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ATTEMPT TO MODEL THE IMPACT OF INTERNAL GOVERNANCE POLICIES ON THE QUALITY OF ACCOUNTING INFORMATION

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Abstract: The objective of this paper is to highlight the impact of the intensity of power relations on the quality of accounting information of agricultural enterprises in the Souss-Massa region. In order to maintain harmony between the object of our research and the methodological path taken to understand it, we have developed a conceptual model composed of thirteen variables distributed over three levels stemming from the governance policies of the firm. Starting from a post-positivist paradigm that we have inscribed in a hypothetico-deductive reasoning, the passage from the theoretical base to the empirical side of the study was done through an investigation by structural modeling of third order with latent variables estimated according to the repeated approach of indicators following a type II model (reflective-formative).

This model, which was tested on a sample of 213 observations, revealed a very significant explanatory value of the company's governance policies on its accounting information quality. In this sense, the mode of remuneration of the manager, the separation of his functions (management/control) and the diffusion of the ownership of the company have monopolized all the merit to explain the impact of the intensity of the relations of power of a company on its quality of the accounting information.

Keywords: Quality of accounting information, Intensity of power relations, Agricultural firm, Corporate governance policies, Structural equation modeling.

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1. Introduction

Accounting is seen as having played a very positive role in creating a manageable organizational domain. A regime of visibility and economic calculation has provided legitimacy to the enterprise, which now sees itself as able to achieve its objectives (Hopwood, 1987). Accountability allows a better translation of the company's actions by incorporating economic motives into legitimate and accepted economic facts (Ho, 1988). However, according to the inconveniences presented by the environment, the quality of the information reported in the summary statements varies from one company to another (Michaïlesco, 1998). Authors who have been interested in explaining the divergence of behaviors

observed among company managers regarding their accounting practices have examined the determinants likely to influence, first, the decisions made in terms of publication, and second, the quality of the information contained in these publications and intended for the company's stakeholders (Miles and Miles, 2019).

Withholding or disclosing financial information is used as a means to ensure the legitimacy of the company's leader both internally and externally. In fact, leaders tend to build relationships based on trust within the framework of work groups in order to stimulate the interdependence of individuals (Courpasson, 1997). The involvement of individuals in the company's strategy, as a result of their interdependence, leads to an improvement in competitiveness and induces self-monitoring by individuals.

Therefore, in addition to its strategic role, financial communication allows itself to act on a tactical level to demonstrate the internal legitimacy of the manager. Of course, if the company's financial information has been prepared by the manager, it is considered legitimate since it is the result of a strategy that is the result of a group effort. Certainly, the quest for internal legitimacy necessarily involves the creation of an environment that favors the establishment of relationships of trust between the various actors in the company.

The study of the accounting literature dealing with the quality of accounting information has allowed us to identify the main factors likely to affect the quality of accounting information from the firm's point of view, as did Gibbins, Richardson and Waterhouse. In this paper, we discuss all these determinants that we have been able to identify and that will be the basis of the variables that we will use later, after treatment, to build our hypothetical model.

Starting from the facts previously mentioned, we specify our problematic by a central question as it was recommended by Wacheux (1996). Thus, our purpose is to know: What is the impact of the company's internal governance mechanisms on the quality of its accounting information? This is a question of singular and innovative importance to which very few academic studies and research have paid attention.

Our paper is organized as follows. The first point is devoted to the presentation of a critical review of the conceptual and theoretical literature relating to the link between the internal governance mechanisms of the firm and the quality of the accounting information it produces (Azhari and Bouaziz, 2019). The second point briefly presents our research field, i.e. agricultural enterprises from the Souss-Massa region, as well as the methodological approach used to overcome the obstacles to the operationalization of our conceptual framework. In the third point, we outline the results of the study before presenting, in the conclusion, a summary of the implications as well as the future avenues on which our reflection is open.

2. The impact of internal governance policies on the quality of accounting information: a rich theoretical framework

Our identification of factors related to corporate governance mechanisms that can affect the quality of a firm's accounting information was based on the identification of internal stimuli that make it possible to evaluate the intensity of the power relations between the firm and its stakeholders (managers, shareholders, creditors, etc.) (Han, 2004). Theoretical reflections in this sense evoke three determinants of the quality of accounting information that can be joined to the governance practices of the firm: the mode of remuneration of the manager, the power of the manager and the structure of the ownership of the firm.

1.1. The method of remuneration has a positive effect on the quality index of accounting information

The role of incentives in mitigating management problems is a central theme in accounting research. We argue that incentives based on how executives are compensated reduce their reluctance to disclose

personal information. In particular, it is found that firms' disclosure varies as executive compensation is linked to performance or not. The accounting literature largely assumes that the disclosure preferences of executives and investors are not congruent. It should be noted that factors such as incentive compensation schemes are a barrier to disclosure (Verrecchia, 2001).

Given the key role of information in corporate governance decision making, disclosure remains an important concern for investors (Bushman and Smith, 2001). One possible approach to mitigating the agency problem (which promotes executive reluctance) is to tie their compensation directly to their disclosure activities. However, such a compensation contract would have to specify in advance the disclosures for all future contingencies. Stiglitz (2000) argues that since future contingencies are innumerable and unverifiable, such a contract would be incomplete and potentially inefficient.

1.2. Reorganization of the powers of the executive management and the chairmanship of the board

Previous studies have focused on identifying the distinguishing factors of companies that may influence the quality of accounting disclosure, without considering whether a company's internal governance mechanisms can explain the phenomenon studied (Azhari and Bouaziz, 2019). According to Gibbins *et al* (1990), the quality of a company's publications and reports is strongly dependent on the will of the board of directors, the only one entitled to set up a disclosure policy. Given the preponderance of the board of directors in determining the quality of a company's accounting information, it is imperative to explore the rules that make it an effective mechanism that responds to the principles of governance that we identify as follows

- The presence of a significant number of independent directors on the Board;
- The presence of audit committees; and
- The delimitation of the functions of Chief Executive Officer and Chairman of the Board.

The study of the relationship between accounting quality and the above-mentioned governance principles reveals a positive correlation of the latter with the quality of corporate disclosure, as well as a reduction in disclosure fraud. Assuming that managers may behave opportunistically, O'Sullivan (2000) and Chen and Jaggi (2000) suggest that these mechanisms should be strengthened in order to support managers' control mechanisms and to achieve alignment between the internal and external interests of the organization while moderating information withholding.

