

How Use of knowledge, Skills and Cognition Enhance Board Performance in Nigerian market: A SEM-Approach

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Abstract

This research aims to take steps towards explaining behavioral principle-based board process as factors for effective board performance. Dominant rule-based board structure approach could not transform effective corporate functioning, thus inconclusive. Based on a survey perception of 154 respondents from Nigerian capital market participants, the study employs confirmatory factor analysis (CFA) in a structural equation modeling (SEM) approach. Other studies used EFA and in developed nations. Replicates and builds upon board process constructs - cognitive conflict, effort norms, use of knowledge and skills, and groupthink. The study concludes that the items are valid measures of the latent constructs and significantly relate to board performance. The paper links corporate governance debates to broader behavioral choices in agency perspective and employs CFA and SEM as alternative approach for the measurement and structural models, in place of the usual exploratory factor analysis (EFA).

Keywords: Corporate Governance, Board Process, Board Performance, Behavioral Accounting, SEM.

Introduction

Empirical research efforts had thrived for decades, and corporate scandals (for example Enron) have happened although they were supervised by an all-star board, with qualifications far beyond what any regulator would ever impose (Hansell, 2003). Unfortunately, these occur despite adherence to the formal regulations and respective country codes. Other notable cases of corporate catastrophe are WorldCom, Parmalat, Tyco etc, which endangered and exposed misfortunes for thousands of employees,

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shareholders, and other stakeholders (Drummond, 2002; and Zandstra, 2002). Cases in Nigeria include AP, Cadbury, Dangote Group, and eight listed banks (CBN, 2008).

The UK Cadbury Report (1992) is considered the thought leader in the development of best practice for effective governance (Kiel & Nicholson, 2003; and Ingley & van der Walt, 2005). The report became the standard across the globe, especially in the 54 commonwealth nations (Nigeria inclusive). Nonetheless, according to a study of firms in the Standard & Poor's (S&P) 500, Finkelstein and Mooney (2003) report that outside directors now account for 75 per cent on the average board; directors are highly compensated with stock; on average 91 per cent of the directors on each S&P 500 board own stock, and 56 per cent of the S&P 500 boards are comprised entirely of directors with shareholdings, and average board size has dropped. Hence, Bostrom (2003) argues that in the new dispensation, simple compliance with the letter of the law and revised listing rules are not sufficient board measures.

Against the background, previous studies have not provided conclusive evidence of the hypothesized relationships between board structure rules and board performance (Maharaj, 2009; Zona & Zattoni, 2007; Ingley & van der Walt, 2005; Wan & Ong, 2005; and Finkelstein & Mooney, 2003). This paper intends to join the bandwagon of scholars to test and replicate studies that determine board performance with empirical evidence from Nigeria. The setting difference is that most of the study locations in the review analysis had been originally in developed nations. Hence, the need to replicate similar constructs in a developing market with distinct behavioral attitude. This paper contributes to literature by providing developing market detailed analysis of the significant relationship between board process factors and board performance. Are the measurement items valid measures of board process and board performance factors? Do board process factors relate to board performance in a developing market?

As a motivation for the research, Brennan and Solomon (2008) encourage broader theoretical perspectives and methodological approaches beyond the traditional use of financial parameters to measure performance. Hence, the paradigm-shift to behavioral factors in place of the dominant rule-based perspective. This study does not intend to challenge existing measurement items. However, we use questionnaire instruments (in place of the usual archival data) to have first-hand information from the responses of relevant stakeholders. The study employs confirmatory factor analysis (CFA) in SEM to test the extent to which a-priori, theoretical pattern of factor loadings on pre-specified constructs represents the actual data. The CFA tool reduces measurement errors (a limitation of multiple regression) and confirms the study's preconceived measurement theories (EFA only explores factors but cannot confirm) and simultaneously establish a structure that fully specify a structural equation model (SEM) as basis for practical adoption of findings with implications for firm strategy, and board behavior.

In addition, recent court judgment that convicts a CEO of Nigeria's large bank on numerous corporate abuses also calls for concern. These occurred although non-financial reports of the bank show high compliance with governance rules. Based on the fre-

quent reported cases of corporate scandals, there is no concluding evidence that governance score cards and more rules map into better corporate performance. Therefore, formal rules and regulations have not yielded desired results in making boards diligent in their governance role, thus ineffective to transform corporate functioning. The use of structural equation modeling (SEM) approach answers the calls of scholars.

The rest of the paper is organized as follows: next section presents theoretical considerations and hypothesis development, section 3 explains the methodology employed for the research, section 4 describes the results, data analysis and the empirical model, section 5 discusses the results, research implications, offers conclusions, limitations and agenda for future research.

Agency Theory and Hypothesis Development

Agency problem is created when external investors entrust their investments in the custody of agents who may act in their personal interests, thus difficult for the principal to verify the agent has behaved appropriately. When principals make attempt to ensure that agents act in the principals' interests, agency cost is incurred (Jensen & Meckling, 1976). Another source of conflict is differing time horizons (Rashidah & Mohammad, 2010), where the agent may be willing to take actions which have relatively short-run payoffs in order to demonstrate success, whereas shareholder interests may be better served by longer-term actions. This means agency theory focus on appropriate governance mechanisms that ensure minimum agency cost and efficient alignment of shareholders and management. In other words, the focus in agency theory is on extrinsic rewards to the agents by vigilant monitoring and creation of incentive schemes based around money, promotion and sanctions, with tangible and exchangeable commodities that are easily quantified (Rashidah & Mohammad, 2010).

Therefore the existence of agency costs may be used to explain the attitude of companies towards the internal monitoring mechanisms employed by the firm as good element of corporate governance. On these interests, many previous studies have attempted to identify formal components of board structure, such as size (Yermack, 1996; Ong & Wan, 2008), diversification (Zuaini & Napier, 2006), CEO duality (Wan & Ong, 2005), board independence (Sanda, Garba & Mikailu, 2008) and control mechanisms, with focus on how boards may protect shareholders' investments from the expropriation of selfish managers. However, despite the relevance and popularity of the past efforts in the corporate governance literature, the extensive body of related empirical research has so far yielded conflicting and ambiguous results (Van Ees, Gabrielson & Huse, 2009). Hence, the timely calls by scholars (Brennan & Solomon, 2008; Daily, Dalton & Cannella, 2003; Gabrielson & Huse, 2004) for new research directions and theorizing in empirical researches on boards. This will be most relevant using different approaches, emerging economies, sector analysis, with emphasis on the need to study behavioral processes and dynamics in and around boardroom closely to better understand conditions for effective corporate governance (Forbes & Milliken, 1999; Zona & Zattoni, 2007; and Brennan & Solomon, 2008).

