Board Characteristics and Firm Performance in State-Owned Enterprises: Evidence from Cameroon

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Abstract

Purpose: This study examines the link or association between the characteristics of boards of directors and performance in public enterprises in Cameroon.

Method: Generalized least square regression (GLS) techniques were used in conjunction with generalized estimation equations (GEIs). The data used in this study are taken from the database of the Technical Commission for Rehabilitation (CTR) of public sector companies, which is hosted by the Ministry of Finance (MINFI).

Results: the proportion of women directors has a positive and significant influence on the performance of public enterprises. The number of meetings held by the board is significantly and positively associated with the performance of public enterprises. Moreover, the proportion of foreigners has no association with the performance of public enterprises.

Originality / relevance: this article is initiated in favor of the promulgation by the Head of State of Cameroon of laws No 2017/010 and 2017/011 of 12 July 2017 on the general status of public enterprises preceded by decree No 2019/320 of 19 June 2019 specifying the modalities for the application of laws raised, all this in place of the 1999 law. In view of the changing socio-economic environment, it became urgent to review this old law in order to adapt the management of these entities with the new realities of New Public Management. These companies are performing against and are generally under the perfusion of the state. Revisiting the normative framework and questioning the effectiveness of the implementing decree are elements that have guided this research program which includes other axes.

Keywords: Board of Directors, Performance, Public Companies, Turnover, Stakeholders, State-Owned Enterprises

JEL: L32 **Public Enterprises • Public-Private Enterprises**

NB: This work is original because; it's the result of a field survey based on data collected from the Technical Committee for the Rehabilitation (CTR) of Public Enterprises in Cameroon. The data used is real. As an author, it is not the subject of any publication in a journal.

Caractéristiques des conseils d'administration et performance des entreprises publiques : le cas du Cameroun

Résumé

Objet : Cette étude examine le lien ou l'association entre les caractéristiques des conseils d'administration et la performance dans les entreprises publiques au Cameroun.

Méthode : L'on a utilisé les techniques de régression des moindres carrés généralisés (GLS) associées aux équations d'estimation généralisées (GEE). Les données utilisées dans cette étude sont extraites de la banque de données de la Commission Technique de Réhabilitation (CTR) des entreprises du secteur public laquelle est logée au ministère des Finances (MINFI).

Résultats : la proportion de femmes administratrices a une influence positive et significative sur la performance des entreprises publiques. Le nombre de réunions tenues par le conseil d'administration est significativement et positivement associé à la performance des entreprises publiques. Par ailleurs, la proportion d'étrangers n'a pas d'association avec la performance des entreprises publiques.

Originalité / pertinence : cet article est initié à la faveur de la promulgation par le Chef de l'Etat du Cameroun des lois N° 2017/010 et 2017/011 du 12 Juillet 2017 portant statut général des entreprises publiques précédées par le décret N° 2019/320 du 19 Juin 2019 précisant les modalités d'application des lois suscitées, tout ceci en remplacement de la loi de 1999. Au vu de l'évolution de l'environnement socioéconomique, il était devenu urgent de revisiter cette ancienne loi afin d'adapter la gestion de ces entités avec les nouvelles réalités du New Management Public. Ces entreprises sont contre performantes et sont généralement sous perfusion de l'Etat. Revisiter le cadre normatif et interroger l'effectivité du décret d'application sont des éléments qui ont présidé à ce programme de recherche qui comporte d'autres axes.

Mots clés : Conseil d'administration, Performance, Sociétés publiques, Chiffre d'affaires, Parties prenantes, Entreprises publiques

JEL : L32

NB : ce travail est original car il découle d'une enquête de terrain avec pour base les données collectées auprès du Comité Technique de Réhabilitation (CTR) des Entreprises Publiques au Cameroun. Les données utilisées sont réelles. En tant qu'auteur, il ne fait l'objet d'aucune publication dans une revue.

Introduction

The board of directors as an internal governance mechanism is essential for companies, whether public or private Brennan (2006). Plays a fundamental role in oversight, strategic direction and important decision-making. It is essential to ensure effective leadership, transparency in decision-making and accountability to stakeholders. His ability to balance conflicting interests while maintaining a clear vision for the future is crucial to the long-term success of a private or public company. The board of directors plays an important role in overseeing the company, particularly with respect to the remuneration system and wealth management (Hambrick and Mason 1984). Given that organizations have different contextual challenges, caused by their core business, size and structure, among other attributes, The criteria for selecting board members should consider all relevant factors to ensure its effectiveness (Zahra and Pearce, 1989).

