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Original Research Article

Determinants of Balanced Scorecard Adoption: A Review of Perspectives

Abstract

The main focus of this study was to examine the determinants of the adoption of balanced scorecard as a performance measure using the library based methodology which relies extensively on the review of relevant literature. From the survey of empirical literature, it can be inferred that the adoption of the balanced scorecard in developing countries is still at an embryonic stage. Based on the contingency theory, the study identifies that the adoption of balanced scorecard as a choice of performance measurement could be dependent on firm size, attitudinal factors, top management support, organisation culture and environmental factors. In conclusion, based on the extant literature reviewed it appears that the differential adoption of the balanced scorecard may be linked to a variety of factors. This link can be subjected to empirical validation in further studies.

Keywords: Balanced Scorecard, Determinants, Contingency theory

1. INTRODUCTION

Performance evaluation research has evolved from traditional financial measurement to more strategic methodologies for evaluating the diverse objectives of the firms. The Balanced Scorecard (BSC) which is the thesis of this study is one of the methods developed to measure the broad goals of the firm. The BSC was developed by Kaplan and Norton in 1992 as a broad performance evaluation tool; that classifies a set of performance indicators useful for evaluating the diverse interest of stakeholders. The initial proposal of the BSC was intended as a performance measurement system; it, however, evolved into a strategic management tool vital for achieving organisation objectives. It suffices to note that the BSC is described as one of the most important management concepts to have been introduced (Atkinson, Anthony, Waterhouse, John &Wells, 1997). As a performance measurement system, the BSC has received wide recognition from both academics and corporate world (Hoque, 2014; Malina & Selto, 2001 and Rigby & Bilodeau, 2013).

In retrospect, the rather myopic and limited panorama of conventional strategic management techniques provided the need for a more practical and multi-dimensional approach to strategic management (Malina & Selto, 2001). For instance, with the recent hyper-competitive environment there is the need for a multidimensional performance

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management system that must furnish managers with constant signals as to what is most significant in their daily functions as well as where endeavours ought to be directed (Otley, 1999). Such a multiple perspective measures towards performance measurement is notably manifested in the BSC. Also, the financial measures are limited by the fact that it is not an indicator of sustainability, whereas the BSC provides forward-looking information (Kaplan & Norton,1992). However despite these laudable advantages of the BSC, studies such as (Ibrahim, 2015; Mahmoud, 2014; Rababah, 2015 and Rahhal & Darabee, 2014) have reflected mixed findings on its adoption in developing countries. Also, studies of Malina and Selto (2001) and Norreklit (2000) identified significant limitations that may potentially undermine its adoption. Conversely, researches of Othman (2008); Speckbacher, Bischof and Pfeiffer (2003) and Tapanya (2004) suggest that the BSC has enjoyed robust adoption and usage in developed countries. This position implies that the adoption and usage of the BSC may be dependent on certain factors.

This study, therefore, seeks to address determinants of balanced scorecard adoption by reviewing the BSC literature, synthesising prior findings, identifying unresolved issues, developing testable propositions and providing recommendations for future research. The rest of the paper is structured into the following section; Literature review, theoretical framework and finally the conclusion and recommendation.

2. LITERATURE REVIEW

The Balanced Scorecard (BSC)

The BSC is a strategic management tool with a preponderance of approval (Figge, Hahn, Schaltegger & Wagner, 2002; Rigby & Bilodeau, 2013). According to Kaplan and Norton (1996), the conceptualisation of the model is premised on measuring the goals and vision of an organisation from four performance perspectives of financial, customer, internal business process and learning & growth. This strategy is aimed at integrating financial and non-financial performance to get a better visualisation of organisations achievements. Furthermore, each perspective includes a series of performance measures, targets, and goals that reflect the firm's long-term strategies (Etim & Agara, 2011).

Kaplan and Norton (1992) explain the measures as follows; the financial perspective examines the profitability of the organisations, through profitability ratios. Secondly, the customer perspective measures customer satisfaction, through customer friendly measures such as product or service delivery time. Thirdly, the internal business process are indicators

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of the firm effectiveness and efficiency, it presents the means of achieving firm's objective. Finally, is the learning and growth perspective which indicates the firm value creations processes, through investment in employees.

