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An Analysis of the Relationship between the Accounting Information System and the Tax Optimization of SMES in the Manufacturing Sector in Côte d'Ivoire

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Abstract: This paperanalyzes the relationshipsbetweenAccounting Information System (AIS) and the optimatization of taxburden in SMEs. The study uses data on organization, production, and use of accounting information from a sample of 216 SMEs in the manufacturingsector in Abidjan, and applies Pearson correlation, Cramer's Phi, and Chi-square statistics to test for theserelationships. The findings show that all three variables have positive and significantrelationshipswithtaxburdenoptimization in SMEs in Abidjan. The relationhipis more pronouncedwhenusing the use of information variable. This result calls for the production of qualityaccounting information in order to makeusefulydecision.

Keywords: Accounting Information Systems, Optimization, Tax burden, SME, Abidjan

I. INTRODUCTION

In Côte d'Ivoire, SMEs are key contributors to economic development due to their role in job creation and the production of goods and services. As a result, SMEs hold a prominent position in the Ivorian economy, with a clear contribution to GDP and a significant role in reducing the unemployment rate (OECD, 2013). SMEs now represent 98% of the formal economic structure, contribute 20% to national wealth, 12% to investment, and account for 23% of the working population. Despite their economic significance, SMEs operate in a rapidly changing environment and face numerous challenges that often lead to bankruptcy. The Ministry in charge of SMEs (2014) indicates that these challenges are financial, legal, structural, organizational, and, above all, fiscal.

Anassé (2013) highlights that SMEs play a crucial role in African economies, particularly in Côte d'Ivoire. However, although SMEs represent 98% of the business sector in Africa, they remain highly vulnerable, with tens of thousands going bankrupt each year. Anassé also points out that out of every ten SMEs created in Côte d'Ivoire, six fail within three years, and eight within five years.

Several authors (Fofana, 2016; Vangah, 2018) have shown that the difficulties and bankruptcies faced by these SMEs are primarily due to management issues, specifically a lack of proper management tools in these businesses. In the Ivorian context, more than 70% of companies created through the CEPICI one-stop shop face severe challenges or cease to exist within two years due to high initial tax pressure. In addition to this tax burden, the manager—often the sole shareholder—is typically a poor financial and accounting manager (Goueu, 2014). Gondo (2018) adds that deficiencies in the Accounting Information System (AIS) are another key factor contributing to the growth challenges of SMEs.

In addition to these challenges, the tax burden in Côte d'Ivoire is an important external factor that SMEs must manage since weak management will expose them to tax penalties. According to Vangah (2018), the number of tax adjustments is growing exponentially in Côte d'Ivoire. Therefore, SMEs have to put in place effective tax management practices which are not an option but a necessity for their performance. Opaque management and stringent tax laws draw SMEs at the epicenter of tax planning. These challenges now bring about the issue of optimizing the tax burden of SMEs through an AIS in the Ivorian context.

Central Question: What is the influence of the characteristics of the Accounting Information System (AIS) on the optimization of the tax burden of SMEs in Côte d'Ivoire?

Specific Questions:
- What is the effect of accounting organization on the optimization of the tax burden of SMEs in Côte d'Ivoire?
- What is the impact of data production on the optimization of the tax burden of SMEs in Côte d'Ivoire?

- What is the effect of the use of accounting data on the optimization of the tax burden of SMEs in Côte d'Ivoire?

The general objective of this study is to analyze the influence of AIS characteristics on the optimization of the tax burden of SMEs. Specifically, it aims to:Specific Specifically, it aims to:

- Examine the effect of accounting organization on the optimization of the tax burden of SMEs in Côte d'Ivoire,
- Measure the impact of accounting data production on the optimization of the tax burden of SMEs, and
- Evaluate the effect of accounting data usage on the optimization of the tax burden of SMEs in Côte d'Ivoire.

II. CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1. Relevent concepts

2.1.1. Small and Medium-sized Enterprise (SME)

The concept of SME is difficult to define, as there is no universal definition (Duchesnaut, 1995; Chapman, 1991). In Côte d'Ivoire, Decree No. 2012-05 of January 11, 2012, defines an SME as any company with fewer than 200 permanent employees and an annual turnover excluding tax (CATH) of less than or equal to 1 billion CFA francs. SMEs are divided into three categories:

- Micro-enterprises: fewer than 10 permanent employees and an annual turnover excluding tax (CATH) of less than or equal to 30 million CFA francs;
- Small businesses: fewer than 50 permanent employees and a CATH of less than or equal to 150 million CFA -francs;
- Medium-sized enterprises: fewer than 200 permanent employees and a CATH of less than or equal to 1 billion CFA francs.