Although public enterprises have an obligation to survive financially, they were created in Cameroon as in many African countries to stimulate economic development and contribute to the long-term vision of modern democratic governments. They must contribute to economic growth, the reduction of unemployment and the eradication of extreme poverty and enable the president to reward his political allies and co-opt opponents and thus secure his power base (Van de Walle, 1994). Cameroon's public enterprises receive preferential financial treatment because they regularly receive state subsidies (Bekolo, 1995; Touna and Tamba, 1996). Despite the private sector infrastructure, public enterprises in Cameroon continue to exercise virtual monopolies in certain economic sectors and sometimes distort the competitive landscape. For example, Cameroon Telecommunications (CAMTEL) has exclusive control of all national telephony and internet infrastructures, including fibre optic cables and the telephone network. Another example is the oil and gas sector, where extraction, refining, storage and distribution are largely controlled by the state through five public companies (National Hydrocarbons Company (SNH), National Refining Company (SONARA), Camerounaise Oil Depots Company (SCDP), Hydrocarbures Analysis Controls (HYDRAC) and Trading and operations (TRADEX).

Public enterprises in Cameroon play a crucial role in the national economy, especially in strategic sectors such as energy, transport, telecommunications and agriculture. They are often seen as instruments of economic and social development. However, they face performance problems, including mismanagement, lack of investment and corruption. These major challenges have led to operational inefficiency, financial losses and a lack of competitiveness vis-vis private companies. This lack of performance has led to reforms that have led to privatizations, which were aimed at improving their governance and performance. Some of them have been partially or fully privatized to attract private investment and improve their efficiency. However, these privatization processes are often controversial and can encounter political resistance.

The governance of public enterprises in Cameroon is a matter of concern. Issues of transparency, accountability and resource management are often raised. The regulatory framework exists, but its application is sometimes insufficient. Public enterprises are also expected to play a role in social development by providing essential services to the population. However, their inability to meet the basic needs of the population (such as access to drinking water, electricity or infrastructure) is being criticized. Access to finance is another challenge for public enterprises. Many of them depend on government subsidies and are having difficulty attracting investment because of their precarious financial situation.

External governance mechanisms exist in Cameroon such as the Cameroon's inter-employer group (GICAM), the National Anti-Corruption Commission of Cameroon (CONAC), the Higher Control of the State (CONSUPE), the National Order of Chartered Accountants and Certified Accountants (ONECCA). They advocate good corporate governance practices, and an arsenal of legal instruments that somehow incorporate certain elements of corporate governance into its provisions. Many researchers still believe that with the enactment of the 2017 Corporate Acts and subsequent decrees, there is much more to be done to make state-owned corporations competitive and free from corruption, embezzlement and fraud.

Caught between poor performance and beneficial financial treatment (subsidies), financial scandals, management errors, corporate fraud, corruption cases are common in Cameroonian public companies,

and since the early 2000s, The leaders of some state-owned enterprises in Cameroon have been jailed for embezzlement, corruption and fraud (Sangue, 2011). This has prompted many academics, civil society activists and the media to question the role of boards in their task of monitoring management. Research on the board of directors involves the study of its characteristics that have been widely studied in academic and professional literature.

Some of the main characteristics identified by various authors are the independence of board members (Fama and Jensen, 1983), the competence and expertise of members (Hillman and Dalziel, 2003), gender diversity, ethnicity (Carter, Simkins and Simpson, 2003), the size of the board (Dalton, Daily, Ellstrand and Johnson, 2007). These board characteristics are essential to effective and accountable governance. Thus, this study aims to determine the effect of the characteristics of the board on the performance of public enterprises in Cameroon. The remainder of the article is organized as follows: the following section reviews theoretical and empirical frameworks and the development of hypotheses. The research methodology follows. The results are discussed in the penultimate section and finally the concluding comments in the last section.

1. Theoretical Framework, empirical literature Review and hypotheses development

1.1 Theoretical Framework

Various theories highlight the role of the board as an internal governance mechanism and its contribution to public enterprises' performance (agency theory, stakeholder theory and resource-based theory). The fundamental premise of agency theory is that the managers are acting out of self-interest and are self-centred, thereby, giving less attention to shareholder interests. This pursuit of self-interest increases the costs to the firm, which may include the costs of structuring the contracts, costs of monitoring and controlling the behaviour of the agents, and loss incurred due to sub-optimal decisions being taken by the agents. A SOE is expected to achieve the desired level of efficiency and performance as well as to serve social and policy objectives, it is imperative for the management to be independent to achieve their desired level of managerial efficiency. The agency problem in SOEs arises between the majority shareholders and citizens of the country, where such a relationship has to be in alignment. Citizens are considered as principal and the local government acts as their agent to protect the public interest. Calabrò et al. (2013) state that since the separation between citizen and principal is very high, the possibility of opportunistic behaviour is strong. Mechanisms of corporate governance are created to monitor the behaviour of managers, to provide checks and balances, and to protect the interests of various parties. While this applies to private listed corporations, the same theoretical perspective based on agency theory could apply to SOEs as well, with a few amendments that suit the characteristics of the latter (Calabrò et al., 2013).