1.3. Ownership structure and quality of the company's accounting information

The quality of accounting information provided to stakeholders is inevitable for reducing uncertainty and making the right economic and financial decisions (Nassar *et al*., 2014). Recently, the issue of institutional ownership structure has received increasing attention in both developed and emerging economies (Haghighat *et al.*, 2015). In the wake of accounting financial scandals, policymakers, academics, and investors have claimed the relevance of institutional ownership as a prerequisite for maintaining stakeholder confidence on issues related to the quality of corporate disclosures (Fathi, 2013; Aifuwa and Embele, 2019). When a firm's ownership structure is marked by a strong presence of institutional ownership, this necessarily impacts its accounting disclosure quality (Nassar *et al.*, 2014). Indeed, when a significant portion of the firm's capital is held by institutional investors, the quality of accounting information improves due to a control of the managers' actions (Azhari and Bouaziz, 2019).

2. Construction of the research model

Our objective to assess the impact of the intensity of a firm's managerial power on the quality of information comes up against a fundamental question: how to construct a conceptual model capable of reducing the abstraction of the endogenous variable? In other words, which variables should be chosen and which indicators should be used to make it possible to translate the conceptual model into empirically observable data? In order to decide between the variables to be eliminated and those that we have retained, we have classified them firstly on the basis of the availability of data, and lastly on the basis of the level of legitimacy that the latter may have gained as a result of public debate. Certainly, we will be constrained by the scarcity of statistical data to reflect the latter. Nevertheless, we will try to find a compromise between the theoretical "*ideal*" and the empirical possible.

2.1. The hierarchical model of accounting information quality

The present model corroborates the modus operandi through which we plan to operationalize the link between the firm's internal governance mechanisms and the quality of the accounting information it produces. Therefore, we designate the quality of accounting information as a third-order hierarchical construct (High-order construct), and the governance policies of the firm as a second-order construct (dimensions) composed of three latent variables: "Executive compensation mode" (MOD_REM), "Executive power" (POU_DIR) and "Ownership structure" (STR_PRO). Figure 1 illustrates our discussion.

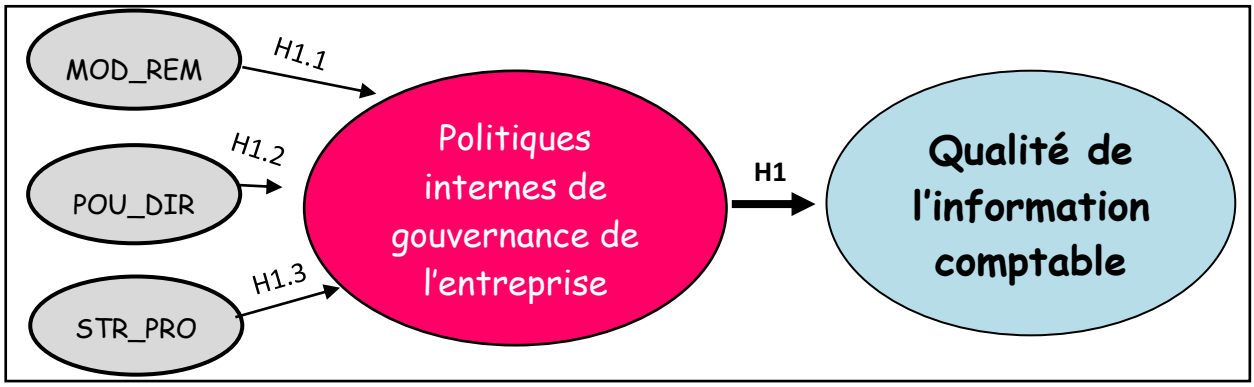

Figure 1. The hierarchical model of accounting information quality

In sum, we seek through the development of the model to verify the following hypothesis:

H1: *The company's internal governance policies have a positive and significant impact on the quality of accounting information.*

2.1.1. The mode of remuneration of the executives (MOD_REM)

The compensation for the services provided by managers can take different forms: fixed remuneration (salary), variable remuneration based on performance (bonus, stock options), non-monetary remuneration (benefits in kind), preferential pension plans, etc. Jensen and Mackling (1976) and Jensen (1984) have managed to classify these different types of remuneration into two categories:

- **Fixed** (base) **compensation to** remunerate the three components of a manager's competence: knowledge, know-how and interpersonal skills; and

- **Incentive compensation** that lies at the heart of agency theory and proposes a variable portion of compensation in addition to base compensation to influence executives and staff to improve organizational performance.

Watts and Zimmerman (1987) were able to confirm the hypothesis that managers are willing to manage the firm better as they hold a larger proportion of the capital. Incentive clauses in shareholder-manager contracts better explain managers' accounting and reporting behavior. Indeed, the observation of the behavior of executives in a sample of 1,129 companies revealed a positive and significant correlation between the "quality of published information" and "the mode of incentive compensation of executives" (Nagar *et al.,* 2003). These authors have reached conclusions confirming that executive incentive plans encourage executives to improve the quality of their disclosures, and that as a consequence they allow them to reduce the agency problem. We will measure the variable "mode of remuneration" on the basis of the indicators that we were able to identify from the literature review and that we present in the table below:

Table 1. Operationalization of the variable "Mode of remuneration

Dimension	Variable	Indicators
• Internal corporate governance policies	• Method of remuneration for executives	• Fixed remuneration • Variable compensation • Non-cash compensation

Source: Own elaboration

The "mode of compensation" variable is designed to allow us to test the following hypothesis:

H1.1 *The company's executive incentive compensation scheme would have a positive and significant impact on the company's internal governance policies.*

2.1.2. The power of the leader (POU_DIR)

We seek to verify the impact of the "duality" of the management/control functions on the quality of the production and publication of a company's accounting information through the "Power of the director" variable (POU_DIR). From the point of view of Charreaux and Pitol-Belin (1990) and John and Senbet (1998), the institution of a board of directors gives a company's governance system a step ahead in terms of controlling the actions of managers.

In this case, the deficiency of a board of directors results in the coupling of management and control functions in the same hand (Fama and Jensen, 1983). Such a situation usually leads to a strong concentration of power of the manager in relation to the decision-making and control process. From this point on, the independence of the board is broken and its control role is frustrated.

