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Taxation and Accounting Data Management: An Empirical Study in Cameroon

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Keywords: *taxation, accounting data management, discretionary accruals, effective tax rate*.

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Taxation and Accounting Data Management: An Empirical Study in Cameroon

Marius Ayou Bene [α] & Marthe Bitoutou [σ]

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I. Introduction

The manipulation of accounting data is a research object frequently addressed in management science insofar as financial information is an important element of decision making (Khoufi, 2021). The link between management of accounting data and taxation is one of the most invested lines of research in this literature (James, 2009; Egbunike and Ezelibe, 2015; Vokshi, 2018). A part of the work on this link has attempted to determine the impact of the tax burden on the production of accounting information reflecting the real situation of the firm, by contrasting tax rules and accounting rules (James, 2009), tax liability versus accruals (Daoud and Omri, 2013), or tax pressure and the ethical behaviour of producers of accounting and financial information (Djeudja and Tedomzong, 2017), etc.

One fact nevertheless marks this literature on the link between taxation and the manipulation of accounting data. The tax burden is often presented as a catalyst for earnings management; the accounting result being the basis for calculating the tax to be borne by the company (Kasraoui and Naoui, 2019). Other elements such as taxes or social security contributions explain the cosmetic nature of the turnover and operating expenses. However, the tax-related factors that affect the behavior of the producers of financial and accounting information can be both internal and external to the company. The internal factors relate primarily to management, while the external factors relate to government policies.

Nevertheless, the debate on the relationship between taxation and the manipulation of accounting and financial data is marked by the contextual realities of the moment. In the years (2009-2010) that marked the implementation of the 2035 emergence plan (Okouda, 2017), this debate was more focused on the opposition between government policies and the transparency of financial and accounting information provided by firms. Indeed, public decision-makers in search of resources to finance state investments are increasing the tax burden in order to obtain maximum revenue on the one hand. On the other hand, the enterprises, in their drive to reduce costs, are seeking and developing ways to reduce the tax burden (Breton and Schatt, 2006).

In developing countries, especially sub-Saharan Africa ones, the tax revenue represents the main source of governments' funding. Yet, so far, the plurality of empirical works on the subject has mainly aimed to assert the catalytic role of tax burden in managers' decision to manipulate information. An illustration is the works of Djeudja and Tedomzong (2017), Bimeme and Um(2018),and Tachouola (2019) in the Cameroonian context, where the tax revenues financed almost 59 percent of the government budget in 2020 (Kamdem, 2021). However, this literature has very little to do with the link between taxation and the manipulation of accounting data. Thus, exploring this relationship appears to be of prime importance for the corporate tax collection issue.

The objective of this paper is to empirically analyse the relationship between taxation and the manipulation of financial and accounting information produced by firms in Cameroon. The main question is whether there is a significant two-way relationship between firms' tax burden and the cosmeticity of financial and accounting information. The economic rationale behind this questioning is that, on the one hand, a government's onerous corporate tax policy may incite managers to operate a downward manipulation of their firm's income before taxes in order to pay the least amount of tax on profit possible. On the other hand, with the aim of maximizing the shareholders' value (Denglos, 2008), managers could manipulate the elements of the calculation of the effective tax rate. The paper also try to find out whether this relationship is linear. Thus, a sample of 1474 Cameroonian firms over the period

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2014-2017 is explored, and a system of two simultaneous equations model is estimated with the two-stage least square method, to determine the influence of the amount of tax liability on the manipulation of accounting information, and vice-versa.

This research sheds some light on this link in the African context in general and in Cameroon in particular. In what follows, the paper first discusses Cameroonian taxation and the manipulation of accounting data separately. Successively the link between these two elements is scrutinized through a review of existing literature. Afterwards, the article goes through the data of the study and the specification of the model. Finally, the empirical results are presented, followed by their discussion.

II. Taxation and Accounting Data Manipulation: A Review of the Literature

Taxation and accounting manipulation have been widely discussed in the financial literature. Agency, information asymmetries, stakeholder, positive accounting, ethics and tax theories are the most widely used. Based on these theories and on empirical work, we attempt to highlight the relationship between taxation and accounting manipulation in the Cameroonian context.

a) *Cameroon's Tax System: The Main Victim of Firms' Asymmetries of Information*

Taxation is an economic and social policy instrument available to the state to generate financial resources in the form of tax revenues (James, 2009). It is generally implemented within the framework of a highly regulated tax system, but characterised by a high degree of uncertainty. Indeed, the tax system is highly exposed to moral hazard situations arising from the opportunistic behaviour of taxpayers to whom the State grants a presumption of probity (Jarillo and Bidault, 1995). For this reason, several countries, such as Cameroon, propose a declarative tax system that allows taxpayers to file a declaration of their taxable income on their honour. This declaration then benefits from a formal presumption of sincerity. However, any rational economic agent aims, in the first place, to maximise his utility function. He may then adopt an opportunistic behavior that ultimately confers an uncertain character to the tax return (Amara, Amar, and Jarboui, 2013). To remedy such situations, tax authorities reserve the right to examine/analyze these returns, with the aim of certifying their veracity.