In the literature, several theories have been used in corporate governance research about board of directors, but agency theory seems to have dominated such research outputs for decades with advantage of being simple and of being founded on a well-accepted model of human behavior especially in developed economies (Daily et al., 2003). Similarly, based on the specific vast literature, it can be inferred that corporate governance and boards have adequately addressed the boards' ability to control firms' top executives and protect the interests of shareholders. In their review of 127 empirical studies in reputable academic journals, Gabrielsson and Huse (2004) report that 54% employ agency-theoretical arguments addressing these topics. Thus, emerging economies like Nigeria provide unique opportunities and challenges for such research (Davis, 2005). Therefore, well-functioning corporate governance mechanisms in emerging economies are crucial for both local firms and foreign investors interested in the tremendous opportunities that such markets provide (Okpara, 2010). These important aspects have contributed to the widespread diffusion of the agency theory, which have led scholars to place too much emphasis on the board monitoring, service and networking tasks (Zona & Zattoni, 2007). Indeed, it is considered appropriate to understand the virtues of the monitoring tasks of the board, but boards do generally fulfill other tasks as well (Zahra and Pearce, 1989). In this regard, since agency theory assumes contracting for all stakeholders, but for shareholders, therefore putting forth some tenets of process issues and behavioral approaches will become very relevant in this study (Huse, Hoskisson, Zattoni & Vigano, 2011). This affirms the assertions that monitoring managerial behavior is considered the principal task of the board through the assessment of top management behavior and control of firm performance (Stiles & Taylor, 2001).

Furthermore, agency theory places emphasis on the board's monitoring role, which takes attention away from other perspectives (Zona & Zattoni, 2007), though an attempt has been made comparing it with resource dependence theory (Hillman & Dalziel, 2003) as parallel perspective. The conflict of interest refers to an issue-related disagreement among directors, where members express multiple viewpoints and exchange positive and negative position. According to Zona and Zattoni (2007), cognitive conflict may arise in boardrooms because directors are a diverse group of successful people facing complex decisions based on their different perceptions on the issues and different opinions on the most appropriate solutions. The authors also report that other boards have been able to develop structures and processes that promote open debate and positive disagreement. This also affects the board service role in that conflict and disagreements may induce the top managers to consider other strategic alternatives or to evaluate more carefully the existing ones (Forbes & Milliken, 1999). In addition, the presence of cognitive conflict inside the boardroom may intensify the feeling of urgency and increase the perception of the need to resort to external resources, thus improving board networking role performance (Hillman & Dalziel, 2003).

Similarly, since directors are busy people facing many competing demands for their time, strong effort norms can be expected to enhance the efforts of each individual director (Forbes & Milliken, 1999), thus norms play an important role in regulating

the level of individual effort in groups. Hence, there is a large variance in the time and attention that boards of directors devote to accomplish their respective roles. It has been reported by Stiles and Taylor (2001) that some boards do not meet frequently and limit themselves to a formalized assessment of top management proposals. In this regard, Zona and Zattoni (2007) opine that higher amounts of time and higher levels of commitment devoted by directors to performing their specific roles lead to significant increases in the degree to which boards are able to make useful contributions in monitoring management behavior, levels of board service of strategy formulation, and to facilitate access to important resources.

However, if boards want to provide good service to CEO/top managers, they must be able to combine their knowledge of various functional areas and apply that knowledge to firm-specific issues (Forbes & Milliken, 1999). Similarly, if boards are to perform their monitoring role effectively, they must integrate their knowledge of the firm's internal affairs with their expertise in areas such as law and strategy. While skills may be present, the actual use of skills is of utmost significance (Wan & Ong, 2005). Anecdotal evidence from corporate failures has shown that boards with directors of excellent skills sets do not use them (Sonnenfeld, 2002). For board to be effective, they must coordinate their individual contributions by extracting the use of knowledge and skills, which also requires the active use and integration of individual knowledge and skills through some internal processes of division of labor, information flow, and delegation of roles based on individual expertise and responsibilities (Forbes & Milliken, 1999; Finkelstein & Mooney, 2003; Zona & Zattoni, 2007; and Maharaj, 2009). To effectively achieve optimum decision-making, there must be a high and diligent level of participation among board members at board meetings to reduce the negative effects of groupthink (Maharaj, 2009).

The basic premise of the process model comes from Pettigrew (1992). He asserts that it is necessary to go beyond the structure-performance approach in order to understand fully the performance implications of board characteristics. There are conflicting propositions with regards to structure-performance relationships. Empirical evidence in a Singaporean study has questioned the assumptions of board structure-performance relationship (Wan & Ong, 2005). As a board is essentially a group at the apex of a company's decision control structure (Fama and Jensen, 1983), it is important to understand the group process since much of the director's output happens at board level for effective team-working (Pettigrew, 1992). The process model is thus explained in terms of the individual board process variables of cognitive conflict, effort norms, use of knowledge and skills (Forbes & Milliken, 1999; Zona & Zattoni, 2007), and groupthink (Janis, 1983; and Maharaj 2009).

In an attempt to explain cognitive conflict, Wan and Ong (2005) assert that the presence of disagreement and criticism from the board may require CEOs to explain, justify and possibly modify their positions on important issues. It serves to remind management of the power and role of the board and of the importance of considering shareholder interests. This will improve the board's performance of its monitoring role. In addition, the different views of directors should result in better guidance and

counsel to the CEO and top management (Forbes & Milliken, 1999), which results in more careful evaluation of alternatives that may enable firms obtain valuable information (Zona & Zattoni, 2007). Furthermore, Forbes and Milliken (1999) assert that, the emphasis is group's shared belief on the level of effort each individual director is expected to contribute. Other researchers have gone a step further than mere obtaining information. They argue that effective usage of time during meetings is more critical due to the busy and tight business schedules of directors. Therefore, achieving firm goals from their competing demands require dedicating quality time as a group to share individual assessment on top management proposals, so that strong effort norms can be expected to enhance the effort of each individual director (Forbes & Milliken, 1999; Zona & Zattoni, 2007). Thus, boards that have high-effort behavior among members should be better able to perform their roles (Ong & Wan, 2008). Hence, boards that spend similar amount of time can exhibit different levels of effort (Monks & Minow, 2008).

For the board to have the ability to explain, justify and settle conflicts, strong effort norms require the use of knowledge and skills. Boards, as the apex of a firm's decision-making structure (Fama & Jensen, 1983), must have directors with functional skills. If boards want to provide good service to CEOs, they must be able to combine their knowledge of various functional areas and apply that knowledge to firm specific issues (Forbes & Milliken, 1999). Similarly, if boards are to perform their monitoring role effectively, they must integrate their knowledge of the firm's internal affairs with their expertise in areas such as law and strategy (Forbes & Milliken, 1999; Wan & Ong, 2005; Zona & Zattoni, 2007). While skills may be present, the actual use of skills is of utmost significance (Ong & Wan, 2008). Anecdotal evidence from corporate failures has shown that boards with directors of excellent skills sets do not use them (Sonnenfeld, 2002). Moreover, Janis (1983) claims that when the interactive effects of social and task cohesion are considered, high levels of cohesiveness do not necessarily lead to groupthink. It could likely be motivated to foster and maintain a cohesive board environment and overcome disruptive tendencies both of which work toward a common goal of board effectiveness due to highly interdependent nature of boards.

Since Nigerian listed firms are not widely held (Sanda et al., 2008), they can be viewed positively in Jensen and Meckling's (1976) seminal work on agency problems. The potential for these problems to arise is reduced in controlled firms where owners are often also managers and where there is more alignment of the owner-managers' interests with the firms' long-term perspective. Because of their long-term attachment to the firm, controlled owner-managers are more inclined to monitor and discipline the whole firm and to avoid misuse of resources (Fama & Jensen, 1983), which can build an accurate picture of how boards actually function in controlled listed firms regarding board process (Forbes & Milliken, 1999; Wan & Ong, 2005; Zona & Zattoni, 2007; Ong & Wan, 2008).