Similarly, SMEs differ from very small enterprises (VSEs).

2.1.2. Accounting Information System (AIS)

The AIS is defined as a set of relevant data that is effectively and usefully integrated into multiple individual or collective decision-making processes within organizations (Dupuy, 1994). Similarly, Chappelier and Montgolfier (1995) describe the AIS as a system of relevant and used accounting data. Richard and Colette (2005) view AIS as a set of subjective information systems aimed at measuring the value, means, and results of an entity. Chapellier and Abdallah (2010) offer a comprehensive definition that includes all elements involved in AIS. They define it as "an organized set of structures, means, and actors that produce accounting data used by SME managers to manage their business." The AIS is characterized by three dimensions: organizational, data production, and data usage by the SME manager.

Ultimately, the AIS can be defined as "an organized set of structures, means, and actors that produce accounting data (mandatory and optional, historical and forecasted) used by SME managers to manage their business."

2.1.3. Optimization of the Tax Burden of SMEs

SMEs no longer merely aim to fulfill their tax obligations for security purposes. They are shifting from passive to proactive management of their tax burden by seeking to optimize their taxation rather than simply submitting to it. Tax optimization involves analyzing the different costs incurred by the available tax processes (Parot, 2003). Good tax management, or "tax optimization," is now a key success factor for any business. The attitude of business leaders towards taxation has evolved: "From reactive, business leaders have become more preventive, even offensive" (Besançon, 2010). Tax optimization involves using legal accounting and tax means and techniques to reduce the tax burden of SMEs. This includes complying with formal tax obligations, maintaining probative bookkeeping, and proactively managing risks.

2.2. Theoretical Positioning of the Research

2.2.1. The Positive Theory of Accounting

The positive theory of accounting, fashioned by Watts and Zimmerman (1978), has been vital in building accounting research. Its objective is to motivate and help the construction of models that explain accounting behavior. Its objective is also to develop explanations accounting for information users and producers and how such explanations might eventually impact the practice of accounting and the development of accounting standards. Several studies have emphasized that the positive theory of accounting has helped in describing the AIS of companies (Watts and Zimmerman, 1990).

2.2.2. Agency Theory and Information Asymmetry

The agency relationship, as defined by Jensen and Meckling (1976), arises when an owner, representing the principal, entrusts another person, the agent, with the use and control of resources. These authors agree that agency conflict primarily occurs in the preparation of financial results and tax declarations. It should be noted that the Ivorian tax system is declarative, allowing taxpayers to file their declarations in good faith. However, the tax administration reserves the right to carry out audits and verifications.

The positive theory of accounting mainly derives its models from agency theory (Avalé, 2013).

2.2.3. Contingency Theory

Woodward (1958), Burns and Stalker (1961), and Lawrence and Lorsch (1967) were among the writers who developed contingency theory. Contingency theory is concerned with those internal and external variables that influence organizational structures in a meaningful way. It posits that any elements internal or external to an organization can have a direct or incidental effect on one or more of the organization’s elements or activities (GREPME, 1997). The information system is part of the organization’s architecture; thus, it should be designed, taking into account the organizational variables (Waterhouse and Tissen, 1978). Likewise, the tax liability has to be one of the preoccupations of SMEs to manage without making adjustments.

2.4. Empirical Review and Formulation of Hypotheses

2.4.1. Relationship between Accounting Organization and Optimization of the Tax Burden

The OHADA system identifies two types of accounting organizations: the classic system and the centralizing system. The classic system is generally used by SMEs, while the centralizing system is better suited to the needs of large companies (Gouadain and El Bechir, 2002). Both systems allow the production of reliable documents used for decision-making. Article 15 of the AUDICIF requires a good accounting organization within entities. Lavigne (1999) characterizes the organization of the preparation of annual and interim financial statements for SMEs using the level of outsourcing and computerization.

This characteristic of the accounting organization is particularly important for SMEs, as it is sometimes integrated (Lacombe-Saboly, 1994). The second characteristic of the accounting organization is computerization (Lacombe-Saboly, 1999).

We propose H1: Good accounting organization has a positive influence on the optimization of the tax burden.

2.4.2. Relationship between the Production of Accounting Data and the Optimization of the Tax Burden

Chapellier's (1994) study is one of the few that attempts to globally characterize the accounting practices of SMEs, defined simultaneously in terms of the production and use of data by the manager in relation to four accounting fields: general (financial), management control, financial analysis, and dashboard (Lavigne and St-Pierre, 2002).