Balanced Scorecard Adoption in Developing Countries

The BSC is gaining popularity in the developed countries, but this is not the case in developing countries, as every country seems to have her requirement for organisations success (Anand, Sahay & Saha, 2005 and Creelman & Makhijani, 2005). The works of Qadri, Azhar and Imam (2013) and Rahhal and Darabee (2014) demonstrates that the adoption of BSC is emergent in developing countries. Table 1 below is a summary of findings BSC adoption in developing countries.

Table 1: Summary of Balanced Scorecard Adoption Level in Developing Countries

Country	Study	Objective	Methodology	Findings
India	Anand, Sahay and Saha (2005)	To identify the extent of usage of the BSC by corporate India	Survey	45.28%
Jordan	Zuriekat and Al-Sharari (2008)	To investigate the use of BSC in Jordanian commercial banks and Insurance companies.	Survey and Logistic Regression Analysis	40%
Jordan	Sawalqa, Holloway and Alam (2011)	To analyse the state of implementation of the balanced scorecard (BSC) among Jordanian industrial companies.	Survey	35.1%
Nigeria	Etim and Agara (2011)	The study assessed the introduction and acceptance of BSC in Nigeria firms. .	Conceptual	Low adoption
Pakistan	Qadri, Azhar and Imam (2013)	To examine the adoption level and determinants of BSC.	Correlation and regression analysis.	Low adoption
Malaysia	Yap, Lee, Said and Yap (2013)	The study explored the level of adoption, benefits and challenges of the BSC.	Survey approach Descriptive statistics	32.2%

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Ghana	Simpson and Otchere (2014)	To investigate the adoption and implementation of BSC in state owned establishment.	Case study approach	< 50%
Palestine	Rahhal and Darabee (2014)	To examine the extent of BSC adoption and implementation in Palestine.	Survey research using SPSS data analysis	30%
Bahrain	Mahmoud (2014)	To find out the level of BSC adoption and determinants in the developing countries such as Bahrain.	Survey and paired t - test for data analysis	40%
Nigeria	Ibrahim (2015)	To investigate the use of BSC in assessing performance in banks.	Survey Descriptive statistics and Kruskal - Wallis	Low adoption

Source: Researcher compilation (2016)

From the review of studies conducted in developing countries, it is evident that the adoption of balanced scorecard is still evolving. The reasons why companies in developing economies appear to be lagging behind are still controversial. However, in the view of this study, the reason may lie in between two extreme opinions. First, it is probable that managers perceive that BSC approach has already been embedded in alternative management approaches being adopted, or the framework seems not to confer any significant marginal effects on organisation goals and objectives. This inference is consistent with the earlier findings of Malina and Selto (2001) and Norreklit (2000).

Nevertheless, viewing the issues from the tenets of the contingency theory of management, the adoption of the BSC as a choice of strategic management and performance measurement tool will be dependent upon the circumstances of the organisation. The contingency theory describes the various circumstances which may affect the adoption of the BSC. These factors are examined subsequently.

Determinants of Balanced Scorecard Adoption

In identifying the determinants of BSC adoption, studies such as Chenhall (2003); Hoque and James (2000); Macy and Arunachalam (1995); Reid and Smith (2000) and Woods (2009) relying on the contingency approach have indicated that there are no clear-cut determinants. This philosophy is because organisations will adopt varying strategic

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management techniques including the BSC based on its firm-specific factors and its environment. The contingency theory emphasises the importance of fit in the use of strategic management system in other to maximise performance benefits (Chenhall, 2003). Inspired by the contingency theory, we examine the following variables; Firm size, attitudinal factors, top management support, Organisational culture and environment.

Firm Size

A fundamental proposition of the contingency theory is that an organisation's adoption of a performance system is largely dependent on its size (Chenhall, 2003). According to Hoque and James (2000) firm size is described as its characteristics regarding total assets, employee turnover, budget and capital investments. A key assumption of this variable is that larger firms tend to be more complex, and as a result require more formalised, decentralised, specialised, and integrated system. Also, large firms can cope with the financial implication of BSC than the smaller firms. Relatedly, a more comprehensive system provides the organisation with a better functional and organisational structure coordination that aids in effective managerial decision making (Hendricks, Hora, Menor & Wiedman, 2012). Prior studies explain the relationship between firm size and the BSC adoption, for example, Hoque and James (2000) examined the relationship between organisation size and BSC adoption, based on a survey of 66 Australian manufacturing companies using descriptive statistics and regression analysis. The result from their study revealed that organisations size has a positive relationship with the use of BSC. These findings indicate that large firms have a greater need for sophisticated measurement tool like the BSC. However, the study was limited to manufacturing companies, therefore generalising the result may not be totally acceptable.