In addition, the State grants the firm (taxpayer) a certain delegation of power to collect taxes. The relationship studied can thus be analysed through the prism of agency theory. Like any agency dilemma (Jensen and Meckling, 1976), the relationship between the State and the company is characterized by a conflict of interest (Boatright, 1992). It therefore has an opportunistic character (Dechow and Skinner, 2000) made possible by the information gap available to the company (Akerlof, 1970).

The opportunistic behavior, which characterizes the manager in tax matters, is also in line with the positive accounting theory (Watts and Zimmerman, 1990) which enshrines the prevalence of self-interest in the decision-making process. It is therefore possible that the manager, when producing accounting and financial information, is at odds with the fundamental principles and concepts of accounting. The latter strongly prescribe ethics (Colasse, 1997). Ethics in accounting requires the manager to make good moral choices in the preparation, presentation and disclosure of financial information (Freedman, 2019). Thus, the methods of preparing accounts with tax implications, among others, the manager must adopt them in accordance with the accounting standards in force.

However, tax audits by the tax authorities take place ex-post. The manager can therefore deviate from the requirements of compliance and ethics by concealing the truth about the company's real situation. In effect, the manager uses all the information at his discretion, and exploits the flexibility of accounting principles, in order to obtain an advantageous tax base. The higher the basis of calculation, the higher the level of tax paid. On the other hand, when the calculation basis is too low or non-existent, the manager will insist that the tax authorities apply their statutory role of auditing tax returns. This verification is carried out through various controls, the exercise of which is provided for in the tax procedure book.

Although the tax administration has control mechanisms that can reduce the information gap that benefits the taxpayer, it is still difficult to eliminate opportunistic behaviour by managers. The cases of accounting data modification (Özevin, 2020) continue to feed the suspicion of unreliable financial information. These modifications are the result of creative accounting, earnings management, earnings stabilization and sometimes aggressive accounting practices. All these typologies of manipulation of accounting figures are aimed at creating a certain picture of the company's financial situation (Safta, Achim and Borlea, 2020).

Yet, the purpose of accounting is generally to provide stakeholders with relevant information for management, control and decision making. In view of the above, it is worth considering the relationship between the tax burden and the manipulation of accounting data. The former is what the manager wants to avoid, and the latter is the strategy used by the manager to achieve its objective.

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b) The Relationship Between Taxation and Accounting Data Manipulation: The Tax Burden Reduction's Hypothesis

Financial and accounting information is of interest to internal (management, employees) and external stakeholders (such as shareholders, creditors, tax authorities, etc.) (James, 2009). However, firms may produce and provide either wrong or little information on their activities (Seca-Assaba, 1998). That could be the case in a declarative tax system. To find a solution to this issue, tax returns may go through rigorous controls. Specifically, the tax audit of a firm is triggered from the returns filed with the tax authorities. Indeed, based on the information provided, the company is subject to a particular observation on situations such as: the existence of significant deficits (Floret, 2014), recurrent negative results and inconsistencies, a discrepancy between the turnover resulting from the VAT declarations and the one reported in the income tax return (Sassi, 2013; El Arif, 2019). This situations induce suspicions of accounting data manipulation, especially whenever firms seek to reduce their tax burden. They occur with acuity in developing countries, countries where information asymmetries between economic actors are very high (Ngongang, 2015). They are also significant in small and medium-size enterprises which maintain an even stronger informational discrepancy (Lefilleur, 2009; Kay, 2010). Thus the hypothesis of accounting manipulation for tax reasons comes to life.

Furthermore, it has been proven that fiscal policies form an incentive for strategic earnings management (Zmijewski and Hagerman, 1981). Firms use their accounting discretion to obtain a tax level that is appropriate for them (Duvall, Jennings, Robinson, and Thompson, 1996). The tax system is thus a precursor of the manipulation of accounting figures. In order to increase the cash flow available to capital providers and thus maximize shareholder wealth, cash outflows are limited. A mean to achieve this goal is to reduce the amount of income tax, by entering into account higher expenses than they "normally" would have been (Breton and Schatt, 2006). We can therefore conclude that the level of taxes is a factor likely to encourage the manipulation of accounting data, and incite the tax fraud (Djeudja and Tedomzong, 2017).

Thus, one of the real causes of aggressive accounting lies in the conflicts of interest between the producers of financial information and the tax authorities. Indeed, managers seek to maximize shareholders' value (Bogliolo, 2000; Denglos, 2008), and shareholders' interest is to maximize their wealth (Egbunike and Ezelibe, 2015). In this case, paying less tax would allow investor-shareholders to obtain more dividends and capital gains. On the other hand, the country's tax authorities would like to collect more and more taxes. Thus, to avoid taxes, companies will on the one hand manage and disclose different tax information to the authorities than to the stakeholders, and on the other hand they will use tax shelters to avoid tax payments (Nisha and Rifat, 2019).

