DLSU Business & Economics Review 29(1) 2019, p. 115-130

RESEARCH ARTICLE

The Use of Multi-Perspective Strategic Performance Measures by Manufacturing Firms: Benefits, Determinants and Challenges

Babajide Michael Oyewo
University of Lagos, Akoka, Lagos, Nigeria
meetjidemichael@gmail.com

Godwin Emmanuel Oyedokun
Babcock University, Ilisan-Remo, Ogun State, Nigeria

Akunna Ebere Azuh
Covenant University, Ota, Ogun State, Nigeria

Stemming from the observation that organizations around the globe are now growingly embracing multi-perspective strategic performance measures such as the balanced scorecard (BSC), this study investigated the application of BSC framework, with a focus on manufacturing companies in Nigeria. Data collected with the aid of a structured-questionnaire were analyzed using descriptive statistics, Mann-Whitney U test and Kruskal-Wallis test. Results from the analysis of responses from 104 adopters suggested that although manufacturing firms consider the use of the BSC beneficial, its utilization rate was found to be generally low. It was detected that organizational factors such as organizational lifecycle, size, market orientation, affiliation to foreign entity, availability of specialist skills, and business strategy explain the difference in the usage level of BSC observed among the companies, thus validating the contingency theory and extending studies on contextual factors affecting the use of management accounting innovations.

Keywords: balanced scorecard; multi-perspective performance measures; non-financial performance, performance evaluation, strategic management accounting

JEL Classification: M10; M41

The BSC was introduced by Kaplan and Norton in 1992 as a multi-perspective performance measure following their observation that organizational performances were commonly-evaluated using financial metrics (Kaplan & Norton, 2006; Braam & Nijseen, 2008). Although the financial measures were not completely abrogated in the BSC framework, three additional non-financial criteria—customer, internal business process, and learning & growth—were introduced. Thus, the originators of BSC considered that the model provides a "balanced" approach to performance-evaluation. The three performance evaluation perspectives added, aside from the financials, were uniquely different because they eventually affect the financial performance in that favourable changes in them should positively affect the financial performance indicators. To illustrate, efficient business processes, and innovativeness in product-offerings should engender customer satisfaction; satisfied customers would lead to more customer patronage, thus resulting to increased sales revenue, higher market share and improved profit margin. This suggests that organizations should primarily concern themselves with seeking improvement in the non-financial performance measures to the extent they desire improvement in financial performance. It was in this light that Vichore (2013) argued that the BSC essentially tracks performance using leading (customer, internal business process, and learning & growth perspectives) and lagging (financial perspective) metrics. The BSC later metamorphosed to a strategy-formulation tool, thus serving a dual purpose of performance-evaluation and strategy-mapping.

Since the introduction of the BSC, different organizations around the world, including profit-making/ not-for-profits (NFPs), private-sector/ public-sector organizations, have adopted or adapted the BSC framework to their circumstances (Downing, 2000; Vichore, 2013), and this has caused the use of BSC to be a ubiquitous subject in management accounting research. Issues in BSC have been investigated under varying subthemes including: BSC adoption (Downing, 2000, Vichore, 2013; Afande, 2015), factors affecting BSC adoption (Hoque & James, 2000; Braam & Nijssen, 2008; Gligorea, 2014), and implementation challenges (Speckbacher, Bischof & Pfeiffer, 2003; Lohman, Fortuin & Wouters, 2004; Greiling, 2010; Tanyi, 2011), among others. Although literature on BSC has been growing, there have been calls for more research on the subject. Scholars such as Atkinson, Balakrishnan, Booth, Cote, Grout, Mali, Roberts, Ulan, & Wu (1997) noted that the BSC is a development in management accounting deserving intense research attention because of its relative newness as a strategic management accounting development. Larcker (1998) as cited in Hendricks, Menor & Wiedman (2004) called for more research efforts in understanding BSC implementation and performance issues. Lohman et al. (2004) noted that studies on BSC adoption and implementation are few and are largely case-study based. In support, Braam & Nijseen (2008) remarked that most of the studies were qualitative and not quantitative. Hendricks et al (2004) asserted that future research on BSC should not only consider adoption but usage issues. Against this backdrop, this study investigated the usage of BSC as a multi-perspective strategic performance measurement tool, addressing the following objectives; (i) extent of BSC usage; (ii) benefits derived from application of BSC; (iii) organizational factors affecting usage rate of BSC; and (iv) challenges in the use of BSC.

The remainder of the paper is organized into four sections (2-5). Review of literature is covered in Section 2. Next, the methodology adopted is explained in Section 3, followed by data-analysis results and discussion of findings in Section 4. The paper is concluded in Section 5.

LITERATURE REVIEW

The Balanced Scorecard as a Multi-perspective Strategic Performance Measure

The balanced scorecard derived its name from the four performance perspectives introduced, which supposedly provides a balanced view to assess performance. The perspectives introduced by the BSC are: learning & growth, internal business process, customer, and financial (Kaplan & Norton, 2006). The BSC de-emphasizes the excessive focus on financial performance and reiterates the strategic positioning of firms using the three non-financial perspectives, thus providing a "balanced" view of the firm using a combination of leading and lagging indicators. The learning & growth perspective is concerned about monitoring improvement and value creation; the internal process perspective bothers on efficiency in the internal business processes and value chain; the customer perspective considers how the firm

regards its customers; and the financial perspective considers returns or rewards to owners in monetary terms.

The three non-financial perspectives suggest that organizations can embed strategies in their activities, because the BSC links non-financial operational issues such as customer satisfaction, employee development, and internal business process to the organization's strategies and objectives. The three non-financial perspectives are considered important because they would eventually affect financial performance (Lev, 2001; Vichore, 2013). To the extent that the BSC can be put to strategic use as postulated by Kaplan and Norton, some scholars have advocated for its inclusion among the strategic management accounting techniques.

Benefits from the Use of Balanced Scorecard

There have been calls for multi-perspective reporting on the basis that such reports could better communicate the endeavors of an entity as there is linkage of value-creation, strategy, and performance. The BSC is one of the widely-acclaimed multi-perspective reporting tools (De Geuser, Mooraj & Oyon, 2009; Wang, Li, Jan & Chang, 2013; Ajibolade & Oyewo, 2017b). The BSC can be used as both a strategy-formulation tool and a performance measurement tool (Kaplan & Norton, 1993). Using FMC Corporation, Kaplan & Norton (1993) suggested that with BSC, performance outcomes could be linked to strategies. In FMC Corporation, the BSC was observed to bridge the gap between strategy, which is long-term in nature, and short-term performance measures. BSC could unify strategic planning and operational budgeting. Recognizing that stakeholders are increasingly demanding for non-financial information and that the BSC helps to produce non-financial performance measures, some researchers (for example, Kloot 1996) have claimed that the continued relevance of management accountants is dependent on producing non-financial information. Lord (1996) maintained that non-financial measures matching accounting emphasis with the firm's strategic position are part of what characterizes modern management accounting techniques. Organizations deploying BSC are therefore expected to benefit in the way of linking their activities to strategy, and achieving betterment in the quality of performance report.