Stakeholder theory is an extension of the agency's view, which expects the board of directors to take care of the interests of shareholders. However, this narrow focus on shareholders has undergone a change and boards are now expected to consider the interests of many different stakeholder groups, including interest groups linked to social, environmental and ethical considerations (Freeman, 1984 and Freeman et al., 2004). Stakeholder theory views that companies and society are interdependent and therefore the corporation serves a broader social purpose than its responsibilities to shareholders. Managers' view of the stakeholders' position in the firm influences managerial behaviour. However, Freeman et al. (2004) suggest that managers should try to create as much value for stakeholders as possible by resolving existing conflicts among them so that the stakeholders do not exit the deal.

Resource based theory provides a theoretical foundation for the role of board of directors as a resource to the firm (Johnson et al., 1996). The importance of unique bundles of resources that a firm controls and which are crucial for its growth needs not to be over stressed. Such resources include all assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm, to improve efficiency and effectiveness (Barney, 1991). From this point of view, firm governance structure and the board composition is viewed as a resource that can add value to the firm. A key argument of the resource dependence theory is that organizations attempt to exert control over their environment by co-opting the resources needed to survive (Pfeffer and Salancik, 1978). Appointment of outsiders on the board helps in gaining access to resources critical to firm

success (Johnson et al., 1996). Board directors also function as boundary spanners and thereby enhance the prospects of a firm's business. For example, the outside links and networks that board members exercise may positively benefit the development of business and long-term prospects. Pfeffer and Salancik (1978) observe that, when an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself (or herself) with its problems, will favorably present it to others, and will try to aid it. Pearce and Zahra (1992) underscore the importance of board composition as it facilitates resource exchange between a firm and its external environment, which is essential for organizational survival and effective financial performance. Thus, boards serve as a co-optative mechanism whereby a firm links its external environment to secure resources and to protect itself against environmental uncertainty.

Table 1: Summary of theoretical perspectives and implications for boards

Theory	*Role of Board*	*Implications for board*
Agency theory	Managerial control	Independent boards are a mechanism for shareholders to retain ownership control rights and monitor performance.
Stewardship theory	Managerial empowerment	The board controlled by management is empowered and manages corporate assets responsibly.
Resource based theory	Co-optation	Board with strong external links is a co-optation mechanism for firms to access external resources.

Source: Authors

1.2 Empirical literature review and hypotheses development

The impact of board characteristics on firm performance is non-conclusive in corporate governance literature, giving room for more research to be carried out.

- **Board Size**

The board size is the number of directors on board. There are two conflicting schools of thought: small and large board size, but there is no agreement on which of them is better. Researchers in the first school of thought are of the opinion that small board size contributes more to the success of a company (Lipton and Lorsch, 1992; Jensen, 1993; Yermack, 1996). The second school of thought argues that large board size improves company performance (Pfeffer, 1972). As per Cameroon corporate laws, section 42 of law n° 2017/011 of 12 July 2017 to lay down the general rules and regulations governing public corporations, and section 16 of law n° 2017/010 of 12 July 2017 to lay down the general rules and regulations governing public establishments state that, the board of directors shall be composed of a college of at least 5 and at most 12 members, and must include 01 peer-elected personnel representative. While Pfeffer (1972), Pearce and Zahra (1992), Mak and Li (2001), Adams and Mehran (2005), Boone et al. (2007), Edem and Noor (2014) and Coles et al. (2008) found significantly positive relationship between board size and firm performance, Yermack (1996), Barnhart et al. (1994), Eisenberg et al. (1998) and Vafeas (2000) found a significantly negative relation while Bhagat and Black (2002), Bennedsen et al. (2004) found no significant results. However, the number of directors on board seems to have an influence on firm performance. Hence it is hypothesized that:

H_1: Board size has a positive impact on Stakeholder value.

- **Women on Board**

Though section 77 of law n° 2017/011 of 12 July 2017 says board members are appointed based on their qualification and competences, it is regrettable to note that no dispositions of law n° 2017/010 of 12 July 2017 and law n° 2017/011 of 12 July 2017 call for the public companies to consider the balance in the formation of a board between male and female directors. Several studies have been conducted to establish the relationship between board women and company performance, but findings of these studies are mixed. Carter et al. (2003); Adams and Ferreira (2009) found positive significant relationship between women directors and firm performance. Bohren and Strom (2007),

and Bar et al. (2008) found a negative relationship between gender and fund returns. Gregory-Smith et al. (2012) found no significant effect both with Return On Assets (ROA) and Return On Equity (ROE). Based on the above arguments, it is hypothesized that:

H_2: The proportion of women on board has a positive impact on turnover.