However, it can be noted that companies that benefit from a tax advantage due to the discretionary management of their results, find themselves faced with an adjustment. As a result, they may suffer a charge, composed of the tax charge actually due and a penalty. They will then make a trade-off between the advantage of a tax gain at the moment, which the use of discretionary power gives (high level of discretionary regularization), and the possible burden to be borne in the future in case of tax repression.

The level of tax liability is likely to encourage the management of accounting data. Thus, managers are more likely to use their discretion to encourage increased spending in order to achieve a lower taxable income. At the very least, it can be noted that the effective tax rate is a function of income, which in turn depends on the level of accruals. Therefore, it can be assumed that the effective tax rate and the accrual book values move in the same direction. The higher the tax liability, the better the managers manage their accounting data. Thus, from the perspective of information asymmetries and positive accounting theory, as well as tax theory, we hypothesize that *the tax burden is positively and significantly related to the management of accounting data by firms in Cameroon*.

Considering that the effective tax rate is a function of the firm's turnover/results, and that the latter attracts the attention of the tax auditor as it becomes more and more consistent, it worth noting that firms with a high level of turnover/results are under the spotlight. Consequently, in order to avoid tax repression resulting from audits, they will proceed less and less with the management of accounting data. In other words, firms with high levels of effective tax rate make less use of their discretion in producing financial and accounting information. Thus, we hypothesize that *the relationship between effective tax and accounting data management is non-linear: it is positive at a certain level of effective tax and becomes negative when the effective tax rate becomes higher*.

Furthermore, considering the theory of information asymmetry, the positive theory of accounting, as well as the theory of taxation, and taking into account the mandatory and non-negotiable side of the tax law, a variation in the level of taxes would automatically lead to a variation in the level of discretionary power. The producers of financial and accounting information being unable to vary the legal requirements, they will therefore make more use of their discretionary powers, in order to adjust the tax burden to the objective to be achieved. As a result, the level of accruals value could define the actual tax paid. Thus, we also hypothesize that there is a *reverse causality in the*

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relationship between the tax burden and the management of accounting data of firms in Cameroon.

III. Data and Model Specification

a) The Data

This paper uses accounting data the Cameroonian National Institute of Statistics (INS). It was then possible to assess the level of companies' earnings management and the tax burden through the indicators generally used in the literature. They are based on the year-end balance sheets and income statements of 1,500 firms operating in Cameroon, and belonging to several sectors of activity, over the period 2014-2017.

In addition, the final sample of 1474 firms used for the analyses[1] is made up of large and small and medium-sized enterprises (SMEs), from different sectors of activity. Those firms are all subject to corporate income tax, they have been considered for the year 2017[2]. With regards to the variables used in this study, they were identified to meet our objective of assessing the causal relationship between tax burdens and accounting manipulation. In the existing empirical works, accounting data management is measured by different indicators. In the case of Amara, Amar, and Jarboui, 2013; Fhiqi and Ni Nyoman, 2019, this variable is dichotomous, taking the value of 1 if the company is subject to data management and 0 otherwise.

But this approach does not allow us to highlight the different levels of data management. As a result, the accounting data management is measured following the works of Thauvron, 2000; Baghar, 2018, in which the discretionary part of the accruals[3]are considered to this end.

The tax burden is measured by the effective tax rate (Halleux and Valenduc, 2007). The effective tax rate is the ratio of income tax to pre-tax income plus depreciation and provisions (Othman and Zéghal, 2006; Rekik and Omri, 2009; Djeudja, 2017).

The control variables are financial ratios that allow for the assessment of firm's indebtedness, liquidity, solvency, size, etc. In addition, firms' earnings management decisions could be correlated over time. They could also depend on the performance and information provided in previous years. For that reasons, some lagged variables are considered. The different variables used are summarized in the table below

[1] The database was cleaned by deleting companies with multiple missing data and missing financial ratios.
[2] Lagged variables until the year t-2 have been considered
[3] Accrual accounting variables

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Table 1: The Variables of the Study