We have been able to identify several empirical studies that have confirmed a strong correlation between the combination of the functions of "dual" managers and the quality of accounting information. We suggest in our work to measure the impact of the variable "Power of the director" (POU_DIR) through the following statistical indicators:

Table 2. Operationalization of the "Power of the leader" variable

Dimension	Variable	Indicators
• Internal corporate governance policies	• Power of the executive	• Cumulation of mandates • Seniority in the company • Seniority in the position of the executive

Source: Own elaboration

Thus, we formulate the following hypothesis:

H1.2 *The separation of the functions of the company's executives would have a positive and significant impact on the company's internal governance policies.*

2.1.3. Property structure (STR_PRO)

The main characteristic to realize the nature of a firm's ownership structure is maintained on the degree of concentration or diffusion of its capital (Azhari and Bouaziz, 2019). In addition, agency theory predicts a negative relationship between the quality of published accounting and financial information and the level of capital concentration.

In other words, the higher the concentration of capital, the more opportunistic behavior of managers is sustained (Fama and Jensen, 1983). Nevertheless, the diffusion of capital leads to a coalition of shareholders, which in turn favors a higher diffusion of accounting information in order to reduce agency costs (Ray and Gupta, 1988). In such circumstances, Raffournier (1991) points out that only a massive diffusion of accounting and financial information can overcome the conflicts arising from the shareholder-manager relationship. We therefore see a negative relationship between the concentration of ownership and the level of diffusion. Moreover, studies that have focused on samples of firms whose capital is largely held by managers have shown a reluctance on the part of managers to publish good quality accounting information compared to firms held by different shareholders (Cuijpes *et al.*, 2002).

For our part, we plan to assess the impact of the "ownership structure" variable (STR_PRO) by associating it with two statistical indicators that we were able to identify in the literature review (Scott, 1994), (Crasswell and Taylor, 1992) and (Mezias, 1990). The table below shows our measurement block for this variable.

Table 3. Operationalization of the "ownership structure" variable

Dimension	Variable	Indicators
• Internal corporate governance policies	• Property structure	• Capital concentration • Diffusion of capital

Source : Own elaboration

Thus, we formulate the following hypothesis:

H1.3 *The diffusion of corporate ownership would have a positive and significant impact on internal corporate governance policies.*

3. Epistemological and methodological aspects of the study

3.1. Epistemological posture: positivism, constructivism or modified paradigms?

Let us recall here that the perception of reality and the production of related knowledge generally fall within two main epistemological perspectives in economics: positivism and constructivism.

As far as we are concerned, the question we are dealing with and especially its opacity imposes us to position our research in a post-positivist paradigm. This is a moderate version of positivism which perceives reality as an existing truth, but which accepts, as well, incompleteness and falsification in the validation of the knowledge produced (Aissa, 2001).

3.2. Methodological positioning

In addition to the above epistemological motive, we aspire to explore the causal relationship between, on the one hand, the quality of accounting information as a dependent variable and, on the other hand, the internal governance policies of the firm as an explanatory variable. It starts with a theoretical examination leading to the emission of hypotheses and ends with empirical tests refuting or corroborating the hypotheses. Consequently, we follow a hypothetical-deductive approach.

3.3. The methodological approach: quantitative or qualitative?

Our methodological choices were largely influenced by the characteristics of the theoretical material from which we built our conceptual research model. Our theoretical framework is both nourished by an analysis of the literature and by the observation of the discipline during our meetings with accounting experts. The present research will thus focus on numerical data. These data have two advantages: on the one hand, they are likely to quantify our key concepts, and on the other hand, they are appropriate for the statistical analyses that we wish to carry out a little further. The study is, therefore, part of a quantitative approach.

4. Spatial scale and sampling procedure

Our sample is derived from a database that we were able to build following our visits to a few specialized organizations, including the Commercial Court of Agadir, the regional investment center of the Souss-Massa region, the regional direction of the High Commission for Planning, the Chamber of Commerce, Industry and Services of Souss-Massa, the General Directorate of Taxes in Agadir and databases of previous studies. To identify agricultural enterprises, we were inspired by the law n°112.12 of December 18, 2014 promulgated by the Dahir n°1 - 83 - 226 of 9 moharram 1405 (October 5, 1984) which governs cooperatives. However, it turned out that the census of agricultural enterprises differs from one agency to another. This has resulted in an undefined population, whose real size is unknown. Faced with such a situation, the determination of a probability sample was inconceivable, so we turned to a type of non-random sampling combining convenience and snowball sampling techniques (Carricano *et al.*, 2010).

5. Data analysis and discussion of results

5.1. Purification of the instruments of measurements

Following our choice of the PLS approach, the following lines will focus on the cleaning of the measurement blocks associated with each of the latent variables of the research model.

5.1.1. Purification of the manifest variables assessing the latent variable "*mode of remuneration of the executive*".

The value of the Cronbach's alpha index (**0.878**) for this block of measures attests to a strong consistency of the measurement scale employed.

Table 4. Cronbach's Alpha calculated for the measurement block of the latent variable "*Executive compensation method* "

Reliability and construct validity		
Built	**Cronbach's Alpha**	**Number of elements**
MOD-REM	**0,878**	3

Source : Results generated by SmartPLS

The principal component analysis (PCA) calculated for the measurement block of the latent variable "*mode of remuneration of the manager*" announces the component that best represents the said variable. A single component explains more than **80.5%** of the variance. This observation is further supported by the high quality of representation of the items extracted by the PCA method (**0.842 ;0.928 ;0.920**). From the results of the principal component analysis, it is apparent that this block of measures would not be subject to any reduction in dimensions. Therefore, the latent variable "*mode of compensation of the manager*" will preserve the same composition of the measurement scale, namely: REM-FIX, REM-VAR and REM-PEC.

Table 5: Qualities of the components of the latent variable *"mode of remuneration of the manager*" extracted by the PCA method

Total explained variance						
Component	**Initial eigenvalues**			**Sums extracted from the load square**		
	Total	**% of variance**	**Cumulative**	**Total**	**% of variance**	**Cumulative**
1	2,416	80,529	80,529	2,416	**80,529**	80,529
2	,414	13,784	94,313			
3	,171	5,687	100,000			

Representation qualities		
	Initiales	**Extraction**
REM_FIX	1,000	**,842**
REM_VAR	1,000	**,928**
REM_PEC	1,000	**,920**

Source: Results generated by SPSS

5.1.2. Purification of the manifest variables assessing the latent variable "*Power of the leader"*

The strong internal consistency of the measurement instrument is endorsed by a Cronbach's alpha of **0.892**.