As a note of caution, a change in emphasis may come from several directions, but the recent financial crisis motivates the opportunity to rethink top management and gov-

ernance and even to search for alternative paradigms of governance. The shareholder or ownership society can be questioned. The corporation as a legal form grew out of its ability to protect not only the shareholders and other investors, but also other stakeholders (Blair 1995). Here are some reflections: First, the present financial crisis has made many rethink what a corporation is, and the purpose of corporate governance, not only researchers, but also business leaders, politicians and lawmakers (Huse et al., 2011). Furthermore, building on Forbes and Milliken (1999) finding, which states that, the participatory board model stimulates board service tasks performance, and the application of similar model to the monitoring activities by Zona and Zattoni (2007). Both arguments affirm that a cooperative work attitude stimulates mutual information exchange and commitment to all categories of board tasks. Consequently, the board's commitment to the monitoring, service and networking activities is increased as well, which will have a positive impact on all the respective board role performance. It is therefore reasonable to suggest that:

Cognitive conflict, effort norm, use of knowledge and skills, and groupthink is positively related to board monitoring, service and networking roles performance.

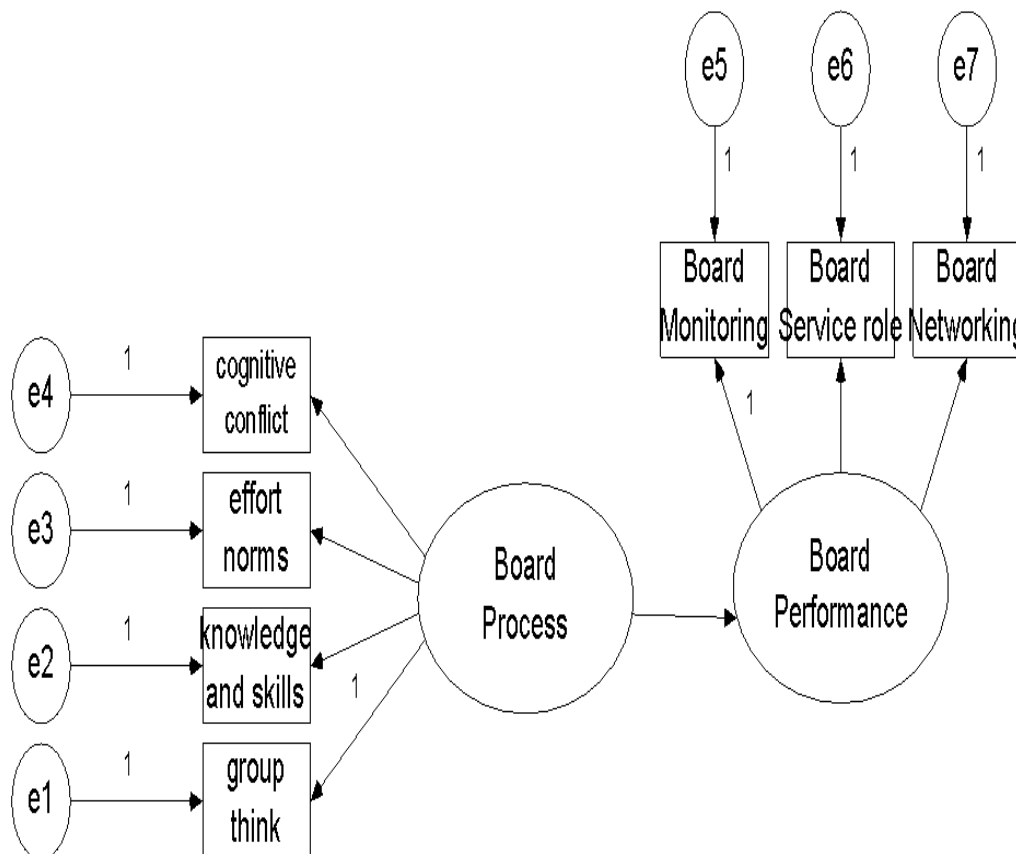


Figure 1. Theoretical Model

In the conceptual model, research attention is shifted to an 'informal' behavioral perspective, i.e. board process. So far, research efforts in this respect show significant positive relationships between board process variables and board performance, which can aid adequate investor protection. This study employs the use of structural equation modeling (SEM). Figure 1 presents a Confirmatory Factor Analysis (CFA) model where an endogenous board performance variable is introduced with its three dimensions as the cause of the exogenous variable board process, represented by four observed dimensions (each with their measurement items). It is important to note that the conceptual framework model attempts to explain the latent constructs of corporate governance structure in the relationships among respondents sharing similar characteristics, with the arrows pointing outward, in ways captured by dependence relationships. The objective is to identify the structure among a defined set of variables, or observations that offer not only simplicity, but also a means of description and even discovery (Hair, Black, Babin & Anderson, 2010).

Methodology

Instrumentation and Measurements

Unlike the usual trend, the study employs more reliable methodological approach (confirmatory factor analysis) to analyze the perceptions of informed capital market participants: such as institute of directors, middle and high-level managers, company secretaries, professional auditors, and the regulators to proxy for board. While the most appropriate method of studying board process and board effectiveness was to sit in board meetings, but it is impossible to adopt this method, as board meetings are highly confidential (Wang & Ong, 2005; and Ingley & van der Walt, 2005). However, as a first step, an informal chat with few middle and high level managers in some public listed companies and an overview of the study background in the literature confirm that questionnaire approach was appropriate and logical (Ingley & van der Walt, 2005). All the data for both board process and board role performance variables were obtained from responses of 5-points Likert Scale questionnaire. Great care was taken in designing the questionnaire.

As a first step, we have series of discussions with experts, who possess relevant research experience in corporate governance. Thus, based on the literature, the survey questionnaire items for the constructs were adopted with modifications largely influenced by the efforts of other researchers who had attempted to test similar constructs (Forbes & Milliken, 1999; Wang & Ong, 2005; Ingley & van der Walt, 2005; Zona & Zattoni, 2007; and Maharaj, 2009). Hence the content validity was deemed adequate.

As a pre-test process, the research instrument was submitted to four senior academics with extensive combined experience in survey research. They were able to provide critical assessment of the content (face) validity of each item, as suggested by Rea & Parker (2005). These expert suggestions during the questionnaire design and revision process helped ensure a close match between the pre-test and final version of the instrument.

Piloting of the survey instrument is accomplished by administering the questionnaire to a small sample (30) of respondents in Nigeria whose responses and general reactions are sought and examined. Luckily, all those that participated in the questionnaire pre-test are sufficiently knowledgeable about issues of relevance to the field of inquiry. Among them are nine high-level managers, one company secretary, and one CEO.

The questionnaire contained a total of 30 sets of statements including 7 demographic questions. 14 sets of statements measured a wide range of board process dimensions. 9 sets of statements measured board monitoring role, board service role and board networking role. Each of these sets of questions required a single response (tick as appropriate in the answer options 1-5) for each of a range of items. Each statement was rated by respondents on a range of measures scaled from 1 “strongly disagree” to 5 “strongly agree”. Greater scores mean higher level of constructs. Items specific to a given construct were separated from each other in the questionnaire to minimize consistency bias and reduce any sense of repetitiveness. Additionally, each measure included at least one reverse-coded item. The questionnaire cover motivated participation by suggesting the usefulness of the questionnaire as an evaluation tool for reflection on participants’ own corporate experience, indicating the amount of time required to complete the survey, and assuring participants of anonymity and confidentiality.