Study variables			
Code	Title of the Variables	Calculation Method	Authors
Ad	Discretionary Accruals	total accruals ¯ non¯discretionary accruals	(Jones, 1991) (Jeanjean T. , 2002)
And	Non-discretionary Accruals	Following linear regression	(Jones, 1991) (Jeanjean T. , 2002)
Tie	Effective tax rate	income tax/ pre¯tax current income + depreciation and amortization	(Othman and Zéghal, 2006) (Rekik and Omri, 2009) (Djeudja, 2017)
Size	Company size	log (Total assets)	(Baghar, 2018) (Mard, 2004)
Tdta	General solvency ratio	Total Liabilities/Total Assets	(Draief, 2006)
Dltrs	Structure ratio	Long term debts/stable resources	(Draief, 2006)
Ewn	Financial profitability ratio	Net income/invested capital	(Onomo, Ayou Bene, and Seck Fall, 2019)
Chexta	Operating expense coverage ratio	Operating expenses/Total assets	(Ayou Bene and Onomo, 2022)
Roa	Economic profitability ratio	Operating income/Total assets	(Onomo, Ayou Bene, and Seck Fall, 2019)
End_Lt	Long term debt	Long-term debt/total debt	
End_ Ct	Short-term debt	Current liabilities/total liabilities	
Tangi_Active	Tangibility of the asset	Property, plant and equipment/total assets	

A step by step construction of the discretionary accruals:

Inspired by the work of Jeanjean (2002), we first consider the total accruals which are calculated as the sum of the change in firm's working capital, reversals of depreciation and provisions and accruals (fixed assets and inventories), minus the change in accruals

Step 1: Estimation of Total Accruals

$$Total\ accruals = \Delta BFR + \text{Reversals of provisions} + \text{capitalized and stored production} - \text{allocations to depreciation and provisions}$$

However, the management of the result is not captured by the total *accruals*, but to a fraction its. In fact, a portion of the *accruals* (having an impact on the result) can be qualified as "normal" in the sense that it corresponds to a sincere and regular application of the principles of accrual accounting in a given country. Therefore, the total accruals are also given by the following formula:

$$Total\ accruals\ (AT) = \text{Normal}\ Accruals\ (AN) + \text{discretionary}\ accruals\ (AD)$$

The literature allows us to measure the so-called normal part of accruals; the part corresponding to compliance with accounting rules and standards. Several models have been proposed, including[4], Healy (1985), DeAngelo (1986), Dechow and Sloan (1991), Jones (1991), Dechow et al. (1995), Kang and Sivaramakrishnan (1995), Rees et al. (1996), Kothari et al. (2005), Raman and Shahrur (2008) and Stubben (2010). In this work uses the model of Jones (1991), because although like all models it has some limitations, it is the least criticized. This model is presented as follows:

Step 2: Estimation the Non-Discretionary Accruals

$$TAit/Ait-1 = [1/Ait-1] + \beta 1[\Delta REVit/Ait-1] + \beta 2i[PPEit/Ait-1] + \varepsilon it4$$

[4] Quoted by (Billel)

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Table 2: Regression for Estimating Non-Discretionary Accruals

	Taitait 1		
Variables	2015	2016	2017
Ait1	-580.6716	855606.2***	1.35e+07***
	(566.3403)	(4991.102)	(821380.3)
Revait1	0.0214181***	0.3472379***	-1.46821***
	(0.0004031)	(0.0308515)	(0.0369424)
Ppeaiti	-0.5150474***	-1.125916***	0.1502641*
	(0.047493)	(0.0074918)	(0.0834932)
Obs	1 495	1 495	1 495
Prob>F	0.0000	0.0000	0.0000
R-squared	0.6626	0.9616	0.7317
Adj R squared	0.6619	0.9615	0.7311

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

Were $\boldsymbol{TA_{it}}$ denotes the total accruals of the firm$i$, $\Delta\boldsymbol{REV_{it}}$ is the change in sales between the years$t$ and t_{-1} ($CA_t - CA_{t-1}$), $\boldsymbol{PPE_{it}}$ is the gross property, plant and equipment of each firm, $\boldsymbol{A_{it-1}}$ is the total assets of the firm i for the year t_{-1}, $\boldsymbol{\varepsilon_{it}}$ is the error term, $\boldsymbol{i}$= 1,..., N, and $\boldsymbol{t}$=1,..., T.

Thus, from the financial statements data of our sample, we use the ordinary least square method to estimate the parameters of the equation in step 2 in order to determine the so-called normal accruals. Consequently, the discretionary accruals (AD) are given by the following:

$$\textit{Discretionary accruals}\ (\text{AD}) = \textit{Total accruals}\ (AT) - \textit{Normal accruals}\ (\text{AN})$$

The sample of the study is then built up to reflect the Cameroonian economy, which is made up of more than 99% of SMEs. Indeed, SMEs represent 90% (1327) of the firms in sample, while large companies account for 10% (147). In the small and medium-size enterprises, the average value of discretionary accruals is equal to a negative 94% of the total accruals, and the effective tax rate is equal to 38.56% on average.

Conversely, discretionary accruals show a negative average of 15% of the total accruals in large companies, while the average effective tax rate is equal to 33.06% in this sub-sample of firms. This different level of accruals is justified by the fact that the top management in large companies, which are mostly multinationals, is not renowned for their propensity to use their discretionary power when it comes to produce financial information. In the opposite, SMEs are known for their opacity in their information production process. Moreover, the effective tax rate is higher in the latters as compared to the standard tax rate of. It stands to the reason that SMEs are often subject to penalties related to the manipulation of their financial and accounting information.