Table 6. Cronbach's Alpha calculated for the measurement block of the latent variable "*Power of the leader*"

Reliability and construct validity		
Built	**Cronbach's Alpha**	**Number of elements**
POU-DIR	**0,892**	3

Source : Results generated by SmartPLS

We repeat the same PCA test on the present block of measures to consolidate the unidimensionality of the measure. The test confirms that a single component explains more than **82.2%** of the variance.

Table 7. Qualities of the components of the latent variable "*Power of the leader*" extracted by the PCA method

Total explained variance						
Component	**Initial eigenvalues**			**Sums extracted from the load square**		
	Total	**% of variance**	**Cumulative**	**Total**	**% of variance**	**Cumulative**
1	2,467	82,220	82,220	2,467	**82,220**	82,220
2	,291	9,686	91,906			
3	,243	8,094	100,000			

Representation qualities		
	Initiales	**Extraction**
CUM_MAN	1,000	**,906**
ANC_ENT	1,000	**,916**
ANC_POS	1,000	**,899**

Source: Results generated by SPSS

The theoretical content of the measurement instrument for the latent variable "*Power of the leader*" is supported by the values obtained from its empirical test. Therefore, we maintain the three items (CUM-MAN, ANC-ENT and ANC-POS) as the measurement block for the variable.

5.1.3. Purification of manifest variables assessing the latent variable "*Ownership Structure*"

The value of Cronbach's alpha (**0.884**) accredits the homogeneity of the items selected immediately for the evaluation of the latent variable "*Property structure*".

Table 8. Cronbach's Alpha calculated for the measurement block of the latent variable "Property Structure."

Reliability and construct validity		
Built	**Cronbach's Alpha**	**Number of elements**
STR-PRO	**0,884**	2

Source : Results generated by SmartPLS

The result obtained from the calculation of Cronbach's alpha is supported by the PCA performed on the items. The latter reveals that a single component explains more than **89.5%** of the variance with sustained representational qualities.

Table 9. Qualities of the components of the latent variable "Ownership Structure" extracted by the PCA method

Total explained variance						
Component	**Initial eigenvalues**			**Sums extracted from the load square**		
	Total	**%of variance**	**Cumulative**	**Total**	**%of variance**	**Cumulative**
1	1,791	89,570	89,570	1,791	**89,570**	89,570
2	,209	10,430	100,000			

Representation qualities		
	Initiales	**Extraction**
CON_CAP	1,000	**,946**
DIF_CAP	1,000	**,946**

Source: Results generated by SPSS

Subsequently, the empirical analysis of the latent variable "*Ownership Structure*" will continue with the items already proposed in the theory: CON-CAP and DIF-CAP.

6. Model estimation using the PLS approach: A two-step process

The path models estimated under the PLS-PM approach consist of two elements: (1) the structural model, which describes the relationships between the latent variables, and (2) the measurement models, which describe the relationships between the latent variables and their manifest variables (i.e., their indicators).

6.1. Validation of the measurement model (Outer model)

6.1.1. Model reliability tests

6.1.1.1. Composite *reliability* of low-order latent variables

The results computed from *SmartPls* show a **better composite reliability** for our case of analysis, i.e., all constructs present a composite reliability above 0.7 without exceeding the undesirable threshold of **0.95**.

Table 10. Composite reliability of constructs (CR)

Lower order latent variables	Reliability of constructions	
	Cronbach's Alpha	Composite Reliability*
MOD_REM	0.878	0.925
POU_DIR	0.892	0.932
STR_PRO	0.884	0.945
**recommended threshold: CR > 0.7*		

Source: Results obtained from calculations in SmartPls

6.1.1.2. Reliability of indicators (*Loadings*)

The external loadings must be in addition to valid (λi > 0.7) significant. SmartPls provides the ability to assess the significance and relevance of the level of significance of each indicator weight. By replicating the sample size (5,000 times), the bootstrap technique provides a large number of subsamples from the original data (with replacement) and estimation models for each subsample. Following this operation, the significance of each model parameter (especially Outer loadings) is calculated based on inference statistics to determine the contribution of each item to the construct explanation associated with it (Hair *et al.*, 2014).

Table 11. Reliability and significance of the measurement blocks (VM)

Lower order constructs	Items	Reliability of indicators	
		Loadings (λi) [a]	T Statistics (Meaning)[b]
MOD_REM	REM_FIX <- MOD_REM	0.849	28.084 ***
	REM_VAR <- MOD_REM	0.924	57.240 ***
	REM_PEC <- MOD_REM	0.917	50.056 ***
POU_DIR	CUM_MAN <- POU_DIR	0.899	32.834 ***
	ANC_ENT <- POU_DIR	0.907	36.903 ***
	ANC_POS <- POU_DIR	0.913	62.218 ***
STR_PRO	CON_CAP <- STR_PRO	0.948	100.701 ***
	DIF_CAP <- STR_PRO	0.945	62.662 ***

[a] *Threshold of good reliability: λi >= 0.7*
[b] *Bootstrap technique with N replications (N =5000);*** p < 0.001 (t > 2.57);** p <0.01 (t > 1.96); * p < 0.1(t >1.65)*

Source: Results obtained from calculations in SmartPls

6.1.2. Test of convergent validity

The average variance extracted (AVE) is the gold standard for assessing convergent validity (Fornell & Larcker, 1981). An AVE greater than **0.5** has been determined to be a sufficient threshold to provide empirical evidence of convergent validity. Statistically, this is equivalent to saying that the construct in question is able to explain more than half of the variance of its indicators on average and, therefore, all other latent variables explain less than half of them (Benitez *et al.*, 2020). For our case, all AVE values are greater than 0.**750**, so all constructs in our measurement model explain more than **75%** of their manifest variables (Items).

Table 12. AVE test of convergent validity

Lower order constructs	Average Variance Extracted (AVE)*
MOD_REM_DIR	0.805
POU_DIR	0.821
STR_PRO	0.896
**Recommended threshold: AVE > 0.5*	

Source: Results obtained from calculations in SmartPls

6.1.3. Test of discriminant validity

6.1.3.1. Discriminant validity at the construct level (Fornell and Larcker test)

A first output that SmartPls proposes to check the discriminant validity of the constructs of a model is the Fornell and Larcker test. Practically this test requires that for any construct (LV), the variance shared with its measurement block (Items) must be greater than the variance it shares with any other latent variable (Hair *et al.*, 2014). Such is indeed the case; the application of the test consolidates the discriminant validity of our measurement model.