Two sets of variables were included in this study: (1) board performance; and (2) board process. The field operation of these variables is discussed below.

Data for board performance i.e., the study’s dependent variable, board monitoring performance, board service performance, and board networking performance were collected through the survey and assessed with a 5-point Likert Scale. The questions were adopted from the works of (Maharaj, 2009; Zona & Zattoni, 2007; and Wan & Ong, 2005). Cronbach’s alpha for this scale is 0.777, 0.842 and 0.780 respectively. Four manifested variables have been studied under the construct board process. Data for the study’s indicator variables, cognitive conflict, effort norms, use of knowledge and skills, and groupthink were gathered through a survey with a 5-point Likert Scale.

Cognitive conflict was measured with a multi item scale for the degree of conflict among board members, adopted from Zona & Zattoni (2007). Specific items assess how frequently there are conflicts and disagreement (i) among directors; (ii) on decisions to be taken; (iii) on how the board should work; and (iv) on how to pursue the firm’s goals. Cronbach’s Alpha for this scale is 0.794.

Effort norm was measured following Zona & Zattoni’s (2007) example. Specific items assess the extent to which directors (i) use their skills and knowledge to fulfill board’s roles; (ii) are available when needed; (iii) devote all the needed to complete the roles assigned; (iv) participate actively during meetings. Cronbach’s Alpha for this scale is 0.843.

Use of knowledge and skills was measure drawing from (Maharaj, 2009; Zona & Zat-

toni, 2007). Specific items assess the extent to which (i) task delegation on the board represents a good match between knowledge and responsibilities; (ii) there is a clear division of labor among directors; (iii) information flows quickly among board members. Cronbach's alpha for this scale is 0.812.

Groupthink was measured drawing from Maharaj (2009). Specific items assess the extent to which directors (i) skills set and experience of fellow board members; (ii) board members are expected to give constructive feedback to management; (iii) board chair ensure board members take leading role in areas of their expertise; and (iv) board members respect the ideas of others when different from each other. Cronbach's alpha for this scale is 0.829.

Sample

The empirical study was carried out using public listed companies in Nigeria as the sample frame. Listed companies are chosen because they are regulated, easier to obtain data and also more accurate, since they are certified. The population of 318 Nigerian listed companies was targeted for the study.

For data collection purposes, 380 questionnaires were distributed to targeted respondents in sampled organizations: listed firms, institute of directors, ministry of finance, accounting firms and the Nigerian Accounting Standards Board. Out of this number, 169 were returned, 13 were excluded because the questionnaires were incomplete, and 2 were deleted when treating outliers (Mahalanobis distance). Thus, a total of 154 usable responses have been employed for subsequent analysis, giving a response rate of 40.5 percent. A 30% response rate is considered acceptable (Sekaran, 2003).

Though participation was on a voluntary basis, some respondents show great interest in the focus of the research, perhaps because corporate governance was the main issue due to scandals in some Nigerian listed firms. However, it was with tremendous effort and determination that this response rate was achieved. In most of the organizations, an insider staff (usually friends or relatives) facilitated the follow-up. If this survey had been conducted without follow-ups, the response rate may have been below 15%. The sample size appears to be adequate and response rate obtained was comparable to several studies using listed companies as the study sample. Respective response rates for such studies were 46 percent (Sanda et al, 2008; and Okpara, 2009) and large survey responses (Ingley & Van der walt, 2005; Zona & Zattoni, 2007).

Result

It should be recalled that the objective of the paper is to determine any relationship between behavioral board process factors and board role performance. In this paper, the data analysis was conducted in two stages. First, as stated above, the scale reliability coefficient has been calculated for each of the scales used in board process and board role performance. Cronbach's reliability coefficients ranged from 0.777 to 0.843. Since these are above the 0.70 accepted threshold suggested by Hair et al (2010), it has been decided to keep the items under each scale. In addition, exploratory

factor analysis (EFA) using principal component method with varimax rotation were conducted on both board performance and board process variables to examine their dimensionalities not based on any theoretical underpinning. Five items were removed because of low communality figures (< 0.5). The remaining measured items were confirmed using CFA based on proposed theoretical framework, and the relationships between board process variables and board role performance were empirically tested using structural equation modelling.

Table 1. Exploratory Factor Analysis: Board Process (Exogenous Variable)

Measurement items	Factor Loadings	% of Variance
Frequent conflicts on decisions to be taken	0.860	64.47%
Frequent conflicts on how board should work	0.758	
Frequent conflicts among directors	0.768	
Directors use skills and knowledge to fulfill board tasks	0.660	
Directors are available when needed	0.843	
Directors devote all time needed to complete tasks assigned	0.592	
Usage of strategic thinking	0.783	
There is a clear division of labor among directors	0.694	
Information flows quickly among board members	0.708	
Good match between knowledge and task delegated to directors	0.579	
The need to outsource expert human resource	0.578	
Whether there is high-level director independent mindedness	0.720	
Board members respect the views of others even if different	0.666	
Kaiser-Meyer-Olkin Measures of Sampling Adequacy	.927	
Bartlett's test of sphericity: Appr. Chi-Square	1248.042	
Df/Sig.	78/55	
Cronbach's Alpha (α)	.936	

The construct - board process - was initially measured using a 16-item scale. When performing EFA, three items with factor loadings less than 0.5 were removed from the scale. Employing the principal components factor analysis (PCA), four factors (13 measured items) with an eigenvalue greater than two explained 64.47% of the variance of board process. The varimax-rotated factor pattern implies that all the four factors concerned - cognitive conflict; effort norm; use of knowledge and skills; and groupthink with the 13-item scale ($\alpha = 0.936$; KMO = 0.927; and $< .001 @ 5\%$ Sig) measuring the construct present acceptable figures to build the latent construct board process for further statistical analysis. The result of the EFA is shown in Table 1.

Similarly, Table 2 shows the EFA result for the construct board performance with KMO and Bartlett's Test, which measure sampling adequacy. 0.927 and $\alpha = 0.893$ values, meaning that the sample for the data is very adequate (N=154), since the rule states that the figure must be above 0.50. There is also high communality among the variables. This shows a strong sense of belonging, 'harmony' or otherwise of the variables, which can lead to an explanation of behavior towards others. To remain in the 'family', the accepted criterion is ≥ 0.50 , but should not be = 1, else the factor faces extraction (Hair et al., 2010). Employing the principal component analysis, with

eigenevalues greater than 2, all the factors explained more than 60% of the variance. All the items with factor loadings less than 0.50 were removed from the scale as clearly shown in the results of the EFA in Table 2.

Table 2. Exploratory Factor Analysis: Board Performance (Endogenous Variable)

Measurement Items	Factor Loading	% of Variance
Board controls plans and budget	0.788	66%
Board evaluates performance of top executives	0.850	
Board engage in succession planning for CEO	0.696	
Board takes long time strategic decisions	0.680	
Board's suggestions frequently improve strategic decisions	0.860	
Board contributes to the implementation of strategic decisions	0.686	
Benchmark strategic plan with industry data	0.789	
Board contributes to the acceptance of the firm in the environment	0.600	
Board provides contacts with relevant stakeholders	0.762	
Kaiser-Meyer-Olkin Measure of Sampling	.893	
Bartlett's Test of Sphericity: Approx. Chi-Square	680.081	
	df	36
	Sig.	.000
Cronbach's Alpha (α)	.893	

Board Process Measurement Model (CFA)

Using Structural Equation Modeling (SEM), we assess the strength of relationships between any two factors more accurately with the use of Confirmatory Factor Analysis (CFA) to reduce measurement error due to the multiple indicators per latent variable. Other techniques can examine only a single relationship at a time with low measure for errors (Hair et al., 2010). Also, an overall test of fit enabled the researchers to assess the validity of a pre-specified set of hypotheses, each representing a regression-like relationship between factors. SEM also refers to a 'hybrid of model' with both multiple indicators for each latent variable, and paths specified connecting the latent variables, Hair et al (2010).