We note that on the whole sample, the accounting data of 2017 are handled down and represents more than 86% of the total accruals, as compared to 2016 (71%) and 2015 (23%). For that years, the average effective tax are of 38%, 42.6% and 39.35% respectively. This suggests that when the data is manipulated upwards, firms pay more taxes and vice versa. By observing the financial ratios, it appears that firms are financially, but not economically, profitable in both 2016 and 2017. Their yearly average long-term debt per unit of assets ratio is 10.47%, 10.39% and 9.68% respectively over the period 2015-2017. The average short-term debt ratio decreases to 83.5% of total assets in 2017, from 92.4% in 2015.We can therefore conclude that firms have reduced their short-term indebtness to use more long term debt in the Cameroonian context over the period 2015-2017.

Table 3: Characteristics of the Sample by Type of Company (AD-Tie)

Variables	Obs	Mean	Std. Dev.	Min	Max
Tie	1474	0.3801	0.5866	0.0000	4.7558
Ad	1474	-0.8616	3.4760	-28.0040	23.4204
Small and medium-size enterprises					
Tie	1327	0.3856	0.6114	0.0000	4.7558
Ad	1327	-0.9405	3.6340	-28.0040	23.4204
Large companies					
Tie	147	0.3307	0.2726	0.0000	1.8387
Ad	147	-0.1488	1.1819	-4.4662	6.8101

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Table 4: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Ad_Lag1	1474	0.7112	2.3244	-13.7824	22.4344
Ad_Lag2	1474	0.2371	3.9847	-24.1736	25.2864
Tie_Lag1	1474	0.4260	0.7927	0.0000	7.7458
Tie_Lag2	1474	0.3936	0.6149	0.0000	6.8621
And	1474	0.8455	3.2638	-21.9746	29.1549
Size	1474	8.0550	1.0700	4.5356	11.9060
Tdta	1474	0.4796	2.2174	0.0000	0.9992
Dltrs	1474	0.1583	0.9260	-9.1430	10.1283
Roe	1474	0.1883	1.4189	-11.0637	11.1265
Roe_Lag1	1474	0.1687	1.7213	-17.4032	15.6130
Chexta	1474	1.7881	1.9720	0.0000	13.5859
Roa	1474	-0.0442	0.9224	-9.3040	7.0910
Roa_Lag1	1474	-0.0288	0.7803	-10.8105	5.8170
End_Lt	1474	0.1048	0.2450	0.0000	1.6370
End_Lt_Lag1	1474	0.1039	0.2489	0.0000	1.8609
End_Lt_Lag2	1474	0.0969	0.2366	0.0000	1.6425
End_Ct	1474	0.8347	0.8343	0.0000	6.1371
End_Ct_Lag1	1474	0.9241	1.0601	0.0000	9.6844

Table 5: Comparison of Discretionary Accruals by Firm Size

Ttest Ad , by (pmege) Unequa						
Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	1327	-0.9405	0.0998	3.6340	-1.1362	-0.7448
2	147	-0.1488	0.0975	1.1819	-0.3415	0.0438
combined	1474	-0.8616	0.0905	3.4760	-1.0392	-0.6840
Diff		-0.7917	-0.7917		-1.0657	-0.5178
diff = mean(1) - mean(2)						t = -5.6765
Ho : diff = 0			Satterthwaite's degrees of freedom = 546.012			
Ha : diff < 0			Ha: diff != 0		Ha: diff > 0	
Pr(T < t) = 0.0000			Pr(|T| > |t|) = 0.0000		Pr(T > t) = 1.0000	

b) Specification of the Empirical Model

In this work, we use a simultaneous equation model to verify the existence of the link between accounting data management and taxation on the one hand, and to identify the exogenous financial ratios explaining these jointly endogenous variables on the other. The model is specified as follows:

$$yt1 = y21yt2 + y31yt3 + \cdots + yM1ytM + \beta 11xt1 + \beta k1xtK + \varepsilon t1$$

$$yt2 = y12yt1 + y32yt3 + \cdots + yM2ytM + \beta 12xt1 + \beta k2xtK + \varepsilon t2$$

Where y_{ti} (i = 1, 2) are the endogenous variables, x_{tj} (j = 1, ..., K) are the exogenous variables. The following final model is estimated:

$$adt1 = y21Tiet2 + \beta 11Ratiot1 + \cdots + \beta k1Ratiotk + \varepsilon t1 \quad \textit{eq1}$$

$$Tiet2 = y21adt1 + \beta 12Ratiot1 + \cdots + \beta k2Ratiotk + \varepsilon t2 \quad \textit{eq2}$$

Where ad_t and Tie_t are respectively the discretionary accruals ratio used as an earnings management measure, and the effective tax rate for firm t. The structure of the model used can be justified by the fact that the company manages its results according to the tax requirement, and aims to maintain a certain logic in the information transmitted in order not to draw attention of the tax auditors.