Table 13. Fornell and Larcker test of discriminant validity

	MOD_REM	***POU_DIR***	***STR_PRO***
MOD_REM	**0.897**		
POU_DIR	0.377	**0.906**	
STR_PRO	0.340	0.388	**0.946**

Source: Results obtained from calculations in SmartPls

6.1.3.2. Discriminant validity at the indicator level (Cross-Loadings test)

The cross-loadings test offers a second alternative to check the discriminant validity of the measurement model (Götz *et al.*, 2009). In a good model, the loadings (external weights) of an indicator are supposed to be higher than its cross-loadings (Chin, 1998). Based on the criteria recommended above, the discriminant validity of our measurement model is close to *the ideal* described by Garson (2016). The table below illustrates this point.

Table 14. Cross-loading test of discriminant validity

	MOD_REM	***POU_DIR***	***STR_PRO***
REM_FIX	**0.849**	0.385	0.279
REM_VAR	**0.924**	0.319	0.302
REM_PEC	**0.917**	0.311	0.333
CUM_MAN	0.354	**0.899**	0.217
ANC_ENT	0.277	**0.907**	0.265
ANC_POS	0.383	**0.913**	0.536
CON_CAP	0.286	0.418	**0.948**
DIF_CAP	0.358	0.315	**0.945**

Source: Results obtained from calculations in SmartPls

With the measurement model (external model) validated, we now turn to the validation of the structural model (internal model). But before embarking on the second phase, we would like to review, in a schematic way, the different steps we have taken to get there. The figure below briefly relates our remarks.

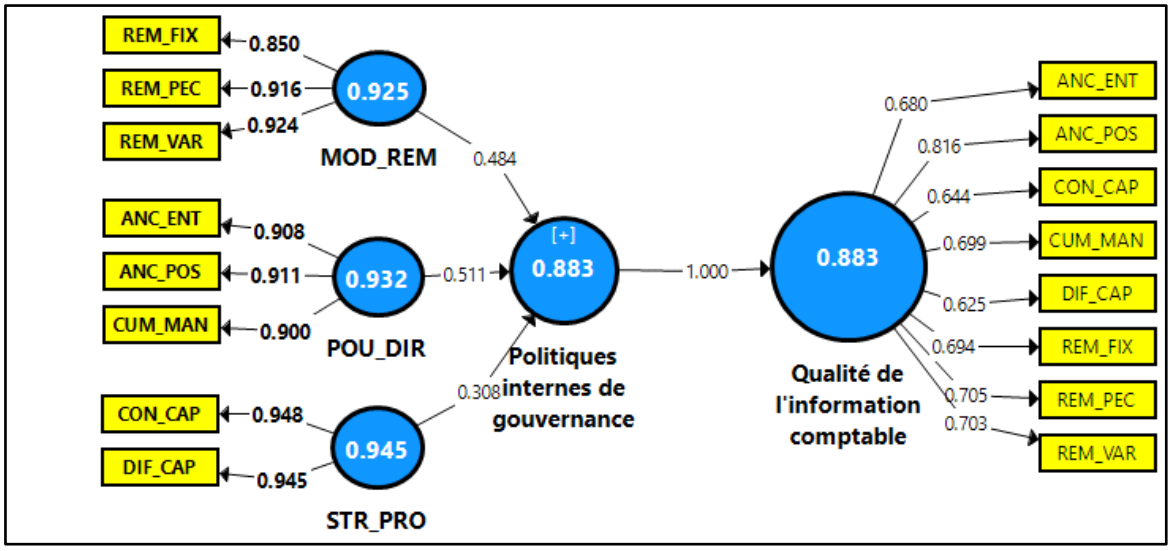

Figure 2. Path modeling of our hierarchical model under PLS using the repeated indicators approach

6.2. Validation of the structural model (Inner model)

6.2.1. Multicollinearity test: variance inflation factor

We begin the process of evaluating our structural model by checking the level of multicollinearity that our formative constructs exhibit. The commonly used index for checking multicollinearity is the coefficient of variance inflation factor (VIF). Applying the VIF test on our structural model revealed very low levels of multicollinearity (well below the recommended thresholds). This is true for the second-order dimensions (POL_INT_GOV < 2), as well as for the third-order construct (Quality of Accounting Information: QIC < 2).

Table 15. Collinearity Statistics (The VIF values of the internal model)

Collinearity Statistic - Inner VIF[a] Values		
Second-order construct		
	POL_INT_GOV	**QIC**
MOD_REM	1.229	
POU_DIR	1.279	
STR_PRO	1.241	
Third-order construct		
POL_INT_GOV		1.033
[a] *recommended threshold: FIV < 10*		

Source: Results obtained from calculations in SmartPls

6.2.2. Structural model path coefficients and significance test results

6.2.2.1. Evaluation of Path *Coefficients*

From a statistical perspective, path coefficients are generally between -1 and +1, with coefficients closer to **+1** representing **strong positive** relationships, and those closer to **-1** indicating **strong negative** relationships (Sarstedt *et al.*, 2017). Chin (1998) considers that "*standardized structural coefficients should be at least **0.2**, and ideally greater than **0.3** to be considered significant."* With respect to our

structural model, the analysis of the structural coefficients shows **very significant** positive relationships connecting the lower order latent variables to the second order dimension. Similarly, the association of our second-order dimension with the quality of accounting information reveals a highly significant relationship.

Table 16. Performance of the path coefficients of the structural model

	POL-INT-GOV	QIC
Second-Order Construct		
MOD_REM	0.470***	
POU_DIR	0.490***	
STR_PRO	0.348***	
Third-Order Construct		
Direct effects		
POL-INT-GOV		0.893***
Indirect effects		
MOD_REM		0.420***
POU_DIR		0.438***
STR_PRO		0.311***
Significant ≠ 0; 0.2 (minimum); 0.3 (ideal) (Chin,1998)		

Source: Results obtained from calculations in SmartPls

6.2.2.2 Significance test of the path coefficients of the structural model

Tenenhaus *et al* (2005) recommend complementing the above analysis with an assessment of the significance levels of the regression coefficients obtained using sample replication techniques, such as bootstrapping, in order to determine the confidence intervals of the path coefficients and to consolidate the significance of the relationships between the constructs of the model.