Organisational Factors Affecting the Usage of Balanced Scorecard

Scholars have often evoked the contingency theory to explain the factors affecting the design of management accounting systems (for example, Ajibolade, 2013; Ajibolade & Oyewo, 2017a). As organizational factors are contextual, it should be expected that the management accounting function may be modelled to fit the needs of an organization. Various contingent factors have been investigated in management accounting literature including firm size, organizational lifecycle, market orientation, presence of specialist skills, degree of centralization, geographic dispersion, organizational culture, business strategy, technology usage and dependency, structure of the environment, and environmental conditions, amongst others (Ahmad & Zabri, 2015; Al-Mawali, 2015; Ajibolade & Oyewo, 2017a; Cuzdriorean, 2017; Oboh & Ajibolade, 2017). To situate the contingency theory, organizational factors may be expected to influence the adoption and usage intensity of BSC. This study however investigated six organizational factors (organizational lifecycle, size, market orientation, affiliation to foreign entity, availability of specialist skills, and business strategy) affecting BSC.

Challenges in the Implementation of Balanced Scorecard

The deployment of modern management accounting techniques, including the BSC, is not without attendant challenges. The observation that traditional management accounting techniques have wider diffusion and usage rates than strategy-orientated techniques (Pavlatos & Paggios, 2009) suggests that there are challenges in BSC adoption and implementation. According to Hackett's research (cited in McDonald, 2012, p. 8), 'most companies are having significant difficulty in taking the Balanced Scorecard from concept to reality'. Nutt (1986) noted that while some of the challenges in the implementation of the BSC are general, others are organization- and geographical-location- specific.

The human barrier refers to problems of modern management accounting technique adoption attributable to the actions and/or inactions of managers, employees, or other personnel that would be involved in implementing new management accounting techniques. Such problems include lack of relevant experience and skills to implement or use the technique, changes required in the organization, changes expected

in people's approach, and lack of top-management support (Dugdale & Jones, 1997; Adler, Everett, & Waldron, 2000; BPP, 2008; Yap, Lee, Said & Yap, 2013). After studying the adoption of management accounting techniques in New Zealand, Adler et al. (2000) found that highest-ranking barriers of adopting new management accounting technique were: the cost of change related to people, time, and lack of relevant skills. Although top-management support is associated with the effectiveness of performance measurement system (Shields, 1995; Braam & Nijssen, 2008; Tung, Baird & Schoch, 2011), top-management support on innovation is dependent on the extent to which management is knowledgeable. Low level of awareness among top-management is, therefore, another noteworthy challenge.

Adoption and implementation of contemporary management accounting techniques such as BSC will call for the development of new skills (Ahl, 1999), because it integrates orientations such as customers, processes, human resources, and financials (Cadez & Guilding, 2008). Managers and employees unwilling to embrace changes to organizational structure ensuing from BSC implementation may be expected to hinder its successful deployment. BSC implementation may also be resisted due to lack of skills, lack of expertise, and low awareness level among employees. In applying the BSC, even a financially-trained manager may have difficulty in interpreting or putting the figures into an overall perspective (BPP, 2009). There may be dearth of skilled personnel to monitor implementation (Bose & Thomas, 2007).

Another criticism of the BSC is that managers may want to achieve too many objectives at the same time —there is therefore a risk that maximization of shareholder wealth might be forgotten (CIMA, 2013), which may eventually discourage BSC implementation. Moreover, to gather various non-financial and financial data which form the input to the BSC model, information technology is needed, and the processes of organizations may have to be automated to capture data at source. The evolution of modern management accounting techniques is traceable to the era of industrialization, where accounting systems were integrated with the production system that was automated. In this advent of computerization whereby processes are automated, modern management accounting systems which are integrated into the operations of an organization would expectedly be automated. The inability of an organization to acquire the technology or procure the equipment for BSC implementation would therefore be a barrier. Given that there is a paucity of data on BSC activities due to non-availability of information technology tools, implementation becomes a challenge.

Cost of implementation is another barrier. Such cost may be the cost of changing from the existing practice to new practice in terms of equipment and time; cost of hiring qualified personnel and time (Adler et al., 2000). As BSC would call for the development of new skills, managers and employees would have to be trained to handle the techniques, thereby incurring training cost and increasing the expense of the company. Meanwhile, the cost of implementing strategic management accounting techniques may exceed the benefits of implementation (Yap et al., 2013).

METHODOLOGY

Research Design, Population and Sample

The study adopted a survey research design in line with some prior related studies (see Cinquini & Tenucci, 2007; Braam & Nijseen, 2008; Fowzia, 2011; Steve & Fiona, 2015). List of firms registered with the Manufacturers Association of Nigeria (MAN) was used as the sampling frame. The MAN membership is open to manufacturing companies employing not less than ten persons in permanent establishment. MAN has over 2,800-member manufacturing firms as of December 31, 2016 (MAN Annual report, 2016) but the number increased to over 3,000 as at January 2018 (MAN website, https://www.manufacturersnigeria.org). The total number of manufacturing firms was taken to be 3,000 for the study, and 10%, (representing 300 firms) was taken as sample. Three hundred (300) copies of the questionnaire were administered on manufacturing firms operating in Lagos State, one of the states in the South-West of Nigeria reputed to be the commercial nerve of Nigeria. The selection of Lagos was also based on its geographic characteristic of having a proliferation of manufacturing companies.

Respondent's Attrition and Response Rate

The questionnaire was addressed to senior accounting/ finance personnel having oversight role in the sample companies because of their expected knowledgeableness on accounting practices in the organizations, requesting that the questionnaire

be completed if the company has adopted BSC. Considering that the focus of the study was to examine issues on the use of BSC for firms that have adopted, and as there was no way to initially differentiate adopters from non-adopters, this approach was used to filter adopters from non-adopters. 112 firms responded that they have not adopted the BSC, thereby declining questionnaire-completion; 77 firms did not respond at all as to whether they have adopted BSC as copies administered in those companies could not be retrieved despite follow-up visits over the eight weeks period that questionnaire-administration lasted. 111 copies of the questionnaire were retrieved, from which 7 copies were unsuitable for use due to incomplete response. In sum, 104 copies were eventually processed for analysis, representing an effective response rate of 55.32% (104 / 188), excluding the 112 non-adopters.

