

The determinants of accounting strategy choices towards Positive Accounting Theory and Institutional Theory

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Abstract: Based on a multinomial logistic regression model, this paper aims to address a theoretical and empirical study seeking to explain the choice of accounting strategies made by the Algerian companies in the framework of positive accounting theory and institutional theory. The robustness of the model is confirmed by Wald Test and Ramsey RESET Test. The empirical results including 68 public and private Algerian companies covering 2010 data suggest that accounting strategy is determined by the system of managers' compensation, legal status and normative pressures on these companies by the accounting offices and consultants.

Keywords: Accounting strategy, management earning, Positive accounting theory, Institutional theory, Logistic multinomial model.

INTRODUCTION

The adoption of financial accounting system (SCF) in the Algerian companies from 2010 generates a change in the accounting concepts. Therefore, at the time of the application of the SCF, managers should take a position in the accounting options rules offered by this system.

The objective of our research is to explain the motivation of accounting choices made by managers whose use their discretionary capacities to modify the financial statements result. Consequently, this lead to ask the following main question: what are the factors that influence the accounting strategy?

For this purpose, we use the positive accounting theory aiming to provide a conceptual framework to analyze the accounting practices through firms' characteristics. This theory attempts to measure management earning generated from the adoption of a particular method. Several studies affirm an explanation limit of this theory, and consider that accounting choices are also affected by external factors of institutions. According to MEZIAS (1990) "The findings indicate that the institutional model adds significant explanatory power over and above the models that currently dominate the applied economics literature." Therefore, to analyze the accounting strategy, we mobilize the internal factors through positive accounting theory and external factors across institutional theory.

First, according to literature review, we identify our research in a well-defined problematic in a spatio-temporal framework. Then, we address the methodological used tools to test our explanatory model. Finally, we present and discuss our multinomial logistic model result.

LITERATURE REVIEW

HOLTHAUSEN and LEFTWICH (1983, p:77) consider accounting choices as "... changes in the rules used to calculate accounting numbers alter the distribution of firms' cash flows, or the wealth of parties who use those numbers for contracting or decision making". Thus, our main objective is to look for the factors that influence these changes. And, to do so, we call two explanatory theories, for instance. Watts and Zimmerman (1978, 86, 90), DiMaggio and Powell (1983, 91.97) Raffournier (1990, 95.2006) Mezias (1990) Casta (2009), Beckert (2010), Dufour and Zamzam (2011) Affes and Hantati-Klila (2012) ... etc. resort to positive accounting theory and institutional theory to explain the accounting choices.

1- The positive accounting theory approach

"Positive Accounting Theory is concerned with explaining accounting practice. It is designed to explain and predict which firms Will and which Will not use a particular method, but it says no thing as to which method a firm should use." (Hassan.A, 2012)

Several studies (Watts and Zimmerman, 1978, 1986, 1990; Hothausen and Leftwich, 1983; Jeanjean and Stolowy, 2008; Jean-François Casta, 2009;) mobilize the positive accounting theory to explain the motivations of accounting policy choices through the politico-contractual costs.

The positive accounting theory (PAT) argues that accounting choices are likely to be motivated by factors such as managers' compensation, the firm's debt/equity ratios and the wider political influence of other parties (Watts and Zimmerman, 1978; 1986).

- a) Managers' compensation concerns executives' compensation contract based on accounting results. This assumption analyses the managers' opportunism who handle earning management through accounting practices to increase their self-interest. (Graham et al. (2005), HOLTHAUSEN and LEFTWICH (1983)).
- b) The firm's leverage related to debt-equity ratios. Therefore, « firms with higher debt-equity ratios choose accounting procedures so as to shift earnings from future periods to the current period » (H.KABIR, 2010,p :139) The managers try to present an advantageous financial situation to reduce funding costs .
- c) Political costs Concerns the political visibility of companies. Holthosen and Leftwich (1983) argue that managers avoid criticism from unions, employees, consumers, politicians ... etc. whereby « the larger the firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current periods to future periods. » (Watts and Zimmerman, 1986, p :235).

2- The Institutional Theory Approach

Other studies (DiMaggio and Powell, 1983, 1991, 1997; Mizruchi and Fein, 1999; Lounas, 2004; Beckert, 2010; Affes and Hantati-Klila 2012) determine the explanatory factors of accounting practices through the environmental pressure treated by institutional theory.

According to Carpenter and Feroz (2001, p569) « Institutional theory assumes that organizations adopt structures and management practices that are considered legitimate by other organizations in their fields, regardless of their actual usefulness”. It “focuses on the major similarities and homogenization of forms and organizational practices” (Desreumaux, 2004, p. 41).

Beckert (2010), in his paper on the review of institutional theory, cites that “DiMaggio and Powell piece focuses on processes of homogenization via the concept of isomorphism. The authors argue that once organizational models are institutionalized, they become diffused, which causes organizational structures to grow more and more alike.” DiMaggio and Powell (1983, p:150) “identify three mechanisms through which institutional isomorphic change occurs, each with its own antecedents:”

- a) Coercive isomorphism: This appears from political influence and problem of legitimacy. It is the result of formal and informal pressures exerted on organizations by other more powerful organizations or set of organizations. The existence of regulatory organizations, presented through their laws, rules,...etc. Order, affects several angles of the organization.
- b) Mimetic isomorphism: are pressures exerted by organizations (executives or organizations) considered more talented and performing on other organizations in a situation of uncertainty to increase their legitimacy.
- c) Normative isomorphism: are pressures exerted by professional organizations to gather other organizations to make them alike. Also, it is all the efforts of members of a profession to define their requirements and working methods to control production processes, and to establish a basis for legitimizing the autonomy of their activity.