In this study, data collected was subjected to preliminary analysis-treating missing values, normality, scale reliability and validity, and exploratory factor analysis. Nevertheless, notwithstanding hypotheses developed for the study, CFA does not estimate direct or indirect causal relationships. Rather, it is meant to show the correlation estimates among the latent constructs (board process and board performance). Figure 2 of the board process CFA model shows how measurement errors were drastically reduced in a way that regression analysis cannot do. Initially, the output shows that the model does not fit the data. Based on the criteria for assessing CFA model fit, the normed chisquare has a value above 2. This is not within the range of 5 as suggested by (Hair et al, 2010; and Byne, 2010). Also, this figure does not make up for the p-value of 0.000, which should be greater than the 0.05 threshold. None of the figures in the fit criteria meets the required threshold. However,

after some suggested modifications the model fits the data, as indicated in Figure 2. Moreover, further criteria for acceptance of this model, is the Comparative Fit Indices (CFI), Normed Fit Indices (NFI), Tucker-Lewis Index (TLI), GFI, and AGFI, which were both less than 0.9 initially, but improved to meet the 0.9 above threshold. Also, the Root Mean Square of Appropriation (RMSEA) should be 0.60 or below. In this model (Figure 2), the initial value of 1.09 is not the desired figure, but after modification, the value of 0.42 meets the criteria for acceptance.

Most interesting are the high percentage of measurement error figures between the variables, and the strenghts of observed variables measuring the latent constructs. On the basis of the foregoing, it can be affirmed that the remaining indicators cannot be rejected, thus they are confirmed items measuring board process. However, it is likely that the informal board process (behaviorial) variables may be responsible for board role performance. Further step of SEM can reveal the direct or indirect causal relationship in a structure simultaneously.

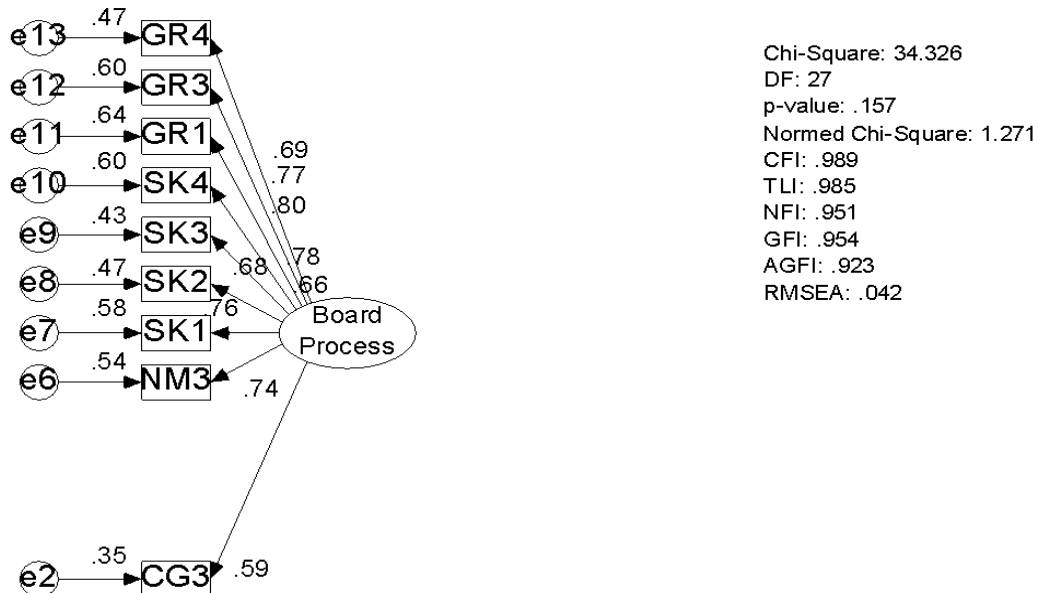


Figure 2. Board Process CFA Model after modification

In the CFA model (figure 2), the Squared Multiple Correlation (SMC) values (.47 for GR4; .60 for GR3; .64 for GR1 down to .35 for CG3) represent the extent to which a measured variable's variance is explained by a latent construct. The rules provided for the factor standardized loading estimates tend to produce the same diagnostics because SMC are a function of the loading estimates regardless of whether the researcher is estimating in a congeneric measurement model, CFA or path model with latent constructs (Holmes-Smith et al., 2006). In addition, a major component of construct validity is convergent validity – items that are indicators of a specific construct should converge or share a high proportion of variance in common. Factor loadings, variance extracted (or SMC), average variance extracted (AVE) and construct reliability are

some of the available ways to estimate the relative amount of convergent validity. In general, researches report at least one of the three models-based estimates of reliability: construct reliability, SMC or VE (Bollen, 1989). Thus, the SMC of a good observed variable should be .5 and above. Nevertheless, 0.3 indicates an acceptable item variable (Holmes-Smith et al., 2006) especially when the indicators for a construct are not more than 3 provided other constructs have higher indicators. A standardized factor loading of 0.7 for an observed variable is roughly the equivalent of 0.5 SMC. From the CFA analysis above, none of the items present offending estimates.

Construct Validity

Construct validity is the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure. A fundamental assessment of construct validity involves the measurement relationships between items and constructs (i.e., the path estimates linking constructs to indicator variables). In CFA application, larger standardized loading estimates confirm that the indicators are strongly related to their associated constructs and are one indication of construct validity. Rules of thumb suggest that standardized loading estimates should be at least .5 and ideally .7 or higher. Low loadings suggest that a measured variable is a candidate for deletion from the model (Hair et al., 2010).

Table 3. Construct Reliability and Variance Extracted compared using standardized loading estimates: Board Process

Variable& Items code	Std. loadin	(Std. loadin) ²	(Σ Std. loadin) ²	Σ (Std. loadin) ²	Std. Error	Σ Std. Error	Constrc Relbty A/A+B	Varianc Extretd C/C+B
Board Process								
CG2	0.684	0.468			0.03			
CG3	0.587	0.345			0.037			
CG4	0.735	0.540			0.045			
NM1	0.738	0.544			0.035			
NM2	0.791	0.626			0.034			
NM3	0.754	0.568			0.03			
SK1	0.78	0.608			0.035			
SK2	0.72	0.518			0.04			
SK3	0.639	0.408			0.035			
SK4	0.776	0.602			0.031			
GR1	0.778	0.605			0.036			
GR3	0.771	0.594			0.036			
GR4	0.693	0.480	89.22 A	5.815 C	0.029	0.453 B	0.994	0.937