Data-Collection Instrument and Measurement of Variables

A structured questionnaire was used as the data-collection instrument. Respondent's profile (academic and professional qualifications), and firm attributes such as organizational lifecycle (proxied by firm age) and firm size (measured by number of employees as used in earlier studies, for example see Yap, et al., 2013; Al-Mawali, 2015) were captured. The Small and Medium Enterprises Development Agency of Nigeria, SMEDAN (2013) criterion was adapted in classifying firms into sizes of small (less than 100), Medium (100-200) and large (above 200) firms respectively.

BSC usage rate was measured by requesting respondents to rank the extent to which their firms use the four BSC perspectives to assess organizational performance on a 5-point scale of 1 ('not applied') to 5 ('very extensive'). Responses obtained were summed up and averaged to develop an index for BSC usage. Similar earlier studies have used this approach to operationalize management accounting techniques (for example, Cadez & Guilding, 2008; Abdel Al & McLellan, 2011; Fowzia, 2011).

A self-developed scale featuring seven items was used to measure the benefits derived from using the BSC. Respondents were requested to rate the extent to which they agree/disagree on a list of benefits derived from using the BSC on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).

Challenges in the Application of BSC was also measured using a self-developed scale. The items featured in the scale were selected following a review of literature on the challenges of BSC implementation. Respondents were asked to rate the extent to which a list of eight items constituted a challenge in the use of the BSC in their organization on a scale of 1 (not applicable) to 5 (Very High).

Validity and Reliability

Internal validity was achieved by developing new scales and adopting/adapting existing ones used in prior studies to measure variables. Face and Content validity were achieved by submitting initial draft of the questionnaire to three experts (one academic and two management accounting practitioners) for critiquing. Feedbacks obtained were used to improve quality. To minimize measurement error, multi-item measures, whereby variables were measured using more than one item, was used as done by prior studies. Cronbach alpha was used to gauge the reliability of the multi-item variable measurement (Table 1).

Reliability test coefficients are as reported in Table 1. Extent of use of the BSC measured using 4 items had a coefficient of .872; benefits derived from BSC usage yielded coefficient of .936 for the 7 items; and challenges affecting BSC usage measured using 8 items produced a coefficient of .944. A minimum coefficient of 0.6 is acceptable as establishing scale reliability (Miles & Shevlin, 2001; Sabine & Brian, 2004). Since the three constructs have coefficients above 0.6, the measurement scale is confirmed to be consistent.

Table 1: *Results from Reliability Test*

Variable	Cronbach's Alpha	Number of Items
Extent of Use of BSC Model	.872	4
Benefits derived from BSC usage	.936	7
Challenges affecting BSC usage	.944	8

Method of Data Analysis

Statistical tools employed for analysis were descriptive statistics [frequency count (*n*), percentage analysis (%), Mean (M)], Mann-Whitney U test and Kruskal-Wallis test.

RESULTS AND DISCUSSION

This section present results of analysis and discussion of findings.

Respondents' Profile and Firm Attributes

Educational profile of respondent and attributes of sampled firms are reported in Tables 2 and 3.

The academic and professional qualifications of respondents reported in Table 2 reveal that 56 (53.8%) hold a first degree, 39 (37.5%) a second degree, and 9 (8.7%) a third degree. Further, 79 (75.9%) are professionally-qualified, while 25 (24.1%) have no professional qualification. These results suggest respondents have requisite educational qualifications and knowledge to participate in the survey.

The results on firm characteristics presented in Table 3 show that more than half of the firms have existed for over 20 years (*n* = 56, 53.8%); 17 firms (16.3%) are 15-20years old; the rest (*n* = 31, 29.8%) have been in existence for less than 15 years. 74 (71.2%) firms have employees of over 200, 18 (7.3%) have 100 to 200 employees, while 12 (11.5%) firms have 50 to 99 employees. 84 (80.8%) firms have Turnover of over ₦100 million, 10 (9.6%) have Turnover above ₦ 50Million but less than ₦100Million, the rest (*n* = 10, 9.6%) earn turnover of ₦ 50 million and below. Majority of the firms have their headquarters in Nigeria (*n* = 89, 85.6%) while 15 (14.4%) are headquartered/ affiliated to organizations outside Nigeria. 63 (60.6%) firms have a separate management accounting department, while 41 (39.4%) have management accounting function subsumed within the general accounting/finance department. 60 (57.7%) firms follow a *defender* strategy; 44 (42.3%) follow a *prospector* strategy. As per the strategic missions of firms, 82 (78.8%) firms are on a *build* mission; 22 (21.2%) are *harvest* seekers. Using the Porter's (1980) strategy typology, 10 (9.6%) firms are classified as adopting a *cost leadership* strategy; more than half pursue a *differentiation strategy* (*n* = 57, 54.8%), and the remaining follow a focus strategy (*n* = 37, 35.6%). In all, firms differ in terms of their strategic orientation (strategic pattern, mission and positioning); these differences provide the opportunity to examine how strategy issues affect the adoption rate of the balanced score card. The profile of firms reported in Table 3 provided opportunity to assess BSC usage against diverse background of firms.

Extent of Usage of the Balanced Scorecard

Result in Table 4 on the extent of BSC usage shows that more than half of the firms (*n* = 58, 55.8%) use the BSC to a shallow extent. Specifically, 39 (37.5%) firms use it to a very low extent, while 19 (18.3%) apply it to a low extent. 9 (8.7%) firms use it moderately; and a combination of 37 (35.6%) firms apply it at a deeper level (High of 16, 15.4%; and very high of 21, 20.2%). The little depth of application by over half of the firms is responsible for the low overall Mean score of 2.62.

Table 2: *Educational Profile of Respondents*

Variable	Categories	Frequency (n)	Percentage (%)
Highest Academic Qualification	First Degree (B.Sc./ HND)	56	53.8
	Second Degree (Masters)	39	37.5
	Third Degree (DBA/Ph.D.)	9	8.7
	Total	104	100.0
Professional Qualification	Professionally-Qualified	79	75.9
	Not Qualified	25	24.1
	Total	104	100.0

Table 3: *Attributes of Study Firms*

Firm Characteristics	Categories	Frequency (n)	Percentage (%)
Organizational lifecycle (Age of Organization)	1-5years	4	3.8
	6-10years	13	12.5
	11-14years	14	13.5
	15-20years	17	16.3
	above 20years	56	53.8
	Total	**104**	**100.0**
Size (Number of employees)	Less than 100	12	11.5
	100-200	18	17.3
	above 200	74	71.2
	Total	**104**	**100.0**
Market orientation (Turnover per annum)	less than ₦20Million	7	6.7
	₦ 20-50Million	3	2.9
	> ₦ 50 ≤ ₦ 100Million	10	9.6
	Over ₦ 100Million	84	80.8
	Total	**104**	**100.0**
Location of parent company	In Nigeria	89	85.6
	Outside Nigeria	15	14.4
	Total	**104**	**100.0**
Existence of Management Accounting department	Yes	63	60.6
	No	41	39.4
	Total	**104**	**100.0**
Strategic Pattern	*Defender*	60	57.7
	Prospector	44	42.3
	Total	**104**	**100.0**
Strategic Mission	*Build*	82	78.8
	Harvest	22	21.2
	Total	**104**	**100.0**
Strategic positioning	*Cost leadership*	10	9.6
	Differentiation	57	54.8
	Focus	37	35.6
	Total	**104**	**100.0**