It would therefore be inappropriate to think that certain exogenous factors that determine the accrual book values of a company are not in turn influenced by the latter.

Thus, on the one hand, an upward (downward) change in the tax requirement may persuade managers to use their discretionary power in the financial information production process. On the other hand, managers' with discretionary power may affect the effective level of taxation of their firms according to the objective they wish to achieve. Therefore, the model specified above is estimated using the two-stage least squares method which accounts for the possible endogeneity feature in the relationship between taxation and accounting data management.

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IV. Results

The empirical analysis reveals a two-way positive and significant relationship between the discretionary accruals and the effective tax rate. As for the effect of the tax rate on the discretionary accruals, an increase of 1% in the first leads to an increase of 3% in the latter. Therefore, when the tax burdens is important, managers use a little more of their discretionary powers in producing financial information, with the aim of lowering their firm's end-year earnings before taxes. Thus, tax pressure has a significant influence on the management of accounting data. Although these results are contrary to the work of (Douanla, Tchabon, and Takoudjou, 2019), our first hypothesis is accepted.

The other way around, the effective tax rate is positively and significantly determined by the discretionary accruals. A 1% increase in latters leads to a 0.86% increase in effective tax liability. Managers are willing to bear a slightly higher tax burden (very often from adjustments) if it allows them to dissimulate information to some other stakeholders. Thus, in the Cameroonian context which is characterised by a high level of information asymmetries, and a repressive power of the law, the management of accounting data significantly influences the effective tax. This is in line with the work of Djeudja (2017). The above results validate our third hypothesis, showing that the manipulation of accounting data exists in the Cameroonian context, and that managers use it to cope with the tax burden. Thus, in order to keep their tax burden within a threshold they consider acceptable, managers use their discretionary power to adapt the taxable income contained in the summary financial statements to their objective.

Looking at the relationship between the effective tax rate and the management of accounting data in the specific cases of both large companies and SME, the results show that the positive influence of discretionary accruals on the effective tax rate is more pronounced in the latters. It can be noted that an increase of one unit in discretionary accruals leads to an increase in tax of 0.92%; and conversely, an increase of 1% in effective tax leads to an increase in discretionary accruals of 3.7%. In large companies, an increase in accruals of one unit leads to an increase in the effective tax rate of 0.543%. In contrast, the accruals are significant and negative influence by the Tie, an increase of 1% in effective tax leads to a decrease of 1.43 units in the use of discretionary accruals power.

These results suggest that large firms in the Cameroonian context are more likely to face fiscal repression whenever their accounting data are manipulated. Indeed, due to their important role in the economy of the country[5], these firms are subject to close and rigorous controls from the tax office. On the other hand, SMEs in the Cameroonian context are characterized by a high degree of information asymmetry (Wamba and Tchamanbé-Djiné, 2002), and make a very great use of accounting data management. This tendency to manipulate the financial information is even stronger when the country's fiscal policy tightens, and the level of taxation increases.

Furthermore, the discretionary accruals is negatively determined by the square of the effective tax rate, in both the entire sample and the small and medium-size enterprises. This is to suggest that the relationship between discretionary accruals and effective tax rate is non-linear but concave. That is, at low levels of effective tax rate, the relationship is positive; it becomes negative at higher levels. Our second hypothesis is validated. Conversely, this latter hypothesis is rejected in the large companies where the discretionary accruals is positively related to the square of the effective tax rate. This indicates a U-shape relationship between discretionary accruals and the latter. That is, at low levels of effective tax rate the relationship is negative, becoming positive at higher levels.

Other than the relationship between tax and accounting data management, the empirical results allow us to note that discretionary accruals are significantly and negatively influenced by last year's tax, non-discretionary accruals, size, profitability and short-term debt. The relationship between discretionary accruals and last year's tax is justified by the continuous quest of companies to reduce deductible expenses as much as possible in each new fiscal year; thus, a level of tax expense in the previous year leads to an increase in expenses in the current year in order to obtain a lower taxable result. As the relationship between discretionary and non-discretionary accruals demonstrates, this desire to reduce the tax burden as much as possible leads companies to stray from the law. Thus, the more a company uses its discretionary power, the less it will put into practice the legal recommendations.

But the more the latter grows, the less it has the possibility of concealing information and will use its discretion less and less. However, it should be noted that whether a company is economically profitable or has recourse to short-term debt, it will be less likely to use its discretionary power, because it will not be useful to it; because on the one hand, having its object to make the whole of the invested capital profitable and on the other hand, having to face the debt before the end of the financial year. And also, a reliable and not very fake

[5] They represent less than 1% (0.99%) of the enterprises in Cameroon, but produce 65% of GDP (RGE/INS, 2009)

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information would encourage the debtors to renew their confidence in the company.