The production of accounting data by the accounting information system encompasses general accounting, management cost accounting, budget management, and management control. Ngongang's (2005) study in Cameroon reveals that the production of quality information helps companies perform better. According to Hernandez (1999), management control data improves the financial policies of SMEs.

We hypothesize H2: The frequency of accounting information production has a positive and significant influence on the optimization of the tax burden.

2.4.3. Relationship Between the Use of Accounting Information and the Optimization of the Tax Burden

Due to their structure, SMEs should have rudimentary accounting practices (data production and information use). This situation is linked to the size effect. The practice of using accounting information would be linked to data production: the more accounting data a company produces, the more likely it is to use it (Chapellier, 1997). Gondo (2018) shows that the production and use of accounting information improves SME management. Dieng (2018) and Bigoulare (2001) demonstrated that proper use of the information produced allows managers to exploit loopholes in tax laws and optimize their taxes. The purpose of information technologies, particularly information systems, is either to increase productivity or to help make information available for decision-making (Bruns and McFarlan, 1987).

We hypothesize H3: The degree of accounting information use has a positive influence on the optimization of the tax burden.

III. METHODOLOGICAL APPROACH

3.1. From the Qualitative Study to the Administration of the Questionnaire

We conducted semi-structured interviews based on interview guides with six (6) SME managers and two (2) experts. These interviews were conducted individually, lasting between fifteen (15) and twenty (20) minutes each. The objective was to gather their perceptions, confirm, and possibly enrich our conceptual model with new variables and items. To this end, a structured guide was used to cover a series of pre-defined themes, as recommended by Evrard et al. (2003).

Our exploratory research, beginning with qualitative research, allows us to identify facts, variables, and relationships that will serve as the basis for understanding the phenomenon, formulating hypotheses, building a conceptual model, and developing a comprehensive questionnaire for the proper conduct of this research. Using this questionnaire, a face-to-face survey was conducted after a pre-test. The questionnaire was addressed to a convenience sample of 216 SMEs operating in the district of Abidjan. These SMEs have been in existence for at least four years, with the owner holding more than 50% of the capital. The manager is directly involved in the management.

3.2. Operationalization of Variables

3.2.1. Theoretical Construction of the CIS

The operationalization of the theoretical constructs was carried out using measurement scales with good psychometric properties. The measurement scales from previous researchers (Chapellier et al., 2013) were borrowed and adapted to our study context in order to measure the CIS of SMEs. Each of the three dimensions is assessed by four variables measured on a 5-point scale.

The Pearson correlation coefficients calculated between the items, variables, and complexity scores guarantee the validity of our construct: the items used to measure the complexity of the CIS converge. The Cronbach’s Alpha coefficient for the 12 variables characterizing the CIS is 0.93. The measuring instrument developed, therefore, has good internal consistency and allows the complexity of the CIS to be accurately measured. The sum of these variables can be taken as a synthetic measure of the degree of complexity of the SME's CIS. The CIS measurement scales are borrowed and adapted from the literature:

- Accounting organization (Saboly-Lacombe, 1994; Nyengue, 2006)
- Production of accounting data (Reid & Smith, 2000)
- Use of accounting information (Abdel-Kader & Luther, 2008; Chapellier et al., 2013)

3.2.2. Constructed Variable: Tax Optimization

The latent variable of tax burden optimization is a new concept, to our knowledge. For the generation of this new measurement scale, we followed the steps of Churchill’s (1979) paradigm or Rossiter’s (2002) C-OAR-SE procedure, as used in management literature (Roussel et al., 2002). In this research, we used Rossiter’s (2002) C-OAR-SE framework. We performed the necessary studies and tests to validate this reflective variable (OPTI. F).

3.3. Estimation Method Used

We performed both univariate and bivariate analyses.

First, to summarize and analyze the different information, we conducted a univariate analysis. In the second step, we performed a bivariate analysis using Pearson’s chi-square test to verify the existence of dependence between variables taken in pairs. The chi-square test allows us to conclude whether a significant relationship exists between two variables. Furthermore, the Cramer index was used to measure the intensity of relationships (Boukar, 2009).

IV. ANALYSIS AND DISCUSSION OF THE RESULTS

4.1. Results of the descriptive analysis

Out of a total of 216 SMEs covered by the study, more than half (53.4%) of the companies have an external accounting department; 70.9% have an in-house accounting department; 6.9% have both an internal and external accounting department.43.83% of these companies have between 10 and 50 employees, 30.14% have between 50 and 200 employees and 26.03% of them have between 3 and 9 employees.