Table 4. Board Role Performance

Variable & Items code	Std. loading	(Std. loadin) ²	(Σ Std. loading) ²	Σ (Std. loadin) ²	Std. Error	Σ Std. Error	Constr Relibty: A/A+B	Variance Extractd C/C+B
Bod Perfrm								
MN 1	0.600	0.360			0.034			
MN 2	0.607	0.368			0.053			
MN 3	0.709	0.503			0.003			
SV 1	0.699	0.489			0.038			
SV 2	0.725	0.526			0.036			
SV 3	0.727	0.529			0.038			
SV 4	0.740	0.548			0.027			
NT 1	0.757	0.573			0.036			
NT 2	0.730	0.533			0.037			
	Σ 6.294		39.61(A)	4.427(C)		0.329(B)	0.992	0.931

From Tables 3 and 4, the rule of thumb for estimating discriminant validity suggests that construct reliability should be greater than variance extracted. Clearly, for both board process and board performance, the figures $0.994 > 0.937$, and $0.992 > 0.931$ respectively provide acceptable construct validity estimation. Discriminant validity is the extent to which a construct is truly distinct from other constructs. Thus, high discriminant validity provides evidence that a construct is unique and captures some phenomena other measures do not (Hair et al., 2010). CFA provides two ways of assessing discriminant validity. The first is the one above, and a more rigorous test according to Hair et al (2010) is to compare the average variance-extracted (AVE) values for any two constructs with the square of correlation estimate between these two constructs. The variance extracted estimates should be greater than the squared correlation estimate. The idea is a latent construct should explain more of the variance in its item measures that it shares with another construct. Passing this test provides good evidence of discriminant validity (Hair et al., 2010). With CFA, the AVE is calculated as the mean variance extracted for the items loading on a construct and is a summary indicator for convergence. This value can be calculated using standardized loadings: $AVE = \Sigma SL/n$ (no. of items), i.e. $9.446/13 = 0.726$ for board process and $6.294/9 = 0.700$.

From the statistical results above, after the iterative processes of the EFA, the measured items have been subjected to confirmation based on a priori theoretical framework. CFA was then conducted using AMOS Version 16 to test the convergent validity of the constructs used in subsequent analysis. The fit indices suggested by Hair et al. (2010) have been used to test the model adequacy. Convergent validity of CFA result has to be supported by item (α) reliability, construct reliability, variance extracted and average variance extracted (Hair et al., 2010). All the standardized factor

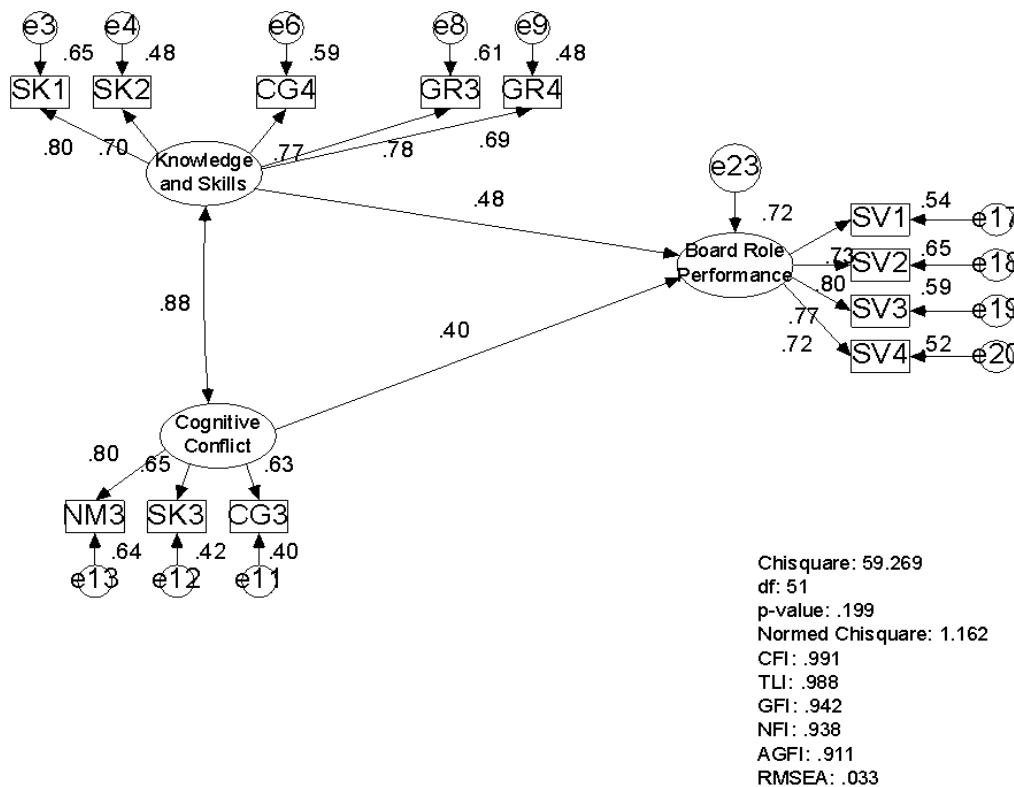
loadings are found to be significant ($p < 0.001$). In addition, construct reliability estimates ranging from 0.992 to 0.994 exceeding the critical value of 0.7 recommended by Hair et al. (2010) indicating it was satisfactory. The rule of thumb for estimating discriminant validity suggests that construct reliability should be greater than variance extracted. Clearly, for both board process and board performance, the figures $0.994 > 0.937$, and $0.992 > 0.931$ respectively provide acceptable construct validity estimation. An alternative measure for estimating discriminant validity is the AVE value. This value has been calculated using standardized loadings: $AVE = \sum SL/n$ (no. of items), i.e. $9.446/13 = 0.726$ for board process and $6.294/9 = 0.700$. Based on the criterion, the variance extracted estimates is greater than the squared correlation estimate.

Measures of Fit

Before analyzing the structural model, it is necessary to understand how to evaluate the models. Fit measures are grouped into various types and each has its specific capability in model evaluation: 1) Measures of parsimony, for example degree of freedom (df) is one of fit measure used for simplicity and goodness of fit; 2) Minimum sample discrepancy function, for example, the Chi-Square statistic is an overall measure of how many of the implied moments and sample moments differ. The Chi-Square statistic (χ^2) is the minimum value of the discrepancy divided by its degree of freedom. The ratio should be close to 1 for correct models (Arbuckle, 2005), or should not exceed 3 before it can be accepted (Byrne, 2010). Since the chi-square is sensitive to sample size, it is necessary to look at other measures that also support goodness of fit. The Chi-Square statistic is an overall measure of how many of the implied moments and sample moments differ. Another example is the p -value, which is the probability of getting as large a discrepancy as occurred with the present sample under appropriate distributional assumptions and assuming a correctly specified model. So, a p -value is a method to select the model by testing the hypothesis to eliminate any model that is inconsistent with the available data or that which does not fit perfectly in the population. 3) Measures based on the population discrepancy, for example, the root mean square error of approximation (RMSEA) is most commonly used, and the figure should be < 0.05 to achieve model fit. 4) Comparison to a baseline model. Three significant indices are Normed Fit Index (NFI), Tucker-Lewis Index (TLI), CFI, AGFI, and 5) Goodness of Fit Index (GFI) and related measures (Arbuckle, 2005, Byrne 2010; and Holmes-Smith et al., 2000). However, Arbuckle (2005) affirmed that model evaluation is one of the most difficult and unsettled issues in structural equation modeling. In this paper, all the fit measures have been tested and interestingly, all the indicators for both the CFA and the structural models achieved the criteria for model fit (see summary in Table 5).