With a Mean score of 2.62 (equivalent to 52.4% on the 5-point calibrated scale), the extent of use of the BSC by manufacturing firms in Nigeria is deemed low (research objective one). Low usage rate of BSC observed in this study aligns with Hendricks et al.'s (2004) findings in which 23.5 per cent of 179 Canadian firms reported that they had decided to adopt and implement a BSC, but controverts the 62 per cent utilization rate reported by Bain & Company's annual international survey of senior executives on management tools (Rigby, 2003). Ajibolade & Oyewo (2017b) however observed an average utilization rate of BSC for performance-reporting purpose among commercial banks in Nigeria.

Benefits derived from the Use of Balanced Scorecard

Result reported in Table 5 shows that firms have reaped benefits from the application of BSC in terms of maintenance of financial stability (M = 3.79), new product development (M = 3.64), development

Table 4: *Extent of BSC Usage*

Range of index	Interpretation	N	%	Cum %	Overall Mean	SD
≤ 1.99	Very Low	39	37.5	37.5		
2.00 – 2.99	Low	19	18.3	55.8		
3.00 – 3.99	Moderate	9	8.7	64.4	2.63	1.590
4.00 – 4.49	Extensive	16	15.4	79.8		
4.50 –5.00	Very Extensive	21	20.2	100.0		
	Total	104	100.0			

Table 5: *Benefits derived from BSC usage*

Items	Mean	Overall Mean
Maintenance of financial stability	3.79	3.40
New product development	3.64	
Development and retention of personnel	3.63	
Sustenance of customer relationship	3.59	
Responses to corporate Social Responsibilities	3.55	
Improvements in internal business processes	3.22	
Taking feedback from client seriously	2.40	

and retention of personnel (M = 3.63), sustenance of customer relationship (M = 3.59), and timely response to corporate social responsibilities (M = 3.55). These five items have Mean score above 3.50 (equivalent of 70% on the 5-point scale) and are considered high-ranking benefits derived from BSC use (research objective two).

The BSC is moderately regarded as helping to bring about improvement in internal business processes (M = 3.22) but lowly regarded as encouraging firms to take feedback from clients seriously. The overall Mean for benefits derived from BSC use is 3.40 (equivalent of 68% on a 5-point scale), meaning firms regard benefits of adopting the BSC to be moderate.

Organizational Factors Affecting the Usage Rate of Balanced Scorecard

Result and analysis on how the degree of BSC usage is affected by six firm characteristics— organizational lifecycle (age), size (number of employees), market orientation (turnover), affiliation to foreign entity (location of head office/parent company), availability of specialist skills (subsistence of management accounting department) and business strategy is presented in Table 6.

Organizational Lifecycle

From the results reported in Table 6, the rate of use of BSC appears to stagger across firm size. However, much matured organizations above 20 years (Mean rank of 65.42) utilize the BSC more than other categories of firms with Mean ranks hovering from 33.44 to 40.96. There is therefore a significant difference in usage rate of BSC among firms based on organizational lifecycle (p = .000), as much matured firms apply BSC the most. Matured firms (in terms of age), which may sometimes also be larger (Boddy, 2012; Kaplan, 2013), may see the need to deploy BSC more than new/ upcoming firms. Matured firms may have deployed the traditional management accounting techniques in the past and metamorphosed to applying sophisticated management accounting techniques such as BSC because of realizing the superiority of the latter over the former from experience.

Firm Size

The usage intensity of BSC may directly vary with firm size, because large-sized firms with more than 200 employees (Mean rank = 61.02) rank higher than medium-sized firms with 100 -200 employees (Mean rank = 41.46); the medium-sized firms have higher

Table 6: *Organizational Factors affecting Usage Rate of Balanced Scorecard*

Organizational factor	Category	N	Mean Rank	p value*
Organizational lifecycle	1-5years	4	33.88	
	6-10years	13	40.96	.000
	11-15years	14	40.00	
	15-20years	17	33.44	
	above 20years	56	65.42	
	Total	104		
Size (No. of employees)	Less than 100	12	24.83	
	100-200	18	41.46	
	above 200	74	61.02	.000
	Total	104		
Market Orientation (Turnover per annum in ₦ ' Million)	less than ₦20Million	7	36.57	
	₦ 20 million - ₦ 50Million	3	20.00	
	> ₦ 50Million ≤ ₦ 100Million	10	30.30	.003
	Over ₦ 100Million	84	57.63	
	Total	104		
Affiliation to foreign Entity	In Nigeria	89	50.40	.073
	Outside Nigeria	15	64.97	
	Total	104		
Existence of a separate Management Accounting Department	Yes	63	65.42	.000
	No	41	32.65	
	Total	104		
Strategic pattern	Defender	60	59.71	.003
	Prospector	44	42.67	
	Total	104		
Strategic mission	Build	82	59.26	.000
	Harvest	22	27.32	
	Total	104		
Strategic positioning	Cost leadership	10	25.80	.003
	Differentiation	57	51.59	
	Niche/ focus	37	61.12	
	Total	104		

**p value computed from Mann-Whitney U and Kruskal Wallis tests*

score in comparison to small firms having less than 100 employees (Mean rank = 24.83). Expectedly, the rate of BSC usage significantly vary among firms based on their sizes (p = .000). This result is in alignment with some earlier studies (Bruns & Waterhouse, 1975; Merchant, 1981; Guilding, 1999; Guilding & McManus, 2002; Cinquini & Tenucci, 2007) which concluded that larger companies are more willing to use accounting sophistication. Larger-sized organizations may have the resources (human, financial, support, experiences, and exposures) to deploy the BSC compared to smaller firms, thus having a greater propensity to apply the model.

Market Orientation

Firms having wider market share, with Turnover of Over ₦ 100 Million (Mean rank = 57.63), recorded a deeper usage intensity of BSC in comparison to firms

with lesser market share (Mean ranks of 36.57 for firms with Turnover below ₦ 20 million, 20.00 for firms with Turnover of ₦ 20 Million - ₦ 50 Million, and 30.30 for firms with Turnover > ₦ 50Million ≤ ₦ 100Million), and the difference in rate of use is pronounced as to evince statistical significance (p = .003). This result supports the inclusion of market orientation as a contingent variable in management accounting research (see Cravens & Guilding, 2001; Guilding & McManus, 2002; Cadez & Guilding, 2008; Al-Mawali, 2015).