- **Board Meetings**

According to sections 26 and 61 of law n° 2017/010 of 12 July 2017 governing public institutions and law n° 2017/011 of 12 July 2017 governing public enterprises respectively, board members are encouraged to meet as often as possible when convened by the chairperson. However, it is mandatory for board members of public establishments to meet at least twice per year, to consider the performance project and vote on the budget. Lipton and Lorsch (1992) suggest that the most widely shared problem directors face is the lack of time to carry out their duties. In a similar argument, Conger et al (1998) suggest that board meeting time is an important resource for improving the effectiveness of a corporate board. On the contrary, some have argued that the number of board meetings is not necessarily useful in that the limited time Non-Executive Directors (NEDs) spend together is not used for meaningful exchange of ideas among themselves or with management (Vafeas, 1999). This position has been recognized as a natural consequence of the fact that agenda setting for such meetings is done by chief executive officers (Jensen, 1993). In addition, it is believed that routine tasks absorb much of the meetings and this limits opportunities for NEDs to exercise meaningful control over management. The nature of the association between board activity and firm performance is not clear. Though this is an open situation, we test the following hypothesis:

H_3: The number of board meetings is significantly and positively related to turnover.

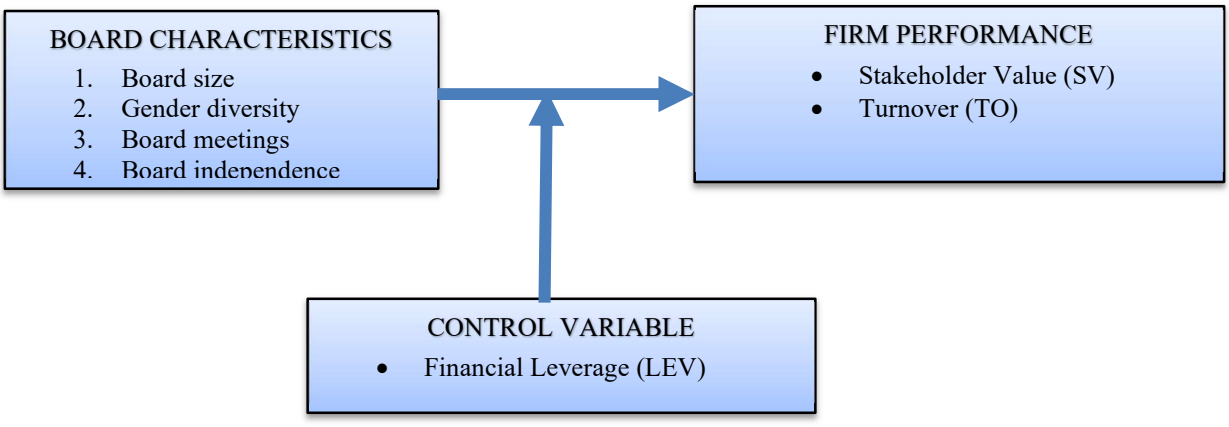
- **Board Independence**

According to Akpan and Amran (2014), board independence refers to a corporate board with majority of outsiders. Fama and Jensen (1993) believe that outsiders are more vigilant in monitoring the behavior and decision making of the firm. This effective monitoring reduces agency costs and increases firm performance as postulated by Fama (1980). Non-executive directors are believed to bring in more skills and knowledge to the company. While Daily and Dalton (1993), Cho and Kim (2007) and Pearce and Zahra (1992) found a significant positive relation, Agrawal and Knoeber (1996), Yermack (1996), Bhagat and Black (2002) found a significantly negative link and Abdulah (2016), Akpan and Amran (2014) found no significant relation between board independence and firm performance. From what precedes, the following hypotheses are formulated:

H_4: The proportion of independent directors is positively associated to stakeholder value.

The figure below explains the proposing relationships between board characteristics and its effect on firm performance.

Figure 1: The relationship between board characteristics and firm performance.



Source: authors' conception

2. Methodology and Data

Twenty-one (21) companies were identified in this study. They are divided into four branches of activity: agriculture (04); hydrocarbons (02); electricity generation and distribution (02); transport and storage (04); information and telecommunications (04); real estate (03); construction (02). This classification is carried out using the Cameroon Activity Nomenclature, Rev1 (NACAM, Rev1) implemented by the National Statistical Institute (INS)

2.1. Research Design

This study adopted a quantitative research approach where data were gathered through secondary approach. The willingness-to-pay/opportunity costs model developed by Charreaux (2007) is used as we measure firm performance by capturing the amount of stakeholder value created by these SOEs. Some key elements of the model were modified: the number of stakeholders increased to six; 7 branches of activity and taxation involved to compensate for the regulatory role of the State.

2.2. Population and Sampling Technic

The population in this study is comprised of public enterprises under the Companies Act, 2017. The choice was motivated by the fact that the effects of private ownership had to be minimized. The population studied is composed of 37 public enterprises. The sampling technique used is that of eliminating enterprises located in an industry and all enterprises without governance data as well as statistical and tax returns during the study period (2014-2017). Public enterprises whose reports were incomplete, and the accounting period were not aligned with the study period were excluded. These enterprises are classified into branches of activity according to the classification of activities in Cameroon rev1 (NACAM, rev1) implemented by the National Institute of Statistics (INS). The total number of public enterprises in the sample for the study is 21.