Table 5. Model Goodness of Fit Indices

	Criteria	Indicators: CFA	Indicators: Structural
χ^2	$\rho > 0.05$	34.326	59.269
χ^2/df	< 5	1.271	1.162
Fit Indices: GFI	> 0.9	0.954	0.942
AGFI	> 0.9	0.923	0.911
NFI	> 0.9	0.951	0.938
PGFI	> 0.5	0.572	0.568
Alternative Indices: CFI	> 0.95	0.989	0.991
RMSEA	< 0.05	0.042	0.033
RMR	< 0.05	0.020	0.014

**Figure 3. Hypothesized Structural Model after Modifications**

The proposed theoretical model in Figure 1 was tested based on the theoretical argument relating the two latent constructs: board process and board role performance. Factors of cognitive conflict, effort norms, knowledge and skills and groupthink were used as four dimensions measuring board process, while board monitoring role, board service role and board networking role were served as dimensions of board role performance. Employing AMOS version 16 among 21 measurement items as input,

the SEM analysis was conducted to examine the relationship between each of the constructs as hypothesized. The results of the SEM analysis were depicted in figure 3. The fit indices of the model are summarized. The overall model indicates that χ^2 is 59.269 with 51 degrees of freedom (*df*) and *p*-value = .199, which is an improvement compared to the initial hypothesized model indicating $\chi^2 = 519.224$ with 206 degrees of freedom and *p*-value = 0.000 since technically the *p*-value should be > 0.05 , i.e., statistically insignificant. However, in practice, the χ^2 is very sensitive to sample size and frequently results in the rejection of a well-fitting model. Hence, the ratio of χ^2 over *d.f.* has been recommended as a better goodness of fit than χ^2 (Hair et al., 2010). A common level of $\chi^2/\text{d.f.}$ ratio is below 5 (though below 3 is better). The $\chi^2/\text{d.f.}$ is 1.162 (i.e. 59.269/51), indicating very good fit. Furthermore, other indicators of goodness of fit are CFI = .991, TLI = .998, GFI = .942, NFI = .938, AGFI = .911 and RMSEA = .033. Comparing this result with the critical values in the output estimates, it suggests that the hypothesized model fits the empirical data well.

In path analysis, AMOS's default method of computing parameter estimates is called maximum likelihood, and it produces estimates with very desirable properties (Arbuckle, 2005). In a standardized model, the standardized regression weights, correlation, squared multiple correlations have been displayed. The standardized regression weights (*R*) and the correlations are independent of the units in which all variables are measured, and will not be affected by the choice of identification constraints (Arbuckle, 2005). In figure 3, the standardized regression weight (*R*) for items SV1; SV2; SV3; and SV4 are .73; .80; .77; and .72 respectively. This means when board performance goes up by 1 standard deviation, SV1 goes up by .73 standard deviation.

The fit measures in Table 5 provides information about how well the model fits the data, but the strength of the structural paths in the model is determined by squared multiple correlations (SMC). SMC is the proportion of its variance that is accounted for by its predictors. Interpretation of the SMC is analogous to the R^2 statistic in multiple regression analysis, thus it is a useful statistic that is also independent of all units of measurement (Arbuckle, 2005). In the hypothesized model - Figure 3, the estimate of SMC show that the predictors of board performance (e23) explain 72% of its variance, i.e. $R^2 = .72$. In other words, error variance of board performance is approximately 28% of the variance of board performance itself. For ease of identification of the SMC in figure 3, since .73 is the *R* of SV1, .54 is the SMC, which is the same as $(.73)^2$.

Thus, the structural model measures behave as they should because not only that the results of model fit are very good, but of greater importance is that the results are conceptually consistent with literature as depicted in the proposed theoretical model. Interestingly, the structural model demonstrated an insignificant change in χ^2 value and other fit indices with its CFA model, which is strongly suggestive of adequate structural fit (Hair et al., 2010). The hypothesis is supported and significant – that is between cognitive conflict, use of knowledge, skills and board role performance.

Discussion and Conclusion

The theoretical implication in this study is that agency theory has been strengthened by developing, conceptualizing, and empirically testing board process dimensions and structural model on the relationships between four board process factors and board performance. The perceptions of market participants on behavioral factors to constitute effective board performance, in relations to improving board functioning were the sources of information for developing the measurement model and testing the hypothesis involved in the study. In this respect, Brennan and Solomon (2008) stimulate debate that encourages broader theoretical perspectives, methodological approaches, and developing economy studies. Interestingly, we made an attempt in this study to join scholars that heed the clarion call in the framework of analysis showing how each one contributes to the field. This study finding confirms the works of (Wang & Ong, 2005; Zona & Zattoni, 2007; and Maharaj, 2009). Hence, the research objective of determining board process as success dimensions of board performance have been achieved.

An important finding in this study is that the proposed manifest variables of the construct board process (exogenous variable) – cognitive conflict, effort norm, skills and knowledge, and groupthink have been confirmed to be strong measures of board process. Similarly, for the construct board performance (endogenous variable), the proposed indicator variables – board monitoring role, board service role, and board networking role have been confirmed to be good measures of the construct. However, board service role items are stronger because both four items are retained after all the modification processes to achieve model fit. This has implications for theory because the findings in this study corroborate the literature, where several theories have been used in strategy research about board of directors (Zahra & Pearce, 1989; Huse, 2005). Particularly, the dominant agency theory (Jensen & Meckling, 1976; and Fama & Jensen, 1983), adopted for this study, notwithstanding its various disputable assumptions such as the complete contracting assumption for shareholders only. Even with agency theory's incontrovertible arguments, it is nonetheless indispensable in corporate governance debates. Challenging agency theory and relaxing some of its basic assumption may lead to new research traditions, new perspectives on board, and corporate governance research (Zingales, 2000).

Exclusive of the afore-mentioned theoretical contributions, methodological approach is another significant contribution in this study. It has been reported by Wan and Ong (2005) that, until recently, the literature on board has been sparse. The reason given for insufficient empirical work on board processes is likely due to the difficulty of gaining access to boards. To avoid such difficulty, and in considerations of the peculiar research objectives, this study involved key relevant informed individuals in the capital market to participate in the survey. In general, based on a sample of 154 responses amongst important stakeholder individuals, this study has conceptualized agency model and empirically tested the model on the sampled publicly listed firms in Nigeria. The widespread perceptions averted the possibility of bias responses, which would have been difficult to avoid if only one group is surveyed, and most importantly

the participants are fit to proxy for board. Nevertheless, all the previous studied reviewed employed the use of Cronbach's alpha reliability coefficients to estimate the scale reliability. In addition, an important methodological contribution in this study is the use of exploratory factor analysis and SEM. In this regard, Kline (2005) affirms that EFA is not generally considered a member of SEM family, though it is a statistical technique used for evaluating a measurement model. In this study, as a first step, EFA has been performed to evaluate the questionnaire items that measure each latent construct through an iterative process of principal component analysis and the varimax rotational methods in order to extract the dominant factors and indicators within each factor that share common variance, and to reach a satisfactory solution on which items should be retained so as to finally suggest items in the same dimension.