In the same vein, Braam and Njissen (2008) opines that large firms face more span of control issues and need more comprehensive management systems to control their organisations than their smaller counterparts. Moreover, large companies may also be better equipped to implement a comprehensive performance tool like the BSC, as they may have more knowledgeable top managers and accountants. Another study by Jusoh (2010) examined the role of size in BSC adoption in Malaysia; their study revealed a positive impact. Furthermore, Hendricks, Hora, Menor and Wiedman (2012) investigated the adoption of BSC and firm size by separating BSC adopters from non-adopters. Their findings reveal that BSC adopters are significantly larger in size than non-adopters. More recently, Ling, Janek and Lee (2014) examine the effect of firm size on BSC adoption using the survey

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method. Also, data was analysed using the regression and analysis of variance. The findings from the study reveal that firm size is positively and significantly related to BSC adoption.

Conversely, earlier studies such as Gosselin (1997) and Libby and Waterhouse (1996) found a negative relationship between BSC adoption and firm size. The studies argued that firm size cannot be a key determinant of BSC adoption as smaller firms may not have need for such complex measurement tool. Similarly, Giannopoulos, Holt, Khansalar and Cleanthous (2013) carried out a study on the use of BSC in small organisations, using descriptive statistics for data analysis. The findings from the study revealed that BSC is unsuitable to small firms. This is because they lack the resources and skills to use such systems. Given the above arguments, the relevant research question is, *RQ 1: What is the impact of firm size on balanced scorecard adoption?*

Attitudinal Factors

The attitudinal factor is derived from the Technology Acceptance Model (TAM) by Davis in 1989. This model examines the user's attitude to a new technology. The application of the BSC has been transformed from the use of basic microsoft excel spreadsheet into various application software; this change has resulted in organisations considering the BSC as a new technology (Koske & Muturi, 2015). To this end, the user's psychology is examined through two constructs of the TAMs model; namely, the Perceived Usefulness(PU) and the Perceived Ease Of Usefulness (PEOU) hereafter referred to as attitudinal factors. The PU is defined as the perception of the user that adopting an innovation will add value to his job performance. Also, the PEOU explains the extent to which the user believes that the adoption of innovation would require less effort (Shutibhinyo, 2014). Wiersman (2009) describes attitudinal factors as organisations' receptiveness to new technologies. Employees who are receptive towards new information are more likely to use the BSC model. In the same vein, Baird, Harrison and Reeve (2004) asserts that organisations who welcome innovation and ideas are very susceptible to the use of the BSC. When users are introduced to innovations the PEOU and PU of that innovation tend to motivate them. For instance, if employees perceive the BSC as an easy tool, it will enhance its acceptance.

Furthermore, Shutibhinyo (2014) investigated the interaction between attitudinal factors and BSC adoption. The study employed primary data, and their findings reveal an indirect relationship between BSC adoption and attitudinal factors. A similar study by Tanyi (2011) examined the determinants of BSC adoption by managers in Finland. The data for the study was sourced using questionnaire, and the ordinary least square was adopted for analysis. The result from the study revealed a positive relationship between attitudinal factors

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and the BSC adoption. Also, Islam and Kellermanns (2006) investigated the relationship between the attitudinal factors and the BSC adoption. Their findings suggest that the attitudinal factors are significantly related to the adoption of the BSC. The recent study of Koske and Muturi (2015) also confirms a relationship between the attitudinal factors and the adoption of the BSC. This indicates that when employees express some level of satisfaction with the use of the BSC it enhances its acceptance. Against the above background, the relevant research question is, *RQ 2: What is the impact of attitudinal factors on balanced scorecard adoption?*