2.3. Data Collection

This study uses secondary data collected from the company's annual reports and financial statements. This is consistent with other studies that made use of company`s annual reports as their main source of data (Ponnu, 2008 and Sanda et al., 2005). Performance data were collected from statistical and financial declarations of these SOEs available at the Specialized Tax Centre for Public Enterprises, Local Decentralized Units and other Organizations (CSI-EPA-CTD-OM) and the Technical Committee for the Rehabilitation of PEs (CTR). Information on board characteristics such as board size, gender diversity, board independence and board meetings were all collected from surveys and annual reports available at CTR.

3. Research Models and Measurements

The independent variables for this study are board size, board independence, board gender diversity and board activity. The dependent variable is firm performance measured by turnover and stakeholder value. Operationalization of variables is as follows: board size (BSIZE) is the total number of directors on board. Gender diversity (GENDIV) is measured as the number of women divided by the total number of directors. Board activity (BA) is measured by the number of board meetings per year and finally board independence represents the number of outsiders divided by the board size. Turnover is the total sales for the period scaled down by one billion. This is consistent with Akpan and Amran (2014). Scaling is a common mathematical practice to reduce values to a manageable size. According to Wooldridge (2009) data scaling is used for cosmetic purposes to reduce and improve data appearance while changing nothing that is important. Charreaux (2007) defines stakeholder value as the difference between the willingness-to-pay (opportunity price) and the opportunity cost, formulated mathematically as:

$SV_{it} = OT_{it} - \sum OC_{it}$

Where OT_{it} is the opportunity turnover for company i in the year t and $\sum OC_{it}$, the sum of opportunity costs for company i in the year t.

Table 2 : variables

Types of variables		Acronyms	Determination	Authors
Dependent	Stakeholder value	SV	$SV_{it} = OT_{it} - \sum OC_{it.}$ in our case scaled down by one billion for cosmetic reasons	Charreaux (2007), Charreaux and Desbrières (1998)
	Turnover	TO	Total sales scaled down by one billion	Edem and Noor (2014).
Independent	Board size	BSIZE	Number of board members	Edem and Noor (2014).
	Gender diversity	GENDIV	Number of women divided by the total number of directors	Marwa et al (2017)
	Board activity	BA	Number of board meetings per year.	Vafeas (1999)
	Board independence	BIND	Proportion of independent directors	
Control	Leverage	LEV	debt to equity	Agrawal and Knoeber (1996)

Source: Author's

Regression analysis was used to determine the predictive power of board characteristics on firm performance. The model for this study is as stated below:

$$firm\ performance = \beta_0 + \beta_1 BZ + \beta_2 BIND + \beta_3 GENDIV + \beta_4 BA + \beta_5 LEV + \varepsilon \text{ (1)}$$

this model has two sub-models namely

$$Turnover = \beta_0 + \beta_1 BZ + \beta_2 BIND + \beta_3 GENDIV + \beta_4 BA + \beta_5 LEV + \varepsilon. \text{ (a)}$$

$$\text{Stakeholder Value (SV)} = \beta_0 + \beta_1 BZ + \beta_2 BIND + \beta_3 GENDIV + \beta_4 BA + \beta_5 LEV + \varepsilon. \text{ (b)}$$

BZ = Number of directors in management
GENDIV = Number of women
BA = Number of board meetings per year
BIND = proportion of independent directors
LEV = debt-equity ratio
ε = Error term

We shall use both the Generalised Least Square (GLS) and the Generalised Estimating Equations (GEE) estimation methods in testing our hypotheses. In statistics, GLS is a technique for estimating the unknown parameters in a linear regression model when there is a certain degree of correlation between the residuals in a regression model, while GEE is used to estimate the parameters of a generalised linear model with a possible unknown correlation between outcomes.

4 Principal results

4.1 Descriptive Analysis

The descriptive statistics for dependent variables will be presented first, followed by those independent variables and lastly by those for controls variables.

- **Descriptive Analysis for Dependent Variables**

It shows that stakeholder value ranges from a minimum of -1.74 billion FCFA to a maximum of 1.83 billion FCFA with an average of 1.38 billion FCFA for the overall sample.