Affiliation to Foreign Entity

The result in Table 6 shows that companies headquartered in Nigeria have Mean ranks (50.50) lower than companies with parent companies outside Nigeria (Mean rank = 64.97). This means that the extent of BSC usage is higher for internationally-affiliated firms compared to local firms. The Mann-Whitney U test p value establishes that the differences in extent of usage is statistically significant at 10% (p = .073< .10). This corroborates the influence of organizational culture on management accounting practice (see Smircich, 1983; Smircich & Calas, 1987; Ajibolade, 2013).

Presence of Specialist skills

The extent of utilizing the BSC by firms with separate management accounting departments is higher (Mean rank score of 65.42) than others with no management accounting departments (Mean rank score of 32.65). The *p* value from Mann-Whitney U test confirms statistical significance (p = .000 < .01), meaning firms differ in the extent of BSC utilization on account of the existence of management accounting department. This could be because the monitoring of performance using BSC requires both qualitative/ quantitative and financial/ non-financial information. The separation of management accounting function from the general accounting/finance function should help management accounting department concentrate on strategic issues rather than being bogged down with processing financial transactions that are historical. BSC requires expertise, justifying the need to separate the two departments instead of subsuming the management accounting function under financial accounting or general accounting functions because of the recognition increasingly accorded to strategy-orientated management accounting techniques in the competitive business environment. Management accountants will have specific knowledge that will foster adopting and utilization of strategy-oriented management accounting techniques like the BSC (Speckbacher et al., 2003; Braam & Nijseen, 2008), and for them to demonstrate their expertise, existence of standalone management accounting department is a sensible development.

Business Strategy

(i) *Strategic pattern*

Firms differ in extent of BSC usage on account of their strategic pattern. The rate of utilization is higher for firms pursuing *defender* strategy (Mean rank, 59.71) in comparison to the *prospector* strategy-oriented firms (Mean rank, 42. 67). This result is similar to the findings of Cinquini & Tenucci (2007) and Fowzia, (2011).

(ii) Strategic mission

Firms with *build* strategy have higher usage rate of the BSC (Mean rank, 59.26) than firms with a *harvest* strategy orientation. The result supports Gupta & Govindarajan's (1984), Guilding's (1999), Cinquini & Tenucci's (2007), and Fowzia's (2011) supposition that strategic management accounting (including BSC) usage rate is higher in build than in hold- or harvest-oriented firms.

(iii) Strategic positioning

Firms pursuing a niche/ focus strategy utilized BSC the most (Mean rank, 61.12), followed by firms adopting differentiation strategy (Mean rank, 51.59) and cost-leadership strategy firms (Mean rank, 25.80). Firms therefore differ significantly in extent of BSC use in respect of their strategic positions (p = .003 < .01). The ranking reported in Table 6 concerning BSC usage *vis-à-vis* strategic positioning may not be unexpected because focus-strategy firms service a smaller segment of the market, and to keep operating competitively, the non-financial perspectives (being critical success factors) would be a useful framework in strategy-formulation and performance-monitoring. For example, keeping their customers satisfied (customer perspective) is crucial to retaining

them; product innovation, and efficiency in internal business processes also culminate to the reduction, retention, or expansion of their market share as the case may be. Such niche/focus-oriented firms will therefore expectedly use the BSC to assess performance. Firms pursuing a differentiation strategy will want to distinguish their products from competitors by making extra efforts to service their customers, introduce new products uniquely different from their competitors, whilst also achieving efficiency in internal processes. In other words, firms could compete based on customer satisfaction, products development or internal efficiency and find the BSC quite useful to monitor performance in these areas. Shank & Govindarajan (1992) supported by Cinquini & Tenucci (2007) argued that *cost leadership* companies use mainly traditional costing systems while firms using a differentiation strategy pay attention to marketing and differentiation costs, hence higher usage rate by *differentiators* than by *cost leaders.*

Overall, from the result in Table 6, firms significantly differ in the extent of the BSC utilization in terms of organizational lifecycle, size, market orientation, affiliation to foreign entity, availability of specialist skills, business strategy (research objective three). This validates the contingency theory invoked in this study.

Challenges in the Use of Balanced Scorecard

Challenges in the application of BSC are reported in Table 7. Lack of top-management support (M = 2.67), low awareness level in the company (M = 2.53), complex organizational structure (M = 2.52) and high cost of deploying needed facilities (M = 2.50) have Mean score from 2.50 to 2.67, meaning they impact moderately on usage. Other items such as orientation of top-management (M = 2.47), competition in business environment (M = 2.22), non-availability of data (M = 2.19) and absence of management accounting department (M = 2.16) have Mean scores below 2.50, implying they are low-ranking challenges in BSC implementation (research objective four).

The appearance of top-management support as the foremost challenge in Table 7 reinforces the criticality of top-management involvement in the implementation of management accounting systems as argued in literature (see Braam & Nijssen, 2008; Dyball, et al., 2011; Smith, et al., 2011; Tung, et al., 2011). For the BSC to be embraced and implemented, it is crucial to secure the buy-in of top-management because of the power/influence they wield in driving management accounting change. If there is generally a shallow knowledge about the BSC, staffs are unlikely to consent to its adoption, or if adopted, could be greeted with resistance during implementation. The awareness about the future, long-term benefits, as against the challenges during implementation, may encourage organizations to adopt. This is an aspect where top-management orientation and support comes in strongly to make a case for adoption and usage.

CONCLUSION

This paper examined the use of BSC as a multi-perspective strategic performance measurement tool, with a focus on manufacturing companies in Nigeria. The utilization rate of BSC was found to be

Table 7: *Challenges in the Use of the BSC*

Item	Mean	Overall Mean
Lack of Top-management support	2.67	2.40
Low awareness level in the company	2.53	
Complex Organizational structure	2.52	
High Cost of deploying needed facilities	2.50	
Orientation of top-management	2.47	
Competition in business environment	2.22	
Non-availability of Data	2.19	
Absence of management accounting department	2.16	

low. Top-ranking benefits derived from BSC usage were maintenance of financial stability, new product development and personnel development & retention. It was detected that organizational factors such as organizational lifecycle, size, market orientation, affiliation to foreign entity, availability of specialist skills, and business strategy explain the difference in the usage level of BSC observed among companies, thus validating the contingency theory and extending studies on contextual factors affecting the use of management accounting innovations. Lack of top-management support was found to be a top-ranking challenge in BSC application.