Nevertheless, when these relationships are observed in the specific case of SMEs, we can note that the relationships are unchanged. This can be explained by the fact that 99% of the sample is composed of this category of firms. However, in the case of large firms, only the nondiscretionary accruals and short-term debt retain the meaning and significance of the relationship; we also note a negative auto-regression between the accruals. As mentioned above, since they are subject to monitoring and therefore to repression in the event of abuse of discretionary power, large firms will tend to reduce their use of it over time. However, in the desire to see assets bear fruit, the size of the company (as measured by the level of assets) has a positive influence on the management of accounting data. This is because although a large company is subject to continuous controls, the sheer size of the assets can lead to loopholes and concealment of data management.

The empirical results also allow us to note a self-regression between the effective tax rate, management quality, financial profitability and debt of the previous and current year, each of which has a positive and significant influence on the effective tax rate. These relationships are the same in small entities, with the exception of long-term debt, which is no longer significant; in large companies, only tax and profitability in the previous year have significant and positive influences on the effective tax rate. These positive relationships with the effective tax rate are explained by the quest for profitability of the entity, as tax is applied to the result, and that a combination of better financing and better management leads to better profitability and consequently to lower taxes.

As a whole, in the Cameroonian context, where the accounting results of companies represent one of the main sources of tax revenue, the manipulation of financial end-year results through the discretionary accruals deserve a particular attention of stakeholders, especially tax authorities. This important issue could be mastered with an adapted tax system that could allow the state to stabilise its revenues, encourage the transparency of accounting data, and reduce information asymmetries.

On the other hand, the high tax burden and corruption in Cameroon seem to encourage entities to engage in discretionary management of accounting data. Indeed, despite being subject to rigorous audit processes, companies can evade tax administration through corruption. From this perspective, a reduction in bribery may encourage companies to comply more with the regulations, as the gain from managing the result will be less than the loss from an administrative tax adjustment.

Therefore, as recommended by OHADA, compliance with rules and standards aims at mitigating the problems of information asymmetry between the firm and its stakeholders, thus enhancing the true and fair view of the company's financial position.

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Table 5: Regression

	Entire population		SME		Large companies	
	Equation (1)	*Equation (2)*	*Equation (1)*	*Equation (2)*	*Equation (1)*	*Equation (2)*
Variables	*ad*	*Tie*	*Ad*	*Tie*	*ad*	*Tie*
Ad		0.0086*		0.0092*		0.0543***
		(0.0049)		(0.0052)		(0.0199)
Tie	2.9996***		3.7265***		-1.4281**	
	(0.7008)		(0.8687)		(0.6593)	
Tie_Square	-0.8012***		-0.9902***		0.8593**	
	(0.1901)		(0.2335)		(0.4150)	
Tie_Lag1	-0.0956*	0.1475***	-0.1341**	0.1748***	-0.0010	0.0088
	(0.0564)	(0.0196)	(0.0696)	(0.0224)	(0.0358)	(0.0219)
Tie_Lag2		0.1627***		0.1620***		0.1461***
		(0.0247)		(0.0270)		(0.0393)
Ad_Lag1	-0.0027		-0.0042		-0.0718*	
	(0.0179)		(0.0197)		(0.0436)	
And	-0.9697***		-0.9688***		-1.0348***	
	(0.0124)		(0.0138)		(0.0316)	
Size	-0.0872***		-0.1156***		0.0582***	
	(0.0268)		(0.0341)		(0.0203)	
Dltrs	-0.0253		-0.0121		0.0068	
	(0.0457)		(0.0554)		(0.0325)	
Roe	-0.0543*		-0.0569*		0.0304	
	(0.0284)		(0.0322)		(0.0306)	
Tangi_Active	0.1659	0.0051	0.2925	0.0056	-0.1999	-0.0202
	(0.1799)	(0.0408)	(0.2134)	(0.0434)	(0.2323)	(0.1063)
End_Lt	0.2711	0.1702*	0.3040	0.1535	-0.4110	0.0226
	(0.1737)	(0.1009)	(0.1943)	(0.1064)	(0.2775)	(0.3227)
End_Lt_Lag1		0.0139		0.0314		0.0873
		(0.0994)		(0.1050)		(0.3092)
End_Ct	-0.1222***	0.0712***	-0.1072**	0.0678***	-0.2639***	0.0916
	(0.0487)	(0.0222)	(0.0548)	(0.0233)	(0.0935)	(0.1512)
End_Ct_Lag1		0.0350**		0.0332*		0.1465
		(0.0180)		(0.0187)		(0.1515)
Chexta		0.0498***		0.0482***		0.0310
		(0.0072)		(0.0076)		(0.0227)
Roa		0.0377**		0.0356**		-0.1277
		(0.0175)		(0.0183)		(0.1990)
Roa_Lag1		0.0322		0.0293		0.9644***
		(0.0210)		(0.0219)		(0.2687)
Obs	1 474	1 474	*1327*	*1327*	*147*	*147*
Parms	11	11	11	11	11	11
Rmse	1.5378	0.5801	*1.6851*	*0.6033*	*0.3983*	*0.2528*
"R-Sq"	0.8169	0.3162	*0.8000*	*0.3087*	*0.8959*	*0.6771*
F-Stat	619.02	61.55	*509.99*	*53.49*	*108.06*	*25.95*
P-Value	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*