Table 17. Significance test of the path coefficients of the structural model

Means, STDEV, T-Values, P-Values			
	[a]Path coefficients	[b]T Statistics (|O/STDEV|)	P Values
Second-Order Construct			
MOD_REM -> POL-INT-GOV	0.470 ***	11.590	0.000
POU_DIR -> POL-INT-GOV	0.490 ***	9.904	0.000
STR_PRO -> POL-INT-GOV	0.348 ***	8.830	0.000
Third-Order Construct			
Direct effects			
POL-INT-GOV -> QIC	0.893 ***	1.972	0.049
Indirect effects			
POU_DIR -> QIC	0.438 *	1.926	0.054
MOD_REM -> QIC	0.420 **	1.982	0.047
STR_PRO -> QIC	0.311 **	2.034	0.042

[a] *Significance at threshold *** p < 0.001 (t > 2.57);** p < 0.01 (t > 1.96); * p < 0.1 (t >1.65)*
[b] *Bootstrap technique with N replications (N = 5000)*

Source: Results obtained from calculations in SmartPls

When analyzing the regression coefficient estimates of the structural model, we find that all the low-order latent variables contribute significantly (at the 1% threshold) to the second-order dimension (POL-INT-GOV). The latent variable POU_DIR (0.490) is the one that contributes the most to the construction of the dimension (POL-INT-GOV). At the third-order level, the bootstrapping results (one replication at N=5000) confirm that the direct effect of the POL-INT-GOV dimension (0.**893**) is highly significant at the 1% level (t > 2.58) on the higher order endogenous variable QIC.

We can thus argue, in the context of the indirect effects of the structural model, that the low-order latent variables POU_DIR (0.**438**), MOD_REM (0.**420)** and STR_PRO (0.**311**) are relevant to the quality of accounting information (higher order).

6.2.2.3. Test of the hypotheses associated with the reduced models

The significance test of the structural model's path coefficients has allowed us to ensure the plausibility of our overall hypothesized model. We now turn to the test of the hypotheses through the evaluation of the **Std Beta** of each structural link forming the hypotheses of our model. We then call a replication of our sample using the bootstrap technique (N= 5000) in order to assess the significance of the emerging links.

A reading of the table below tells us that all four assumptions of the model **are supported** (3 assumptions at the 1% error level and 1 at the 5% error level). The detailed discussion of these hypothesis relationships will be the subject of a point to which we will return when we discuss our model results.

Table 18. Testing of hypotheses associated with the overall model

Assumptions	Structural links	Std. Beta	Std. Error	T-Value	P-Value	Decision
H 1.1	MOD_REM POL-INT-GOV	0.470 ***	0.042	11.253	0.000	**Accepted *** **
H 1.2	POU_DIR POL-INT-GOV	0.490 ***	0.050	9.830	0.000	**Accepted *** **
H 1.3	STR_PRO POL-INT-GOV	0.348 ***	0.040	8.644	0.000	**Accepted *** **
H 1	**POL-INT-GOV QIC**	0.893 **	0.442	2.018	0.044	**Accepted ** **

Source: Results obtained from SmartPLS calculations

6.2.3. The coefficient of determination (R square)

We recall that we designed our hierarchical latent variable model using the repeated indicators approach in a type II (reflective-formative) model. Under such circumstances, almost all of the variance of the higher-order constructs (HOC) is explained by its underlying lower-order constructs (LOC) generating, therefore, R^2 values close to 1 ($R^2 \approx 1$) (Ringle *et al.*, 2012). Such is indeed the case; the table below illustrates what we predicted earlier.

Table 19: Coefficient of determination test (R square)

R Square		
	[a]R Square	**R Square Adjusted**
Second-Order construct		
POL-INT-GOV	1.000	1.000
Third-Order construct		
QIC	**0.988**	0.988
[a]recommended threshold: $R^2 > 0.19$		

Source: Results obtained from calculations in SmartPls

6.2.4. Evaluation of the effect size (f^2)

Touching on our structural model, the evaluation of the coefficients of the R^2 determination attested that the higher order constructs are perfectly explained by their sub-dimensions ($R^2 \approx$**1**.0), which is why we assume that the magnitude of the effects of our hierarchical constructs will be reflected by very large f^2 values compared to the recommended thresholds. An assumption that we later confirmed by the values spread over the table below.

Table 20: Evaluation of effects size (f^2)

F square (f^2)				
	POL_INT_GOV			**QIC**
Second-Order Construct				
MOD_REM	20776.429			
POU_DIR	21710.753			
STR_PRO	11301.388			
Third-Order Construct				
POL_INT_GOV				62.634
Significance: $f^2 > 0.02$				

Source: Results obtained from calculations in SmartPls

The size effects calculated for our structural model are overall very large. The significance of these effects is explained by the high levels of the R^2 coefficients of determination calculated above. If we focus specifically on the structural relationships linking the POL_INT_GOV dimension to its various related variables, we can say that the three low-order latent variables MOD_REM (20776.429***), POU_DIR (21710.753***), and STR_PRO (11301.388***) all have a very large effect on their dimensions (second-order construct).

6.2.5. Test of the predictive relevance of the Q^2 model

It is customary to appreciate through the predominant measure of predictive relevance the Stone-Geisser Q^2 (Stone, 1974; Geisser, 1975). The Q^2 value of the latent variables in the PLS path model is obtained using the Blindfolding procedure. The farther the value is from 0, the better the predictive reliability of the construct estimates. The Blindfolding procedure can only be applied to latent endogenous variables that have a reflexive measurement model. A condition that our model fulfills thanks to the repeated indicators technique, even if we adapt a formative scheme linking the second and third order constructs to their underlying variables. The table below shows the Q^2 values obtained.

Table 21: Stone- Geisser Q^2 cross-validation test of predictive accuracy

Construct Cross-validated redundancy			
	SSO	**SSE**	**[a]Q^2 (=1-SSE/SSO)**
Second-Order construct			
POL_INT_GOV	1704.000	900.960	0.471***
Third-Order construct			
QIC	4899.000	4158.228	0.151**
[a] Recommended threshold: $Q^2 > 0$			

Source: Results obtained from calculations in SmartPls

The results obtained from the Blindfolding for the Stone-Geisser Q^2 test show Q^2 values that are well above 0. Thus, the performance of the predictability of our model is supported. This performance is seen at the level of the second order constructs (*POL_INT_GOV: Q^2* = 0.471***) as well as for the third order endogenous variable (*QIC: Q^2*= 0.151**).

7. Discussion of the results

The present paragraph will lead a discussion of the different elements, which we have initiated previously, by confronting them with the previous literature. To do so, we will return to the first results of our analysis concerning the validity and reliability of the measurement instruments. We continue our

discussion by putting into perspective the direct structural links (hypotheses) that are established between the constructs of the different hierarchical levels of our model. Appropriately, we will initiate the discussion of the results of each hypothesis, taking care to compare them to previous work.