Table 3 : Descriptive statistics for stakeholder value

Variable	Obs	Mean	Std. Dev.	Min	Max
SV	84	138	443	-174	183
Turnover	84	50.01	135.74	0	817.01

Source: Authors'

The descriptive statistics show that stakeholder value ranges from a minimum of -174 billion FCFA to a maximum of 183 billion FCFA with an average of 138 billion FCFA for the overall sample. The

standard deviation (443 billion FCFA) shows that most companies create value higher than the average value and it equally shows that value creation is not uniform in SOEs. Also, the results show that the debt ratio ranges from a minimum of 0% to a maximum of 147.1% with an average of 36.2%. These results indicate that there are SOEs in Cameroon that have not contracted any debt and there are others without any turnover. These are mostly companies of the electricity production and transportation branch of activity that are still in the investment phase of the project (hence no turnover) and benefits from State funds, contracted generally with foreign partners (hence no debts).

- **Descriptive Analysis for Independent Variables**

The descriptive statistics for the independent variables are presented on the table below:

Table 4: Descriptive statistics for board characteristics

Variable	Mean	Std. Dev.	Min	Max
BZ	11.09524	1.238139	9	13
GENDIV	10.98333	11.57128	0	36.4
BA	2.27381	.5229939	2	4
BIND	85.00952	19.51955	7.7	100

Source: Authors

The table above shows that the board size ranges from a minimum of 9 members to a maximum of 13 members with an average of 12 members for the overall sample of 21 SOEs. This confirms that on average, SOEs meet the requirement of the 2017 corporate law and is contrary to the recommendations of Jensen (1993) and Lipton and Lorsch (1992), based on their investigation of firm performance in relation to board size. They recommended eight or nine directors and specified that ten should be the maximum number. This relatively small size is due to the effect of more people inhibiting the process of making decisions (i.e. causing indecisiveness or incoherent decisions due to the fissiparous decision-making process among many parties). The average board size similar in Egypt and Malaysia is 8 directors (Haniffa and Hudaib, 2006), while the average board size in the United States is 12.25 (Yermack, 1996). However, the board size is significantly smaller in Australia, averaging 6.6 (Kiel and Nicholson, 2003) and in New Zealand averaging 5.81 (Bhagat and Black, 2000).

The proportion of women on board ranges from a minimum of 0% to a maximum of 36.4% with an average of approximately 11%. This shows that on average, 89% of board members in Cameroonian SOEs are men. Also, there are boards without a woman director. This result seems to comfort the position of the 2017 corporate law as none of its dispositions makes it mandatory to involve a certain percentage of women on the boards of directors. The average percentage of women on boards in Cameroonian SOEs (11%) is less than those on boards in Fortune 500 companies – 15%, in 2010 (Catalyst, 2010) and greater than those in French companies- 9.4%.

The number of board meetings ranges from a minimum of 2 per year to a maximum of 4 per year with an average of 3 meetings per annum. In Cameroonian SOEs, the presence of independent directors ranges from a minimum of 7.7% to a maximum of 100% with an average of 85%. An average of 85% indicates that 15% of these boards on average are made of executive directors. However, some of these boards could be said to be highly independent with 100% of their membership consisting of non-executive directors

- **Descriptive Analysis for Control Variable**

One variable of control is used: leverage. The descriptive statistics are presented on table 4 below:

Table 5 : Descriptive statistics for control variables

Variable	Mean	Std. Dev.	Min	Max
Financial leverage	36.21	35.04	0	147.10

Source: Authors'

The results show that the debt ratio ranges from a minimum of 0% to a maximum of 147.1% with an average of 36.2%. The result indicates that there are SOEs in Cameroon that have not contracted any debt. These are mostly companies of the electricity production and transportation

branch of activity that are still in the investment phase of the project fully financed by debts contracted by the State from foreign partners. These debts are not registered as a liability of these company, but as State external debts.

4.2 Correlation Analysis

The issue of multicollinearity appears if two or more variables are highly correlated which might affect the estimation of the regression parameters (Hair et al., 2009). Gujarati (2003) illustrates that the existence of multicollinearity makes the assessment and the hypothesis testing about regression coefficients indeterminate. The results are portrayed on the table below:

Table 6 : Correlation matrix

	SV	TURNOVER	BZ	GENDIV	BA	BIND	LEV
SV	1						
TURNOVER	0.0316	1					
	(0.7750)						
BZ	-0.0032	-0.0262	1				
	(0.9770)	(0.8130)					
GENDIV	0.0330	0.4860***	0.2640**	1			
	(0.7660)	(0.0000)	(0.0153)				
BA	-0.0189	-0.0790	-0.0408	0.0392	1		
	(0.8640)	(0.4750)	(0.7130)	(0.7230)			
BIND	0.0275	0.0970	-0.2230**	0.2050*	0.1530	1	
	(0.8040)	(0.3800)	(0.0413)	(0.0610)	(0.1660)		
LEV	0.0105	0.2670**	0.0353	-0.00260	0.0674	0.00200	1
	(0.9240)	(0.0142)	(0.7500)	(0.9810)	(0.5420)	(0.9860)	

Source: Authors' using STATA

From the table above, no coefficient is greater than or equal to 0.9 as per Field (2009) or greater than 0.8 as per Gujarati (2003), indicating the absence of multicollinearity.