Top Management Support

The study by Rogers (1995) examined organisations innovativeness and presented top management as a major driver of firm's innovations. This study is extended by the conclusions of Frambach, Barkema, Nooteboom and Wedel, (1998). They found that top management role is fundamental to the adoption of innovations. Braam and Njissen (2008) investigated the role of top management and BSC adoption, the study which employed regression for data analysis revealed a positive relationship. Similarly, Shutibhinyo (2014) examined the relationship between top management training and BSC adoption and observed a positive relationship. Relatedly, Hongratanawong (2009) and Shutibhinyo (2014) found a positive relationship between management support, effective training of employees and BSC adoption. They observed that effective training affects the way organisations think about the adoption of information. Also using the ordinary least square regression and data which comprise of 34 managers using balanced scorecard in Finland, Tanyi (2011) concludes that managers perceived information from new sources affect their usage of the information. From the preceding, these results indicate that managements have a very significant role to play in the adoption of BSC, management who do not welcome innovation may not find the BSC useful. Also, top management level of education and training may enhance the adoption of the BSC.

Hence, the relevant research question is, *RQ 3: What is the impact of top management support on balanced scorecard adoption?*

Organisation Culture

Organisation's acceptance of a new idea is largely dependent on its culture. Organisations culture can be viewed as its shared values, encouragement for creativity, a disposition to risk taking (Qadri, Azhar & Imam, 2013). When organisations are disposed positively to these through socialisation, behavioural exhibition of values and beliefs which

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are part of organisation structures and management policies, it tends to reflect in their acceptances of ideas. Rababah (2015) defined organisation culture as the behaviour of employees in an organisation, and their perception of their various actions. Also, Ravasi and Shultz (2006) describe organisations culture as a set of mental assumptions that gives a platform for defining organisations behaviour in different perspectives. Similarly, Hofstede (1980) defines organisational culture as the collective programming of the mind that distinguishes the members of one organisation from others. The study divided culture into four dimensions: femininity versus masculinity, power distance, uncertainty avoidance, and collectivism versus individualism. For the purpose of this study, we define organisation culture as owner's philosophy and values. Organisations behaviour can be influenced by the owners of the organisations, national and regional groupings. Asiaei and Jusoh (2014) examined the relationship between BSC and organisations culture they adopted the competing values model. The study classified organisation's cultural practices into control and organisations. The former advances the regard for organisations structure, stability, and change; the people and organisation express the differences in organisational focus. Data for the study was sourced from 128 companies Tehran Stock Exchange, Iran and analysed using partial least squares (PLS). The result of the study indicates that organisational culture is positively related to the usage of the BSC.

Another study by Qadri, Azhar and Imam (2013) investigated the status of BSC adoption in Pakistan, and the factors affecting its adoption, based on a random sampling 287 firms were selected from the Karachi stock exchange, data was validated using Cronbach alpha and factor analysis and testing using regression. Their study suggests that the culture of an organisation influences its ability to accept new ideas. Similarly, Rababah (2015) investigated the relationship between organisation culture and the BSC adoption; logistic regression was used to analyse data from questionnaires. The findings from the study indicate that organisation's culture is very significant in the adoption of BSC. In a recent study, Rababah and Bataine (2016) examine the relationship between organisational culture and BSC adoption, using factor analysis and logistic regression. They found that innovative, team-oriented and mission-driven organisations have the propensity to adopt the BSC. An earlier study by Kaplan and Norton (2004) supports this assertion; they acknowledge that firms were employees accept the vision, mission, and core values tend to adopt the BSC. This implies that employee norms, share values and beliefs have an immense impact on BSC adoption. Therefore, the relevant research question is *RQ 4: What is the impact of organisation's culture on balanced scorecard adoption?*

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Environment of the Organisation

The environment is an important aspect of contingency theory as emphasised in Macy and Arunachalam (1995). An organisation's environment includes all factors and dimensions that surround the organisation. These include all factors that may have a potential or actual influence on the organisation. Extending the contingency theory study of Macy and Arunachalam (1995), we examine the environmental factor from both internal and external environment. Macy and Arunachalam (1995) described the external environment as those external characteristics of the organisation that may or have an impact on the organisation. This study discusses external environment from the view of uncertainty in market demand and competitors' action. The contingency theory proposes that organisations will adopt a performance system based on its environmental circumstance. For instance, an extremely innovative and competitive environment may inspire the adoption of a more sophisticated performance measurement approach. Accordingly, contingency theory emphasises that a performance measurement systems that fit a company's environment and help the organisation align its business processes with its environment are more likely to be adopted (Meyer & Goes, 1988 and Baines & Langfield-Smith, 2003). The BSC offers a performance measurement and management system that enables managers to control their organisations strategically and deal with environmental uncertainties effectively. Improved information regarding activities and their effects on company performance allows managers to monitor the progress of the strategies they have plotted, and to make decisions for improvement. Based on the BSC information they can take timely action.