This study contributes to knowledge because it presents empirical evidence on the benefits and challenges of BSC usage, thus contributing to the scanty literature in this area in Nigeria. Further, the study did not simply categorize firms into exclusive groups of adopters/ non-adopters as done in some prior studies (for example, Hendricks et al., 2004) but brings to the fore the level of BSC usage among adopters, as well as organizational factors affecting usage rate. Braam & Nijseen (2008) earlier observed that most studies on BSC classified adoption into dichotomous group of adopters and non-adopters, without considering the level of adoption, as the level of adoption will vary amongst the adopters. Finally, the study evaluated the organizational factors determining the rate of use of BSC thus representing the first, to the authors' knowledge, to provide evidence on the prognosticators of the usage level of the BSC in Nigeria.

REFERENCES

Abdel Al, S.F. & McLellan J.D. (2011). Management accounting practices in Egypt: A transitional economy Country. *Journal of Accounting, Business & Management, 18*(2), 105-120.

Abdel-Kader, M., & Luther, R. (2008). The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review, 40* (1), 2-27.

Adler, R., Everett, A.M., & Waldron, M. (2000). Advanced management accounting techniques in manufacturing: Utilization, benefits, and barriers to implementation. *Accounting Forum, 24*(1), 131-150

Afande, F.O. (2015). Adoption of the balanced scorecard by state corporations within the Ministry of Information and Communication. *Kenya Public Policy and Administration Research*, *5* (2), 74-91.

Aguilera, J., & Walker, K (2008). A new framework to ensure excellence in patient-focused care: The nursing directorate's balanced scorecard approach. *Asia Pacific Journal of Health Management, 3*(2), 25-29

Ahl, E.B. (1999). *An investigation of the influence of culture on management accounting*. Master of Commerce thesis, Department of Accounting and Finance, University of Wollongong. Retrieved from http://ro.uow.edu.au/theses/2266

Ahmad, F., Abolfazl, D., & Hadi, H. (2014). Evaluation of Hadid's performance using the balanced scorecard model. *Arabian Journal of Business and Management Review, 3* (6), 42-63

Ahmad, K., & Zabri, S.M. (2015). Factors explaining the use of management accounting practices in Malaysian medium-sized firms. *Journal of Small Business and Enterprise Development, 22* (4), 762-781

Ahmed, A., Bahamman, S.M., & Ibrahim, M. (2015). Assessment of the non- financial measures of performance of deposit money banks in Nigeria. *Journal of Accounting and Taxation, 7*(8), 131-136.

Aidemark, L., & Funck, E. (2009). Measurement and health care management. *Financial Accountability & Management*, *25*(2), 253-276.

Ajibolade, S. O. (2013). Drivers of choice of management accounting system designs in Nigerian manufacturing companies. *International Journal of Business and Social Research, 3*(9), 45-57.

Ajibolade, S. O., & Oyewo, B., (2017a). Firm characteristics and performance disclosure in annual reports of Nigerian banks using the balanced scorecard. *Euro Economica, 36*(1), 94-112.

Ajibolade, S. O., & Oyewo, B.M. (2017b). Evaluation of multi-perspective performance reporting in Nigerian banks using the balanced scorecard model. *International Accounting & Finance Research Journal, 6* (1), 43-63.

Albu, N., & Albu, C.N. (2012). Factors associated with the adoption and use of management accounting techniques in developing countries: The case of Romania. *Journal of International Management & Accounting, 23*(3), 245-276.

Al-Mawali, H., 2015. Contingent factors of strategic management accounting. *Research Journal of Finance and Accounting, 6*(11), 130-137.

Al-Omiri, M. (2003). *The diffusion of management accounting innovations: A study of the factors influencing the adoption, implementation levels and success of ABC in UK companies*. Ph.D. Thesis, University of Huddersfield, United Kingdom.

Al-Omiri, M., & Drury, C. (2007). A survey of factors influencing the choice of product costing systems in UK organizations. *Management Accounting Research, 18*(4), 399-424.

Aminu, N., Ahmed, M., & Moutari, O. (2015). Evaluation of the non-fiscal measures of performance of deposit money banks in Nigeria. *International Journal of Accounting, Auditing and Taxation, 2* (4), 163-166.

Anand M., Sahay, B.S., & Saha, S. (2005). Balanced score card in Indian companies. *Vikalpa, 30* (2), 1-15.

Atkinson, A.A., Balakrishnan, R., Booth, P., Cote, J. M., Grout, T., Mali, T., Roberts, H., Ulan, E., & Wu, A. (1997). New directions in management accounting research. *Journal of Management Accounting Research*, *9*, 80-108.

Berliner, C., & Brimson. J.A. (1988). *Cost management for today's advanced manufacturing. The CAM-1 conceptual design.* Boston: Harvard Business School Press.

Boddy, D. (2012). *Essentials of management: A concise introduction*. Essex, England: Pearson Education Limited.

Bose, S., & Thomas, K. (2007). Applying the balanced scorecard for better performance of intellectual capital. *Journal of Intellectual Capital, 8* (4), 653-665

BPP (2008). *CIMA Paper P2: Management accounting—decision management study text*. (5th Ed.). London: BPP Learning Media Ltd.

BPP (2009). *CIMA Paper E3: Enterprise Strategy study text*. (1st Ed.). London: BPP Learning Media Ltd.

Braam, G., & Nijssen, E. (2008). *Exploring the antecedents of Balanced Scorecard adoption as a performance measurement and strategic management system*. Nijmegen Center for Economics (NiCE), Institute for Management Research, Radbound University Nijmegen. Retrieved from www.ru.nl/publish/pages/516298/nice_08115

Bruns, W.J., & Waterhouse, J.H. (1975). Budgetary control and organizational structure. *Journal of Accounting Research*, Autumn, 177-203.

Cadez, S, & Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organisations and Society, 33*(7–8), 836-863.

Cadez, S., & Guilding, C. (2012). Strategy, strategic management accounting and performance: A configurational analysis. Industrial Management & Data Systems, 112 (3), 484-501.

Chang, W., Tung, Y., Huang, C., & Yang, M (2008) Performance improvement after implementing the balanced scorecard: A large hospitals experience in Taiwan. *Total Quality Management & Business Excellence*, *19*(11) 1143-1154.

Chenhall, R. H. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28 (2, 3), 127-168.

Chenhall, R., & Langfield-Smith, K. (1998). Adoption and benefits of management accounting practices: An Australian study. *Management accounting research, 9;* 1-19.