7.1. Effects of internal governance policies on QIC

7.1.1. Manifest variables assessing the "*POL_INT_GOV*" dimension

The reliability of the reflective indicators of the model was assessed from the factorial contribution weights (*loadings*) of each item. The values of the calculated *loadings were* completed by a significance test using the bootstrap technique (at N=5000 replications) to confirm the contribution of each item to the explanation of the construct associated with it. The three items associated with the low order variable (MOD_REM) registered the following values: (Loadings $_{REM\_FIX <- MOD\_REM}$ = 0.849; t-value $_{REM\_FIX <- MOD\_REM}$ = 28.084 ***), (Loadings $_{REM\_VAR <- MOD\_REM}$ = 0.924; t-value $_{REM\_VAR <- MOD\_REM}$ = 57.240 ***) and (Loadings $_{REM\_PEC <- MOD\_REM}$ = 0.917; t-value $_{REM\_PEC <- MOD\_REM}$ = 50.056 ***). The variable (POU_DIR) also contributed profoundly to explaining the variation in the dimension "POL_INT_GOV". The values displayed by the manifest variables we associated with it attest to our statements: (Loadings $_{CUM\_MAN <- POU\_DIR}$ = 0.899; t-value $_{CUM\_MAN <- POU\_DIR}$ = 32.834 ***), (Loadings $_{ANC\_ENT <- POU\_DIR}$ = 0.907; t-value $_{ANC\_ENT <- POU\_DIR}$ = 36.903 ***) and (Loadings $_{ANC\_POS <- POU\_DIR}$ = 0.913; t-value $_{ANC\_POS <- POU\_DIR}$ = 62.218 ***).

The third latent variable of lower order, which we have mobilized to construct the dimension "POL_INT_GOV", is also endowed with an appreciable capacity for the formation of the underlying higher order constructs. We apprehended it through two manifest variables (items) whose statistical characteristics of significance are as follows: (Loadings $_{CON\_CAP <- STR\_PRO}$ = 0.948; t-value $_{CON\_CAP <- STR\_PRO}$ = 100.701 ***) and (Loadings $_{DIF\_CAP <- STR\_PRO}$ = 0.945; t-value $_{DIF\_CAP <- STR\_PRO}$ = 62.662 ***).

7.1.2. The contribution of low-order latent variables to the explanation of the "*POL_INT_GOV*" dimension

Following the recommendations of Sardeshmukh and Vandenberg (2017), we performed the path coefficients (standardized beta) test to verify whether the lower order constructs "(MOD_REM), (POU_DIR) and (STR_PRO)" contribute significantly to the second order dimension "*POL_INT_GOV*" and whether, also, the latter contributes significantly to the third order construct *"Quality of accounting information"* alone. To consolidate the results of the first test, we calculated the standardized error, the t-value and the p-value for each structural link (hypothetical relationship). The analysis of the structural coefficients was based on the significance and positivity of the relationships linking, in turn, the latent variables of lower order to the dimension "*POL_INT_GOV*" and the latter to the endogenous variable *"Quality of accounting information"*.

The first structural relationship undertakes a significant and positive link between the mode of remuneration of the manager (MOD_REM) as a counterpart of the services they offer, and the management mechanisms of the firm "*POL_INT_GOV*". This finding is easily read from the high relevance and significance of the structural relationship (*MOD_REM* ➔ *POL-INT-GOV*: $\beta = 0.470$; Std. Error = 0.042; t = 11.253***; $p < 0.001$). These results confirm what was put forward by Verrecchia (2001), the latter found that the information disclosed by companies varies as the executive's

compensation is linked to his or her performance or not. According to Verrecchia (2001), the accounting disclosure preferences of executives and investors are not congruent, so factors such as incentive compensation schemes are a barrier to disclosure of accounting information. In the same vein, Shleifer and Vishny (1989) argue that the embarrassments that can affect the quality of accounting information in a market stem from the fundamental agency problem, adding that "*managers in most firms prefer not to disclose things if they don't have to. They don't want you to see exactly what they're doing; to see the little bets they're making*. It is in this sense that Bushman and Smith (2001) have presented a possible approach to mitigating the agency problem by linking executive compensation directly to disclosure activities in order to improve the quality of accounting information. Similarly, according to (Nagar, 1999) the reluctance of executives to disclose full accounting information is explained by their fear that such disclosures will cause the labor market to re-evaluate their managerial skills and abilities. Thus, unless duly compensated, managers are risk-averse and reluctant to disclose information if they are unsure how such disclosures will affect them.

To an even greater extent, we find a positive and highly significant impact of the variable (POU_DIR) on the dimension "*POL_INT_GOV*". Thus, the reading of the structural relationship estimate (POU_DIR ➔ POL-INT-GOV) confirms that corporate governance policies depend on the level of power enjoyed by the managers. Statistically this is approved as follows: (POU_DIR ➔ POL-INT-GOV: $\beta = 0.490$; Std. Error = 0.050; $t = 9.830^{***}$; $p < 0.001$). This lesson refers to the findings of Jensen and Meckling (1976) who explained that the presence of a dichotomy between ownership and management in most large firms allows for a significant improvement in the quality of accounting publications through the consolidation of governance policies. Although the power of management can be appreciated in the composition of the board of directors, which is presumed to be an internal control device. Holtz and Sarlo (2014) analyzed the quality of accounting information of firms in relation to the characteristics of their boards of directors. These two authors managed to establish, based on the studies of Asteriou (2010) and Abdoli and Royaee (2012), a positive relationship between the quality of accounting information and the independence of the board of directors.

Given the conclusions we were able to draw from the analysis of the structural relationship (POU_DIR ➔ POL-INT-GOV), we can, therefore, conclude that our results can be seen as an extension of the lessons we were able to use for the construction of the present structural relationship. These lessons have been found in various contexts (UK, China, US, Spain, Australia, Italy, Greece, Portugal) by (Beekes, Pope, and Young (2004); Firth, Fung, and Rui (2007); Ahmed and Duellman (2007); Lara, Osma, and Penalva (2007); Habib and Azim (2008); Marra, Mazzola, and Prencipe (2011); Dimitropoulos and Asteriou (2010); Alves (2011)) respectively. However, results from other studies have ruled on the absence of or/and a negative relationship between accounting conservatism and leader power (Vafeas (2000); Ahmed, Hossain, and Adams (2006); Alkdai and Hanefah (2012)).