Prior studies carried out on the relationship between competitive environment, and adoption of BSC found position results. Ahmad and Zibril (2015) examined the relationship between the intensity of market competition and BSC adoption in Malaysian manufacturing sector. The result of their study indicates that the intensity of market competition has a significant influence on the use of BSC. Also, Ajibolade (2013) investigated the relationship between environmental uncertainty and management accounting system designs, using questionnaires survey of chief account officers from 144 selected manufacturing companies. The result obtained suggest that companies facing intense market competition tend to adopt sophisticated management accounting systems like the BSC, as they believe the application will enhance performance. Similarly, Hendricks, Hora, Menor and Wiedman (2012) examined the relationship between environmental uncertainty and the adoption of BSC in organisations. They found a positive relationship between environmental uncertainty and BSC usage. When organisations are faced with high competition, they tend to adopt multiple

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performance measures like the balanced scorecard (Hoque & James, 2000). Jusoh (2008, 2010) maintains that information needed for strategic management and performance evaluation should look beyond the numbers in other to cope with increased market competition.

The internal environment in this study is referred to as technology of the organisation. The advancement in technology has brought about the increased importance to manage resources as well as identifying relevant costs. To achieve these, organisations require a more comprehensive performance measurement system.

In a study of Korean manufacturing firms, Choe (2004) investigated the relationship between technology and BSC adoption; the study presents a positive relationship. Likewise, Ajibolade (2013) and Ahmad and Zibril (2015) investigated the relationship between technological advancement and the adoption of advanced performance measures. The study reports a positive relationship between technological advancement and the use of sophisticated performance measures. Sophisticated MAS would be of immense benefit to companies faced with complex technological production processes. Such MAS will help produce more information covering both financial and non-financial measures. In conclusion from the contingency theory perspective, we argue that the environment creates opportunities and threats to organisations (Hwang, 2005) and shapes organisational structure, processes, and managerial decision making. Therefore the uncertainty in the environment may influence performance evaluation decisions. Against the above backdrop, the relevant research question is, *RQ 5: What is the impact of organisation's environment on balanced scorecard?*

3. THEORETICAL AND ANALYTICAL FRAMEWORK

Contingency Theory

The term contingency theory was first mentioned in the literature by Lawrence and Lorsch in 1967, in the context of organisational structure. The contingency theory suggests that under different circumstances different solutions may prove effective (Chenhall 2003). This can be considered as one of the primary insights of the theory, because instead of propagating universally applicable organisation-management principles, the theory tries to demonstrate that different circumstances require different organisational structures (Islam & Hu, 2012).

In essence, therefore, contingency theory suggests that there are several factors that have a moderating influence on the strategic management practices adopted by organisations and these factors are appear not to be unanimous and are subject to change over time. Miles and Snow (1978) found that these factors might determine the strategy adopted by the

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organisation. The contingency theory is centred on the assumption that there is no universally appropriate accounting system which applies equally to all organisations in all circumstances. This implies that an accounting system that is suitable for one organisation may not be effective in another. In the light of the above, the contingency theory forms the central framework of this study. Based on the contingency theory, the analytical framework for the study is developed to aid possible empirical validation of the factors. Figure 1 below, is a schematic representation of the functional relationships that could exist between the identified factors and BSC adoption.

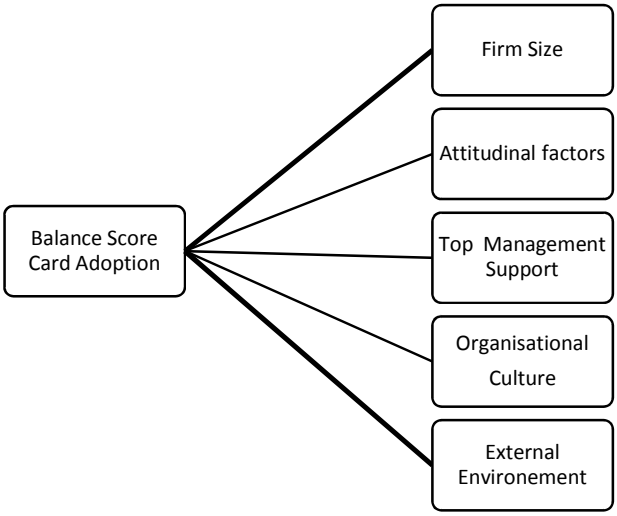

Figure 1: Schematic framework

Source: Researcher's compilation (2016)