4.2. Results of the two-dimensional analysis between the characteristics of the SIC and OPTI.

The results of the Pearson chi-square tests and the Cramer index or phi are reported in Appendices 2, 3 and 4. The results show that, overall, the characteristic elements of the SIC have a strong relationship with the optimisation of the tax burden of SMEs in CI.

- The production of the data has a very strong relationship with the optimization of the tax burden according to the results of the chi-square test (Appendix 2). The phi of cramer = (0.312). Strong relationship.
- The accounting organisation of a CIS has a very strong relationship with the optimisation of the tax burden according to the results of the chi-square test (Annex 3). The phi of cramer = (0.295). There is a significant positive relationship between the frequency of information production and tax optimization.
- The use of the information produced by a CIS has a very strong relationship with the optimisation of the tax burden according to the results of the chi-square test (Annex 4). The phi of cramer = (0.2997).' There is a significant and positive relationship between the use of the information produced and tax optimization.

4.3. Discussion of the results

4.3.1. Influence of the accounting organization on the optimization of the tax burden.

An accounting system is an organization of accounting work characterized by the books, documents used, the order of succession of the different tasks and the way in which summary documents are obtained. By accounting organization, we generally mean the techniques used to keep the books and documents specific to the different systems (hand-held, increasingly widespread use of computers). Saboly (1994) emphasizes that "accounting data are produced in and by an accounting organization and the quality of the accounting product depends on certain characteristics of this organization".

The results of our quantitative research show a positive and significant link between the influence of the accounting organization on the optimization of the tax burden of SMEs in CI at the 1% threshold. These results coincide with those of the authors who have shown that a good accounting organization contributes to the tax optimization of SMEs. We can cite (Gouadain and El Bashir 2002; Nkongolo et al., 1994; Meyssonnier and Zawadzki .2008). The **H1** hypothesis is validated

4.3.2. The influence of the production of accounting data on the optimization of the tax burden.

The production of information or data by the SIC has a positive and significant influence on the optimisation of the tax burden of SMEs. This is justified through the results of Pearson's tests and Cramer. La production of data are useful for management by the manager. The quality data produced at regular intervals is used to reduce the tax burden of SMEs according to all experts (100%).

In addition, its data will be used to optimise the SME's costs. Our results corroborate those of these authors who have shown the need for the production of data by the SIC for both long-term and short-term decision-making. Lacombe-Saboly (1994) and Lavigne (1999), Ngongang (2005) and Dupuy, (1994). Accounting data is transformed into information when it brings a message, when it has a semantic value for its recipient (Davis et al., 1986). In addition, the results of the qualitative phase show that the data produced must be of high quality so as not to bias decision-making: "SMEs must not only produce accounting and financial data but also produce quality data so that they are useful for decision-making". The above results allow us to validate our following sub-hypothesis **H2**.

4.3.3. The influence of the degree of the use of accounting information and the optimization of the tax burden.

The use of information for decision-making purposes is implemented from the perspective of the intensity of the use of information (Chappelier, 1994, Chappelier et al, 2013).

In the field of accounting, it can be argued that the use of accounting information necessarily contributes to the performance of all SMEs. Indeed, the data produced are used because they make it possible to make a statement of debts, receivables, and to negotiate loans with banks and financial institutions Ngongang (2005). the results of our research suggest that SMEs in CI actively use the information produced by their CIS. This information contributes to the optimization of their tax burdens as indicated by the results of the Pearson and Cramer tests.

Accounting information plays an important role in the company's strategy (Gondo 2018). Companies that have a high-performance CIS make more use of accounting information in their management Dieng (2018).Our results are consistent with those of (Bruns and McFarlan, 1987, McMahon 1999, Gorton, 1999, Orser et al, 2000). However, our results do not coincide with those of McMahon and Davies (1994). **H3** is validated.

V. RESEARCH CONCLUSION AND PROSPECTS

The justification for carrying out this study within the Ivorian SMEs framework has two main reasons. The first reason is that SMEs play a major role in driving the economies of both the OECD countries and emerging economies (OECD, 2009). Indeed, SMEs are very important in the economy of Côte d'Ivoire. The research question that motivated our study was: "What is the influence of the characteristics of the CIS on the optimization of tax burden of SMEs in Côte d'Ivoire?" Our interest in conducting this study was to find out the influence that the characteristics of the CIS have on the optimization of SMEs' tax burden in Côte d'Ivoire.