CIMA (2009). *Management accounting tools for today and tomorrow*. Retrieved from the Chartered Institute of Management Accountants website: http://www.cimaglobal.com/ma

CIMA. (2013). *Paper P3: Performance Strategy study text*. Berkshire, UK: Kaplan Publishing

Cinquini, L. & Tenucci, A. (2007). *Is the adoption of Strategic Management Accounting techniques really "strategy-driven"? Evidence from a survey*. 1-27 Retrieved from the Munich Personal RePEc Archival website: http://mpra.ub.uni-muenchen.de/11819/

Cinquini, L., & Tenucci, A. (2010). Strategic management accounting and business strategy: A loose coupling? *Journal of Accounting & Organizational Change, 6* (2), 228-259

Collis, J., & Jarvis, R. (2002). Financial information and the management of small private companies. *Journal of Small Business and Enterprise Development, 9* (2), 100-110.

Cravens, K.S., & Guilding, C. (2001). An empirical study of the application of strategic management accounting techniques. *Advances in Management Accounting*, 10, 95-124.

Cuzdriorean, D. D. (2017). The use of management accounting practices by Romanian small and medium-sized enterprises: A field study. *Accounting and Management Information Systems, 16* (2), 291-312.

De Geuser, F, Mooraj, S., & Oyon, D. (2009). Does the balanced scorecard add value? Empirical evidence on its effect on performance. *European Accounting Review, 18*(1), 93-112.

Downing, L. (2000). Progress Report on the Balanced Scorecard: A Global Users' Survey. Balance Scorecard Report. *Harvard Business School Press*, *2*(6), 7-9.

Dugdale. D., & Jones, T.C. (1997). How many companies use ABC for stock valuation? A comment on Innes and Mitchell's questionnaire findings. *Management accounting research, 8*, 233-240.

Dyball, M, Cummings, L., & Yu, H. (2011). Adoption of the concept of a balanced scorecard within NSW Health: An exploration of staff attitudes. *Financial Accountability & Management*, *27*(3), 335-361

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

Fowzia, R. (2011). Strategic management accounting techniques: Relationship with business strategy and strategic effectiveness of manufacturing organizations in Bangladesh. *World Journal of Management, 3* (2), 54-69.

Gligorea, R. (2014). *Factors influencing Balanced Scorecard adoption*. Retrieved from: http://www.performancemagazine.org/factors-influencing-balanced-scorecard-adoption/

Gosselin, M. (1997). The effect of strategy and organizational structure on the adoption and implementation of activity-based costing. *Accounting, Organizations and Society*, 22 (2), 105-122.

Gottlieb, G (2008) Moving from performance measurement to strategy management at Brighamand Women's / Faulkner *Hospital. Balanced Scorecard Report*, *10* (2), 11-13

Greiling, D. (2010). Balanced scorecard implementation in German non-profit organizations. *International Journal of Productivity and Performance Management, 6* (59), 534-554.

Guilding, C. (1999). Competitor-focused accounting: An exploratory note. *Accounting, Organizations and Society, 24* (7), 583-595.

Guilding, C. Cravens, K. S. & Tayles, M. (2000). An international comparison of strategic management accounting practices. *Management Accounting Research*, *11*, 113-135.

Guilding C., & McManus, L. (2002). The incidence, perceived merit and antecedents of customer accounting: an exploratory note. *Accounting, Organizations and Society*, 27, 45-59.

Gupta, A.K., & Govindarajan, V. (1984). Business unit strategy, Managerial characteristics, and Business unit effectiveness at strategy implementation. *The Academy of Management Journal, 27* (1), 25-41.

Gligorea, R. (2014). Factors influencing balanced scorecard adoption. Retrieved from: http://www.performancemagazine.org/factors-influencing-balanced-scorecard-adoption

Haldma, T., & Laats, K. (2002). Contingencies influencing management accounting practices of Estonian manufacturing companies. *Management Accounting Research, 13*, 379-400.

Hendricks, K., Menor, L.& Wiedman, C. (2004). *Adoption of the balanced scorecard: A contingency variables analysis*. Retrieved from http://www.accounting.uwaterloo.ca/seminars/old_papers/hendricksmenorwiedman.pdf

Hiromoto, T. (1988). Another hidden edge: Japanese management accounting. *Harvard Business Review*, July-August, 22-26.

Hofstede, G. (1990). The cultural relativity of organizational practices and theories, in Wilson, D.C. and R.H. Rosenfeld. *Managing Organizations: Text, Readings and Cases.* London: McGraw Hill.

Hoque, Z., & James, W. (2000). Linking the balanced scorecard measures to size and market factors: Impact on organizational performance. *Journal of Management Accounting Research, 12* (1), 1-17.

Inamdar, N., Kaplan, R., & Reynolds, K. (2002). Applying the balanced scorecard in healthcare provider organizations. *Journal of Healthcare Management, 47*(3), 179-195

Innes, J., & Mitchell, F. (1995). A survey of activity-based costing in the UK's largest companies. *Management Accounting Research,* (June): 137-153.

International Federation of Accountants, IFAC. (1998). *International management accounting practice statement*: *Management Accounting Concepts*. New York.

Ismail, N.A., & King, M. (2007). Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms. *Journal of Information Systems and Small Business, 1* (1/2), 1-20.

Ittner, C.D., & Larcker, D.F. (1997). Quality strategy, strategic control systems, and organizational performance. *Accounting, Organizations and Society, 22*, 293–314.

Ittner, C., & Larcker, D. (2001). Assessing empirical research in managerial accounting: A value-based management perspective. *Journal of Accounting and Economics, 32*, 349-410.

Järvenpää, M. (2007). Making business partners: A case study on how management accounting culture was changed. *European Accounting Review*, *16*(1), 99-142.

Jaworski, B.J., & Kohli, A.K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing, 57*, 53–70.

Johnson, M (2002). *Mobilising strategic change using the balanced scorecard*. Retrieved from: http://www.aub.edu.lb/osm/scorecards/Documents/case_study_smdc.pdf

Kaplan (2013). *ACCA Paper F2: Management accounting*. Berkshire, UK: Kaplan Publishing Limited.

Kaplan, R.S., & Norton, D. P. (1992). The balanced scorecard-measures that drive performance. *Harvard Business Review*, *1* (70), 71-79.

Kaplan, R.S., & Norton, D.P. (1993). Putting the balanced scorecard to work. *Harvard Business Review, September-October*, 134-147.

Kaplan, R.S., & Norton, D.P. (1996). Using the balanced scorecard as a strategic measurement system. *Harvard Business Review, 1*, 75-85.

Kaplan, R.S., & Norton, D.P. (2006). *Alignment: Using the balanced scorecard to create corporate synergies*. Boston, MASS: Harvard Business School Press.

Kloot, L. (1996). Looping the loop: New directions for the learning organisation. *Australian Accountant, July*, 26-27.

Kocakülâh, M., & Austill, D. (2007). Balanced scorecard application in the health care industry: A case study. *Journal of Healthcare Finance* 34 (1), 72-99

Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. *Accounting, Organisation and Society, 22*, 207-232.