In a less strong, but still significant way, ownership structure (STR_PRO) exerts a positive and significant effect on the "*POL_INT_GOV*" dimension (POU_DIR ➔ POL-INT-GOV: $\beta = 0.348$; Std. Error = 0.040; $t = 8.644^{***}$; $p < 0.001$). Knowing that at the time of the operationalization of the variable

(STR_PRO) we associated two items to assess it (CON_CAP and DIF_CAP), to finally formulate our hypothesis which predicts that the diffusion of corporate capital ownership positively and significantly impacts the internal governance policies of the company. Following the validation of this hypothesis, we agree with the agency theory that predicts a negative relationship between the quality of accounting information and the level of capital concentration (Jensen and Meckling, 1976; Fama and Jensen, 1983). This postulate seems to be fortified by Chau and Gray (2002), with Eng and Mak (2003) and Leung and Horwitz (2004) having been able to consolidate this theoretical expectation with homologous results. However, the negative relationship between capital concentration and the quality of a firm's accounting information is not always verified. The findings of Norita and Shamsul Nahar (2004) and Ballesta and Garcia-Meca (2005) are cases that illustrate this refutation. Indeed, it was found that greater diffusion of ownership hinders the production of better quality accounting information. While the findings of Huafang and Jianguo (2007) reveal no relationship between these two variables.

Overall, the magnitude of the effect of the three lower-order latent variables does not prevent us from saying that the dimension "POL_INT_GOV" is relatively explained by the same proportions of these underlying lower-order constructs. A support that favored exporting, via the "POL_INT_GOV" dimension, the impact of the lower-level variables to the higher level. Thus, the structural link analysis (POL-INT-GOV ➔ QIC) established a positive and significant relationship between the dimension "POL_INT_GOV" and the endogenous variable "QIC" (POL-INT-GOV➔ QIC: $\beta = 0.893$; Std. Error = 0.442; $t = 2.018^{**}$; $p < 0.05$). We can tell from these facts that improving the quality of accounting information involves improving corporate governance policies such as the method of compensation, separation of powers, and the nature of the capital ownership structure.

Conclusion

Aware of the importance of the usefulness of accounting information in the decision-making process devoted to investment or resource allocation choices, our focus was immediately on the qualities that make accounting information useful. So much so that this modest work was assigned the objective of assessing the impact of the company's internal governance mechanisms on the quality of its accounting information.

Given the complexity and difficulty of operationalizing issues related to the quality of accounting disclosures, and for the sake of simplicity, this overall objective has been broken down into two sub-objectives. The first sub-objective consists of an original operationalization of the concept of the quality of accounting information. We wish to contribute, methodologically and technically, to the implementation of a "*metric" that* can bring added value to the quantification and evaluation of the quality of accounting information, which remains, at present, an active and controversial field of investigation. In this essay we have designated the quality of accounting information as a third-order endogenous variable that we have explained in the first instance by the company's governance policies and in the second instance we have specified the three variables of the model as first-order latent variables directly associated with their measurement blocks.

For the second sub-objective, it was necessary to motivate our methodological choices. At this level of the study, there were many reasons that supported our choice to apprehend the reality of our research

through an investigation by structural modeling with latent variables under the PLS approach (Sosik *et al.*, 2009). Our hypothetical model was estimated using a second-generation statistical approach PSL-PM which allowed the validation of the related hypotheses.

1. Research implications

Certainly, academic research devoted to issues related to accounting information has grown in recent years. Apart from that, the reader can easily spot that these studies focus on the perceived usefulness or use of accounting information. However, the analysis of the link between the intensity of the power of the company's managers and the quality of accounting information remains a little-traveled corridor. That said, the implications of this modest work can be observed at three levels: theoretical, methodological and managerial.

1.1. Theoretical implications

The results presented in this paper are of twofold interest: on the one hand, they provide empirical support for an angle that has been little addressed in the literature, namely, the factors that determine the quality of corporate accounting information. On the other hand, they address the problem of the quality of accounting information in a special context, namely the agricultural sector, whose accounting treatment of assets is not comparable to other sectors.

1.2. Methodological implications

One of the methodological contributions of this work was the confirmation of our intuition on the unidimensionality and theoretical content of the measurement scales that we proposed and mobilized. In addition, we used a second-generation statistical approach similar to structural equation models (SEM) with latent variables based on the partial least squares method (PLS).

1.3. Managerial implications

If we wish to outline the main interest that arises from the managerial implications of this work, we can cite the study's contribution to ensuring a better understanding of the quality of accounting information of agricultural enterprises in the Souss-Massa region. This is a significant point that we believe our research can contribute to. In the same vein, this research is motivated by the desire to assist users of accounting information of agricultural enterprises to distinguish the factors that may jeopardize the true and fair view of assets and results that the summary statements are supposed to reflect.

2. Limitations of the research

The strongest criticism that can be made of our theoretical positioning is inherent in the anchorage on which it gravitates, insofar as it is characterized by an incipient and constantly evolving theoretical development favoring poor measurement scales. Although we obtained statistically significant results on the psychometric qualities of the selected measurement blocks, our choice to form the new composite latent variable (Internal corporate governance policies) lacking theoretical maturity remains a limitation for our conceptual model. From a methodological point of view, our humble work also has some limitations. The first relates to the composition of the sample. In fact, the lack of data on agricultural enterprises collected by the organizations has resulted in an undefined population, the real size of which is not known. Faced with such a situation, the determination of a probability sample was inconceivable, so we turned to a non-random type of sampling (convenience sampling technique).

3. Futures avenues of research

A first promising avenue that we plan to explore consists of an extension at the level of latent and manifest variables to remedy the limit already mentioned in this sense. First, we explore a part of the literature in management sciences that is interested in the study of the degree of complication of accounting information systems in companies. The latter associates the quality of accounting information with the practices used to produce it. More precisely, a company is more likely to have a higher quality of information if it manages to produce it in a short time with regular frequencies. Secondly, we start from the development of Chapellier (1977), who incorporates the notion of the usefulness of information as an essential characteristic in the assessment of its quality. Thus, the author insists on the degree of use, by managers, of the accounting information produced as a determinant of the quality of accounting information (Abdou and Dupuy, 1992).

Finally, whatever the chosen method of operationalization, a broadening of the spatiotemporal scope is subsequently recommended. Spatially, the analysis can be spread over the national scale. At the temporal level, longitudinal analyses over a long period of time, in five-year steps, would shed more light on the factors that contribute most to determining the quality of accounting information.

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