To achieve this goal, we adopted a research methodology based on a hypothetico-deductive approach, which consisted of two phases: a qualitative phase and a quantitative phase.

In our review of the theoretical literature, we aimed to clarify the theories and laws concerning the influence of the CIS on the optimization of the tax burden. All three of our hypotheses were confirmed.

This article presents both theoretical and methodological contributions:

- **Theoretical Contribution:** In our literature review, we highlighted that researchers have explored the contingency factors influencing the CIS, but no accounting research had previously developed the concept of tax burden optimization for SMEs. At the conclusion of our research, we demonstrated the influence of the CIS characteristics on the optimization of the tax burden of SMEs in Côte d'Ivoire. Indeed, this research emphasizes the specific characteristics of the CIS that managers must implement to reduce their tax burden and improve financial performance. Specifically, this includes the mandatory establishment of a sound accounting organization, the regular production of accounting and financial documents, and the use of data for decision-making purposes.
- **Methodological Contribution:** This research, from a methodological perspective, integrated both exploratory qualitative methods and confirmatory quantitative analyses, based on hypothetico-deductive logic. The goal of this research was to marry both methods: using the qualitative study to shine a light on a poorly explored or unknown phenomenon, and at the same time making sure the work is publishable by extending the external validity using statistical methods.

This research also led to the development of a measurement scale for the variable of tax burden optimization in SMEs. Although the proposed instrument, based on the qualitative study's verbatim data, benefited from exploratory and confirmatory factor analysis, it warrants some caution.

Looking ahead, it would be useful to revisit certain aspects of this study with a new sample that focuses exclusively on small and medium-sized industries (PMIs) in Côte d'Ivoire. Additionally, the use of structural equation modeling could be applied to account for all variables comprehensively.

REFERENCES

[1] A. Anasse, (2013). Trade-off of homogeneity and size of segments: proposal of an approach for AfricanSMEs. *Management international/International Management/Gestiòn Internacional*, 17(2), 123-134 (2).

[2] B. Bampoky, (2013). How to ensure quality financial information under the OHADA accounting system? *La Revue des Sciences de Gestion*, (3), 75-83 (2)

[3] Y. C. A. Vangah, (2018). The motivations for the practice of intention accounting: the case of Côte d'Ivoire. *Economics and Management,* (3), 65-73 (2).

[4] V. Besançon "Tax optimization and abuse of rights: the example of companies , *La Revue des Sciences de Gestion,* (4), 85-93.(3) .

[5] , K. Rosenzweig (1981). An exploratory field study of the relationships between the controller's department and overall organizational characteristics. *Accounting, Organizations and Society*, 6(4), 339-354. (4).

[6] H. Affès , A. Chabchoub, (2007). The accounting information system. *La Revue des Sciences de Gestion, (2), 59-68. .(4)* .

[7] J. R. Rossiter, (2002). The C-OAR-SE procedure for scale development in marketing. *International journal of research in marketing*, 19(4), 305-335.(5)

[8] A. Ngantchou, (2008). Refocusing the accounting framework, hardening the tax environment and persistence of accounting data management: A study of the behavior of Cameroonian Small and Medium Enterprises. (5)

[9] N. Bigou-Lare, (2001). SYSCOA and the relevance of accounting information: an analysis of the practice in Togolese companies. *Accounting and Business Research* 19 (74): 143-15 (6)

[10] H. Boukar, (2009). The contingency factors of growth Cameroonian micro and smallenterprises. *La Revue des Sciences de Gestion,* (3), 75-83 (7)

[11] B.Hamadi (2011), The Determinants of the Complexity of Accounting Data Systems of Small and Medium-Sized Enterprise Executives: A Meta-Analysis on Individual Data. *Accounting, Economics and Society, France*. pp.cd-rom, <hal- 00646518>.(7)

[12] B (2002), Lavigne. "Contribution to the study of the genesis of accounting information systems of SMEs: An empirical research", Proceedings of the XXIIIth Congress of the French Association of Accounting, Toulouse (8)

[13] Y. Evrard. (2003), Market: studies and research in marketing. Foundations and Methods, Nathan, 3rd edition (8)

[14] D .Ngongang (2007), "Analysis of the determining factors of the accounting information system and accounting practices of Chadian SMEs", La Revue des Sciences de Gestion (n°224-225), p. 49-57. (9)

[15] Watts and Zimmerman (1978), "Toward a Positive Theory of the Determination of Accounting Standards", Journal of Accounting Research, pp.112-134. (9)