4.3 Multiple Regression Analysis and Discussion

Both the Generalised Least Square (GLS) and the Generalised Equation Estimation methods of estimation were used and the results are presented on the tables that follow:

- **Model 1 with Turnover as the Dependent Variable**

The model is represented as:

$$\boldsymbol{Turnover = \beta_0 + \beta_1 BZ + \beta_2 BIND + \beta_3 GENDIV + \beta_4 BA + \beta_5 LEV + \varepsilon.}$$

It will be used to test the following hypotheses: *H_2: The proportion of women on board has a positive impact on turnover and H_3: The number of board meetings is positively related to turnover*.

The results obtained using the GLS method of estimation are presented on table 6 below:

Table 7 : Regression results with Turnover as dependent variable

GLS	(1)	(2)	(3)	(4)	(5)
VARIABLES	TURNOVER	TURNOVER	TURNOVER	TURNOVER	TURNOVER
BZ	-21.51**		-21.33**	-20.17**	-20.15*
	(10.43)		(10.55)	(9.997)	(11.05)
GENDIV	6.476***	5.731***	6.458***	6.339***	6.416***
	(1.111)	(1.077)	(1.123)	(1.069)	(1.178)
BA	-31.48	-30.86		-32.90	-26.39
	(23.08)	(23.65)		(22.88)	(24.40)
BIND	-0.294	0.0992	-0.417		-0.284
	(0.658)	(0.646)	(0.659)		(0.697)
LEV	1.098***	1.069***	1.066***	1.097***	
	(0.341)	(0.349)	(0.344)	(0.341)	
Constant	274.4*	10.09	212.6	239.2*	287.2*
	(145.9)	(71.57)	(140.3)	(123.0)	(154.6)
Observations	84	84	84	84	84
Number of i	21	21	21	21	21

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' using STATA

The results indicate a significantly negative impact of board size on turnover. The results of this study are similar to those obtained by Lipton and Lorsch (1992), Jensen (1993), Barnhart et al. (1994), Yermack (1996), Eisenberg et al. (1998) and Vafeas (2000). These authors argued that reducing board size helps in avoiding any free rider problems or poor coordination and communications, which result from larger boards. Though Miller (2003), Dalton et al. (1999) and Lehn et al. (2009) argue that larger boards are better than the small ones in improving firm performance. They argue that in small boards the powerful position of the CEO enables him to override the decisions made by the board members in accordance with their own interests leading to increased agency problem and correspondingly undermining the performance of the firm (Miller, 2003). In addition, from the resource dependence theory perspective, large boards have improved linkages and networking with external sources of skills, expertise and capital to benefit from. In addition, large boards allow directors to exchange highly qualified counsels and present extra scope for the possibility of correlation with different external linkages.

The result also shows that the relationship between gender diversity and turnover is positive and significant. This shows that when there are more women on the boards of Cameroonian public companies, they perform better if measured through turnover. This is consistent with results obtained by Carter et al. (2003) and Smith et al. (2006).

The result also reveals that the association between board meetings and turnover is non-significant. This indicates that the number of board meetings per year has no impact on the turnover. The result is similar to those obtained by El Mehdi (2007) and Almontaser and Faudziah (2018).

Also, board independence has no significant impact on turnover. This indicate that the composition of boards in terms of outsiders/insiders has no influence on the turnover in SOEs in Cameroon. The findings are similar to those of Akpan and Amran (2014) and Abdulah (2016). The lack of significance between performance and independence of members of the board of directors of public enterprises in Cameroon can be explained by several contextual factors (weak regulation, lack of transparency), structural (internal dynamics on boards) and cultural.

Concerning the control variable, the results indicate that financial leverage is significantly positive to firm performance. This shows that the higher the debts of SOEs, the more they become performant. The findings are similar to those of Modigliani and Miller (1963), Jensen (1986), Ross (1977) and Agrawal and Knoeber (1996). These results indicate that for SOEs in Cameroon to improve on their performance, they need to adopt smaller board with more women as directors. H2 is accepted while H3 is rejected.

- **Model 2 with Stakeholder Value as the Dependent Variable**

The model is represented as:

$SV = \beta_0 + \beta_1 BZ + \beta_2 BIND + \beta_3 GENDIV + \beta_4 BA + \beta_5 LEV + \varepsilon$. It will be used to test the following hypotheses: *H_1: Board size has a positive impact on Stakeholder value and H_4: The proportion of independent directors is positively associated to stakeholder value.* The results obtained by using the GEE method of estimation are presented on table 7 below:

Table 8: Regression results with Stakeholder Value as dependent variable

GEE	(1)	(2)	(3)	(4)	(5)
VARIABLES	SV	SV	SV	SV	SV
BZ	-0.219		-0.280	-0.273	-0.218
	(1.158)		(1.375)	(1.110)	(1.157)
GENDIV	0.116	0.108	0.121	0.121	0.116
	(0.123)	(0.117)	(0.146)	(0.119)	(0.123)
BA	8.137***	8.146***		8.215***	8.146***
	(3.020)	(3.022)		(2.982)	(2.982)
BIND	0.0118	0.0158	0.0435		0.0118
	(0.0733)	(0.0702)	(0.0859)		(0.0733)
LEV	0.000837	0.000413	0.0199	0.000772	
	(0.0454)	(0.0453)	(0.0529)	(0.0454)	

Constant	-17.00	-19.69**	-1.267	-15.63	-17.00
	(16.47)	(8.270)	(18.29)	(14.14)	(16.47)
Observations	84	84	84	84	84
Number of i	21	21	21	21	21

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' using STATA

The results indicate no significant impact of board size on stakeholder value creation. The results of this study contradict those of some prior studies but similar to those obtained by Bhagat and Black (2002), Bennedsen et al. (2002), Farrell and Hersch (2005), Akpan and Amran (2014) and Abdulah (2016).

Also, gender diversity, and board independence have non-significant relations with stakeholder value. This signifies that these board characteristics do not influence stakeholder value creation in SOEs in Cameroon. The explanation for this result is because the board of directors of SOEs are made up of representatives of supervisory ministries, other state institutions, political allies and retired civil servants. This might result in appointing management and members on the board based on friendship and nepotism rather than experience and skills. Such cliques can use their power to influence management decisions and undermine the monitoring and coordination of the board, rendering the board impotent with regard to its impact on management and firm performance.

The result reveals that board activity positively and significantly enhanced the creation of stakeholder value. This implies that the more board meetings there are, the more SV is created in SOEs in Cameroon. The results are like those obtained by Vafeas (1999) and Khaleel et al. (2016). With the launching of the Sparrow Huck operation to crack down on corrupt public officials, the role of the boards of directors in SOEs has been questioned by many scholars. Being the only medium (board meeting) to discuss corporate issues, the results obtained show that directors concentrate more on corporate issues during meetings.

With regards to the control variables, the results show that the impacts of leverage on SV are non-significant. That is, capital structure does not affect performance in SOEs in Cameroon. This is explained by the fact that, the State usually pay part of the debts of some SOEs and equally subsidise them without paying attention to performance. H1 and H4 are rejected.

Conclusion

The aim of this research was to empirically study the influence of the characteristics of the council on the performance of public enterprises in Cameroon. A sample of 21 public corporations was selected from a population of 37 public enterprises. The data collected covers four (04) years from 2014 to 2017. The results of this study show that board size has a negative and significant impact on turnover and an unimportant effect on stakeholder value creation. In addition, the proportion of women on boards has a positive and significant influence on the performance of companies measured in terms of turnover and a non-significant effect on them when measured in terms of partnership value creation. The number of board meetings is also significantly positive for the company's performance when measured by partnership value and not significant when measured by revenue. The results also indicate that the proportion of outsiders has no impact on the company's performance.

Public enterprises in Cameroon, as in other African countries and even around the world, need to have an effective board of directors to ensure good governance, transparency and accountability. Based on the results of the study, the following recommendations were made:

- The promotion of diversity on the board through the inclusion of members from different ethnic backgrounds, genders and regions. This can help to reflect the country's plurality and better understand the needs of different communities (Catalyst, 2004, Mc Kinsey Company, Adams et Ferreira, 2009, Terjesen, Sealy et Singh, 2009noland et Phillips, 2010).

- Assurance that the board of directors includes members with in-depth knowledge of the local

market as well as international experts. This allows a combination of understanding of the realities of Cameroon with global practices.

- Independence and impartiality to encourage the inclusion of independent directors who are not affiliated with political parties or private interests, thereby reducing conflicts of interest and ensuring that decisions are made in the best interests of the company, of its users and therefore the State of Cameroon.

- The implementation of continuing training programs for board members on best governance practices, risk management, regulatory compliance and issues specific to public enterprises in Cameroon.

- Promoting a culture of transparency through regular publication of reports on the board's activities, decisions taken and their impact on stakeholders.

- Stakeholder Inclusion: Establish mechanisms for consultation with stakeholders (employees, customers, local community, strategic partners) to ensure that their concerns are considered in the decision-making process.

- Clarity of roles to clearly define the roles and responsibilities of board members as well as management to avoid duplication and ensure effective governance.

the introduction of a minimum number of meetings per year

By implementing these recommendations, public enterprises in Cameroon can strengthen their governance, improve their performance and better serve the general interest while addressing specific challenges of the country.

The sample used in this study was limited to the number of public corporations. The sample size was a limiting factor as firms with incomplete reports and those whose accounting period was not aligned the period of study were excluded. Future research may consider expanding the model and the introduction of more moderate variables for better results than this.

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