Lawrie, G., & Cobbold, I. (2004). Third-generation balanced scorecard: Evolution of an effective strategic control tool. *International Journal of Productivity and Performance Management*, 53 (7), 611-623.

Lev, B. (2001). *Intangibles: Management, measurement, and reporting.* Washington D.C: Brookings Institution Press.

Libby, T., & Waterhouse, J. H. (1996). Predicting change in management accounting systems. *Journal of Management Accounting Research*, 8, 137-150.

Lohman, C., Fortuin, L., & Wouters, M. (2004). Designing a performance measurement system: A case study. *European Journal of Operational Research*, *156*, 267-286.

Lord, B.R. (1996). Strategic management accounting: The emperor's new clothes? *Management Accounting Research, 7*, 347-367.

Malgwi, A., & Dahiru, H. (2014). Balanced scorecard financial measurement of organizational performance: A review. *Journal of Economics and Finance, 4* (6), 1-10.

Manufacturers Association of Nigeria, MAN (2016) Annual Report

McDonald, B. (2012). *A review of the use of the balanced scorecard in healthcare*. Retrieved from https://www.scribd.com/document/253196696/Review-of-the-Use-of-the-Balanced-Scorecard-in-Healthcare-BMcD

Merchant, K. (1981). The design of the corporate budgeting system: Influences on managerial behaviour and performance. *The Accounting Review*, October, 813-829.

Miles, J., & Shevlin, M. (2001). Applying regression and correlation. London: Sage Publications.

Miles, R., & Snow, C. (1978). *Organisational strategy, structure and process*. New York: McGraw-Hill.

Mullins, L.J., & Christy, G. (2013). *Management and organisational behaviour.* London: Financial Times Publishing International.

Narver, J. C., & Slater, S. F. (1990). The effect of market orientation on business profitability. *Journal of Marketing, 54*, 20–35.

Neely, A., & Bourne, M. (2000). Why measurement initiatives fail. *Measuring Business Excellence*, *4* (4), 3-6.

Nutt, P.C. (1986). Tactics of implementation. *Academy of Management Journal*, *29* (2), 231-261.

Oboh, C. S., & Ajibolade, S. O. (2017). Strategic management accounting and decision making: A survey of the Nigerian banks. *Future Business Journal, 3*(2), 119-137. doi: http://dx.doi.org/10.1016/j.fbj.2017.05.004

Oyewo, B. (2017). Predictors of the effectiveness of management accounting function in Nigerian firms. *Scientific Annals of Economics and Business, 64* (4), 487-512

Pascale, R. T., & Athos, A. G. (1982). *The art of Japanese management*. London: Penguin.

Pavlatos, O., & Paggios, I. (2009). Management accounting practices in the Greek hospitality industry. *Managerial Auditing Journal, 24*, 81-98.

Porter, M. (1980). *Competitive strategy*. New York: Free Press.

Radnor, Z., & Lovell, B (2003). Success factors for implementation of the balanced scorecard in a NHS multi-agency setting. *International Journal of Healthcare Quality Assurance, 16* (2/3), 99-108.

Rigby, D. (2003). Management tools survey 2003: Usage as companies strive to make headway in tough times. *Strategy & Leadership*, *31* (5), 4-11.

Roslender, R., & Hart, S.J. (2003). In search of strategic management accounting: Theoretical and field study perspectives. *Management Accounting Research*, *14* (1), 255-279.

Sabine, L., & Brian, S.E. (2004). A handbook of statistical analyses using SPSS. United States of America: CRC Press Company.

Shank J.K., & Govindarajan, V. (1992). Strategic cost management: Tailoring controls to strategies. *Journal of Cost Management*, *Fall*, 14-24.

Shields, M.D. (1995). An empirical analysis of firms' implementation experiences with activity based costing. *Journal of Management Accounting Research, 7* (1), 148-166.

Shortell, S.M. & Zajack, E.J. (1990). Perceptual and archival measures of miles and snow's strategic types: A comprehensive assessment of reliability and validity. *The Academy of Management Journal, 3*(1), 817-842.

Siegel, G., & Kulesza, C.S. (1996). The coming changes in management accounting education. *Management Accounting (US),* January, 43-47.

Small and Medium Enterprises Development Agency of Nigeria, SMEDAN, (2013). *SMEDAN and National Bureau of Statistics collaborative survey: Selected findings*. Retrieved from https://www.nigerianstat.gov.ng/pdfuploads/SMEDAN%202013_Selected%20Tables.pdf

Smircich, L. (1983). Studying organizations as cultures, In G. Morgan (Ed.), *Beyond method: Strategies for social research,* (pp. 160-172. California: Sage.

Smircich, L., & Calas, M.B. (1987). Organizational culture: A critical assessment, In F.M. Jablin, L. L. Putnam, K.H. Roberts, & L W. Porter (Eds.), *Handbook of organizational communication,* (pp.228-263). London: Sage.

Smith, A., Mainland, J., & Blais, I. (2011). Managing strategy to enhance care for children. *Healthcare Quarterly, 14* (Special Issue – October), 21-26.

Sousa, S.D., Aspinwall, E.M., & Rodrigues, A.G. (2006). Performance measures in English small and medium enterprises: Survey results. *Benchmarking: An International Journal, 13* (1/2), 120-134.

Speckbacher, G., Bischof, J., & Pfeiffer, T. (2003). A descriptive analysis on the implementation of balanced scorecard. *Management Accounting Research, 14* (14), 361-388.

Steve, B., & Fiona, X. (2015). Impact of lean supply chain management on operational performance: A study of small manufacturing Companies. *International Journal of Business Analytics, 2* (3), 1-19.

Tanyi, E. (2011). *Factors influencing the use of balanced scorecard*. Working Paper, Hanken School of Economics.

Tung, A., Baird, K., & Schoch, H.P. (2011). Factors influencing the effectiveness of performance measurement systems. *International Journal of Operations & Production Management, 31*(12), 1287-1310.

Vichore, S. (2013). Balanced scorecard: Adoption for government & non-profit organization. *Research Journal of Social Science and Management, 2* (12), 122-132.

Walker, O.C., Boyd, H.W., & Larreche, J. (1998). *Marketing strategy: Planning and implementation (3rd ed.)*. Boston: Irwin/McGraw-Hill.

Wang, Y., Li, Y., Jan, C., & Chang, K. (2013). Evaluating firm performance with balanced scorecard and data envelopment analysis. *WSEAS transactions on Business and Economic, 10* (1), 24-39.

Yap, K.H.A., Lee, T.H., Said, J., & Yap, S.T. (2013). Adoption, benefits and challenges of strategic management accounting practices: Evidence from emerging market. *Asia Pacific Management Accounting Journal, 8*(2), 27-45.