Importantly as a first attempt seen in the literature, it is the correlation of factors that the study intends to confirm for the measurement model (CFA), after exploring for the study measures. Further, using SEM, we assessed the strength of the hypothesized relationships between the four predictors and the outcome factor simultaneously and more accurately with the use of confirmatory factor analysis to reduce measurement error due to the multiple indicators per latent variable and at the same time showed the direct effect in the structural relationships. Other techniques even if applied can examine only a single relationship at a time; hence this is considered an acceptable contribution in methodology in response to the calls by Brennan and Solomon (2008) for broader methodological approaches. With the in-depth method used to validate measures, the implication for practitioners is that the principle-based behavioral perspective of board and corporate governance will be closer to actual board behavior than the customized rule-based approach, and board performance may thus become more actionable for practitioners. This suggests that board members contribute to the problem solving process because they offer a variety of experiences and quality of judgment, which in turn makes them perform their monitoring and service roles more effectively. In addition to dealing with conflicts resulting from differing preferences of stakeholder alliance, highlight board members' contributions in dealing with the complexities and associated uncertainties related to strategic decisions and skills to solve firms' problems. This argument falls within acceptable rationality because firm actors have different and limited cognitive capacity; they need planning and controlling routines to help them analyze complex tasks for effective decision-making. This also implies that participation in the early stages of strategic decision-making will enable board members to protect shareholders' interests through problem identification and definition.

Therefore, boards' emphasis on operational matters as a measure of performance should be reconsidered, because this study has provided the required empirical evidence to substantiate the arguments in the extant literature that operational variables, such as monitoring role are insignificant instruments of compliance, but has so much effect on board service role performance. Finally, this study practically conceived that Nigerian firms that understand the different dimensions of board process could lead to better utility of boards to maximize their contributions and to impact such dynamics not only on board performance in particular, but also on firm's performance in general.

Based on the outcome of study analysis, the implication for policy can be traced to an earlier Nigerian study by Okike (1994) who observes that the various measures taken by the Federal Government of Nigeria to improve the investment climate in the country are commendable and could help to attract foreign investors into the country. Nevertheless, there are corporate governance implications that cannot be overlooked (Okike, 2007). Prospective foreign investors would need to be assured that the systems of corporate governance put in place are effective, in order to win their confidence to invest in Nigeria. In his visit to Nigeria, shortly before he vacated office, the former US President, Bill Clinton, recognizing the enormous investment potentials in Nigeria, called on the government to put its house in order to attract prospective investors. Therefore, the correlation estimates of this study findings seem to suggest that if the Nigerian code will pro-actively focus on behavioral attitude of board with legitimate expectations and managing the relationships with them will contribute towards effective corporate governance especially for the regulated listed firms, which will ultimately determine their value, and also result in a positive reputation for the complying organizations. This could be in place of the current formal rule-based corporate governance structure, which for many years since 2002, when the Peterside committee consists of few individuals adopted an emerged economy's UK Cadbury report, and assumed it suitable for emerging Nigerian market. Thus, this can be likened to be a strong contributing factor or a hindrance to better corporate functioning. In other words, this answers the research question in the affirmative. Hence, based on this study findings, efforts to strengthen the Nigerian code to emphasize behavioral board process factors to ensure better board functioning have been achieved; having in perspective some attitudinal variables such as cognitive conflicts, effort norms, use of knowledge and skills, and groupthink.

This study is not without its limitations. Theoretically, this study claimed to be a new research agenda focused on conventionalized descriptions of board behavior, but the study rooted its board process and board performance constructs from the dominant agency framework. Ideally, in a behavioral perspective, the emphasis should have focused on developing actual board behavior based on specific behavioral theoretical factors. This is because in reality, boards may be less concerned with solving conflicts of interests and rather more concerned with solving problems of collection and coordination of dispersed knowledge through planning, control procedures, managing the complexity and uncertainty associated with strategic decision making, and facilitate cooperation between stakeholders (Roberts, McNulty & Stiles, 2005; and Van Ees et al., 2009). It is however difficult for a director to separate monitoring from resource-provision activities. Therefore, we agree with Roberts et al (2005) that a more comprehensive picture of board behavior is required. However, even though the board process variables are behavioral in nature, the study cannot claim complete paradigm shift to behavioral arguments.

So far, in the literature, behavioral insights from agency theory are limited, and lessons from the behavioral theory of the firm may be the natural starting point for establishing better field research from a behavioral perspective on boards and governance. In this regard, Van Ees et al (2009) examine four core variables in the behavioral tra-

dition that have been applied in recent board research such as bounded rationality, satisficing behavior, organizational routines, and bargaining among coalitions of actors. The bounded rationality variable emphasizes that organizational actors do not fully understand the world they live in. Earlier, Hendry (2005) asserts that decision-making in the behavioral theory is consequently seen as an experiential learning process, where firms adapt incrementally to its changing environment through learning and experimentation. Perhaps, in the future when more similar research outputs are made recourse to Nigerian sector analysis, firms will respond to recommendations so that actors at the helms of Nigerian firms' affairs might fully accept and understand good choices on important needs for perfect mapping of the decision-making environment. It will provide a better implication for practice in addition to our pace-setter attempt.

The findings in this study set a fundamental challenge for corporate governance researchers in the emerging markets both at the individual level, firms at the organizational level, and nations at country level on the positive relationship between board process factors and board performance. The response on this indispensable subject is imperative because corporate governance remains the prerequisite to firms' success. New directions and substitute perspectives in research on board and corporate governance are necessitated to meet these challenges, especially questions about how board actually behave in the board room if the organization is perceived as a nexus of coalitions between stakeholders.

The research outlined informal principle-based behavioral factors and challenged the predominant approach - the formal rule-based factors, which have not been able to transform effective corporate functioning, hence incomprehensive. For Nigerian listed firms, a combination of board process factors – cognitive conflict, effort norms, use of knowledge and skills, and groupthink have been determined empirically to be the factors that explain board performance. Rather than rely solely on unquestioned governance code of best practice as a basis for prescription where synergy of cooperation, interaction, communication, and information sharing between members, shareholders and other stakeholders have generally not been assumed to affect the board's functioning (Forbes & Milliken, 1999; Gabrielson & Huse, 2004). Behavioral board process and corporate governance, the actual coalitions and interactions in and around boards will be the foundation for the emerging Nigerian market to come up with an all-inclusive principle-based corporate governance practice that will not only serve as an instrument for compliance, but also as experiment for heuristic practice.

In addition, the findings in this study seem also to suggest that individual board processes affecting specific board performance indicators, such as effort norms, usage of skills and groupthink tend to stand out, and are most likely to strengthen the effort of individual board members that reasonably enhance the service and networking roles of the work-groups (Forbes & Milliken, 1999; Wan & Ong, 2005; Maharaj, 2009). As noted in the survey responses with managers, company secretaries and directors, many mentioned that coalition of stakeholders on board provide directors the skills to strategize on key firm issues, monitor firm performance, advise senior managers, and discuss options, hence the significant relationship between board process and board performance.

This study has succeeded in bridging the conspicuously dearth of extensive research on board process. Perhaps the insufficient empirical work is possibly due to the difficulty of gaining access to data. As a task, we believe that such a limitation should not be a hindrance for not developing a working model for conceptual analysis. The results in this study seem to suggest that board process play a more important role in explaining board role performance, thus this study can be expressed in terms of contribution of theory. As part of their accountability to achieve firm objectives, they should collectively use the necessary knowledge and skills, information and authority to establish, and monitor the system of board firm control through the provision of participative advice. On a more practical note, combination of the afore-mentioned attitudes and roles and understanding the different dimensions of board processes could lead to better functioning of boards to maximize their respective tasks towards board performance. This debate will follow other preceding arguments that portray a misapprehension of the superiority of equity shareholder as the ultimate board role.

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