From the study schema above and prior studies, this study identifies several variables that could likely affect the adoption of the BSC in organisations. Firstly, for firm size, a number of empirical researches such as George, Andrew, Ehsan and Stephanie, (2013); Giannopoulos et al. (2013); Hendricks et al., (2012); Hoque and James (2000); Josuh (2010) and Ling, Janek and Lee, (2014) have explored the link between firm size and the balanced scorecard usage and have showed that the size of firm may be important in its decision to adopt the BSC framework. Hence in line with RQ1, we predict that *the propensity to adopt the BSC is significantly and positively related to firm size. The hypothesised functional relationship is presented thus;*

$BSC_{ADOPT} = f\,(firm\ size)$ ----------(1)

With the technology acceptance model in perspective, Davis (1989) has shown how attitude can affect usage of a particular innovation. With an emphasis on the BSC, Shutibhinyo (2014); Tanyi (2011); Islam and Kellermanns (2006) and Hongratanawong (2009) have

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shown that the attitude of individuals is crucial in accepting new practices such as the BSC. Hence in line with RQ2, we predict that *the propensity to adopt the BSC is related to attitudinal factors. The hypothesised functional relationship is presented thus;*

$BSC_{ADOPT} = f$ *(Attitudinal factors)----------(2)*

Top management by virtue of their office are the determiners of the adoption of innovations in organisations (Frambach, Barkema, Nooteboom & Wedel, 1998), since they are at the helm of affairs they are saddled with the responsibility of taking decisions concerning an organisations strategy, design and management systems (Braam & Njissen 2008). Empirical studies such as Braam and Nijssen (2004, 2008); Davis and Albright (2004); Hongratanawong (2009); Shutibhinyo (2014) and Speckbacher et al., (2003) have shown empirical support for the effect of Top management on BSC adoption. Hence in line with RQ3, we predict that *the propensity to adopt the BSC is related top management.*

The hypothesised functional relationship is presented thus;

$BSC_{ADOPT} = f$ *(Top management) ----------(3)*

Organisation culture is key in acceptance of the new idea. Studies carried out by Asiaei and Jusoh (2014); Qadri, Azhar and Imam (2013); Rababah (2015) and Ravasi and Shultz (2006) have shown empirical support. Hence in line with RQ4, we predict that *the propensity to adopt the BSC is related organisational culture. The hypothesised functional relationship is presented thus;* $BSC_{ADOPT} = f$ *(organisational culture) ----------(4)*

Macy and Arunachalam (1995) described the external environment as those external characteristics of the organisation that may or have an impact on the organisation. In addition to the internal organisational characteristics, external characteristics may influence innovation adoption behaviour. Ajibolade (2013); Hendricks et al., (2012) and Olson and Slater (2002) have provided empirical support for the relationship between BSC-use and external environment. Hence in line with RQ4, we predict that *the propensity to adopt the BSC is related to the external environment. The hypothesised functional relationship is presented thus;*

$BSC_{ADOPT} = f$ *(external environment) ----------(5)*

In aggregating model 1 to 5 above we develop model 6

$BSC_{ADOPT} = f$ *(Firm size, Attitudinal factors, Top Management, Organisational Culture, External environment)----------(6)*

4. CONCLUSION

This study examined the determinants of balanced scorecard adoption. The study has contributed to our understanding of what factors could influence companies to adopt the BSC

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by specifically examining selected variables based on the contingency theory. Despite being one of the outstanding contributions to management accounting, there is a clear diversity in the level of adoption, especially between developed and developing economies. The direct inference from such diversity is that there exist particular and peculiar incentives for its adoption. The contingency theoretical framework provided the justification for such inference as it suggests that the adoption of the balanced scorecard as a choice of strategic management and performance measurement will be dependent upon the circumstances of the organisation. The study has also succeeded in pointing out some of these factors for empirical consideration. Given the importance of stakeholders, the study recommends the incorporation of a fifth perspective which is environment and culture. Also, the ensuing model thus provides a platform for further empirical validation to be exercised.

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