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

V. Conclusion

In sub-Saharan Africa and in Cameroon in particular, it is very often claimed that firms have "three balance sheets" in order to deceive the vigilance of other stakeholders and mainly the State; because it is established that taxation is one of the main obstacles to the development of entities, especially that of SMEs (INS, 2018). This work aimed to establish empirical

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evidence of the relationship between accounting data management and taxation in the Cameroonian context.

The analyses show a two-way relationship between the manipulation of accounting data is positively related and the effective tax rate. However, the discretionary accruals are negatively determined by the effective tax rate in large companies. Tax is therefore an important factor in the level of transparency of the information provided by the entity, because the producers of financial information make a trade-off between the gain obtained in data management and the burden to be borne in the event of an adjustment during a possible audit.

Moreover, the relationship between discretionary accruals and effective tax rate is non-linear but concave in SME. That is, at low levels of effective tax rate, the relationship is positive; it becomes negative at higher levels. Conversely, the results indicate a U-shape relationship between discretionary accruals and the effective tax rate in large companies. That is, at low levels of effective tax rate the relationship is negative, becoming positive at higher levels.

Therefore, there is a need to reduce the accounting data manipulation practices. This could be done through a suitable clean-up of the tax system, so that companies stop considering taxation as an obstacle to their development. Also, data management accentuated the effective tax. These results also advocate compliance with the law, to avoid a possible recovery in case of control.

However, these results raise the question of the optimal tax and the level of discretion granted to producers of financial and accounting information. What is the level of tax that would ensure compliance with standards, and then the production of a true and fair view of the firm? What rules should be put in place to ensure a true and fair view in the year-end financial statements? Moreover, OHADA standards have been modified in 2017 to bring them in line with international standards (IRFS). Thus, an analysis of the tax-manipulation relationship after application of these rules would show the importance of reducing discretionary power on the tax burden in Cameroon, given the high contribution of entities to tax revenue.

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Annexes

Appendix 1 Correlation Matrix

```
. correlate ad tie tie_square tie_lag1 tie_lag2 ad_lag1 and taille dltrs tangi_actif end_lt end_ct chexta end_lt end_lt_lag1 end_ct_lag1
(obs=1,474)
```

	ad	tie	tie_sq~e	tie_lag1	tie_lag2	ad_lag1	and	taille	dltrs	tangi_~f	end_lt	end_ct	chexta	end_lt	end_lt~1	end_ct~1
ad	1.0000															
tie	0.0467	1.0000														
tie_square	0.0234	0.9125	1.0000													
tie_lag1	-0.0902	0.2031	0.1707	1.0000												
tie_lag2	-0.0023	0.1677	0.1303	0.2015	1.0000											
ad_lag1	0.1215	-0.0143	0.0096	-0.0705	-0.0080	1.0000										
and	-0.9152	-0.0380	-0.0205	0.0985	-0.0073	-0.1410	1.0000									
taille	0.2454	-0.0235	-0.0398	0.0068	-0.0156	0.0550	-0.2797	1.0000								
dltrs	0.0444	0.0335	0.0171	0.0997	0.0280	0.0062	-0.0432	0.1476	1.0000							
tangi_actif	-0.0460	-0.1759	-0.0716	-0.1218	-0.1581	0.2074	0.0135	0.0156	0.0245	1.0000						
end_lt	0.0657	-0.0009	0.0069	0.0279	-0.0098	0.0572	-0.0553	0.1394	0.2794	0.0737	1.0000					
end_ct	-0.0575	0.0444	0.0556	0.0797	0.0731	-0.0818	0.0239	-0.0747	-0.1051	-0.1173	-0.1395	1.0000				
chexta	-0.0337	0.0974	0.0443	0.0716	0.1131	-0.0175	0.0615	-0.4290	-0.0906	-0.1311	-0.1045	0.0687	1.0000			
end_lt	0.0657	-0.0009	0.0069	0.0279	-0.0098	0.0572	-0.0553	0.1394	0.2794	0.0737	1.0000	-0.1395	-0.1045	1.0000		
end_lt_lag1	0.0427	-0.0062	-0.0003	0.0175	0.0046	0.0513	-0.0554	0.1461	0.2337	0.0737	0.7893	-0.0872	-0.0846	0.7893	1.0000	
end_ct_lag1	-0.0402	0.0374	0.0357	0.0526	0.0182	-0.1434	0.0694	-0.1552	-0.0850	-0.1305	-0.1101	0.6033	0.1094	-0.1101	-0.1135	1.0000