According to the above, the explanatory power of each theory separately is limited. TIXIER and Jeanjean (2000, p.15) point out that the positive accounting theory and institutional theory are complementary rather than competing approaches to the extent that there is no incompatibility of their hard cores. Indeed, Mezias (1990) Tourron (2005) and other researchers demonstrate that the institutional model has a, significant and important additional explanatory capacity to the economic models.

CONCEPTUAL FRAMEWORK OF RESEARCH

Given the laws of 07/11 November 25, 2007 of the accounting and financial system (SCF) application, Algerian companies must apply the new accounting doctrine inspired from the International Financial Reporting Standards (IFRS).

In order to meet the requirements of accounting transaction, companies are in a position to choose between different accounting method of the same transaction. This appealed the managers' judgments within their accounting business strategies.

In this context, accounting strategy or policy according to Casta (2009), is all the choices made by the leaders to act on accounting numbers for the purpose of shaping the content or form of published financial statements, whose respecting regulatory constraints. In the same vein, fields and al (2001) define an accounting choice as “any decision whose primary purpose is to influence (either in form or substance) the output of the accounting system in a particular way, including not only financial statements published in accordance with GAAP, but also tax returns and regulatory filings”

In our research, we are only interested in the accounting policy choices that affect the accounting result.

Table 1: accounting method according to SCF

| Element | Object | Method 1 | Method 2 | Method 3 |
|---------------------------------------|---------------|----------------------------|-------------------------|--------------------------------|
| Tangible and intangible assets | Evaluation | historical cost | Fair value | - |
| | amortization | straight-line depreciation | sum-of-the-years method | digit Mode of production units |
| Tangible assets with low value | ascertainment | Tangible assets | Expense | - |
| Exit stocks | Evaluation | FIFO | weighted average cost | - |
| Borrowing costs | ascertainment | Financial expense | financial cost | - |

On the change in accounting regulations occasion of 2010 in Algeria, our research aims to explain the motivations of accounting strategy. For this, we set up the following problem:

Given the economic, institutional, legal and characteristics of company, what are the determinants of accounting strategies of Algerian companies during the adoption of the financial accounting system?

Accounting choices has been the subject of considerable research since the 70s. "Research has focused on the impact of compensation schemes, lending agreements and political visibility. More recently researchers have emphasized the role of institutional factors in shaping management incentives"(HJELSTROM and SCHUSTER, 2011).

According to our literature review, to solve our problem, we based on two complementary parties of explanation. First, The accounting strategies are determined through political-contractual characteristics of the company, explained by the positive accounting theory. The second, they are determined through environmental institutional pressures that have suffered by the company such as professional organizations, the judiciary and regulatory institutions ... etc, explained by the institutional theory.

RESEARCH METHODOLOGY

In order to answer our main addressed problem, we discuss a portfolio of accounting choices (accounting policies) within a framework of dual theories in order to establish an explanatory econometric model of the phenomenon.

1- Sample

Determining the sample size stems from a desire to representativeness. On one hand, it is necessary that the companies studied are of different sizes and industry to test the effect of these factors. Also made by most previous studies that analyze public companies, we combined public and private companies to test the effect of legal status on the choice of accounting policy. On the other hand, the sample must be large enough to trace a general trend. for this, we got up to 68 Algerian companies adoptive SCF.

Table 2: sample details

| Size | | | | Industry | legal status | | |
|-------|---------|-------|------------|--|--------------|--------|---------|
| small | average | large | very large | oil, mining, chemicals, energy and construction activity | other | public | Private |
| 21 | 27 | 13 | 7 | 18 | 50 | 37 | 31 |
| 68 | | | | 68 | | 68 | |

Our study targeted the Algerian economic enterprises. We eliminated companies belonging to the insurance and banking sector, given the peculiarities of application of accounting standards and rules for presenting their accounts.

2- Data collection:

To understand the nature of the relationship between accounting strategy and companies' characteristic and environment pressures, we have established a questionnaire that submitted to general managers and financial and accounting directors of firms. The first part of this questionnaire concerns accounting methods choices made by companies. The second part concerns the factors determinant of these choices.

explanatory hypotheses of accounting strategy in a double theoretical framework, positive and institutional, we used multinomial logistic models.

Multinomial Logistic Regression is useful for situations in which you want to be able to classify subjects based on values of a set of predictor variables. This type of regression is similar to logistic regression, but it is more general because the dependent variable is not restricted to two categories.

In our research, we want to know the probability that a firm chooses an accounting strategy, knowing its accounting and financial characteristics and institutional environment. Multinomial logistic regression is shown as a function of connecting a variable Y (1,2,3 ...) to one or more independent variables X1, X2 ... Xn; is $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots \beta_n X_n$. The objective of this model is to determine the factors influencing the accounting strategy of Algerian companies. We propose to test the following equation that seeks to explain simultaneously the probability of choosing each strategy :

$$\text{Str} = \beta_0 + \beta_1 (\log(\text{act})) + \beta_2 (\text{df/cp}) + \beta_3 (\text{rd}) + \beta_4 (\text{sj}) + \beta_5 (\text{sac}) + \beta_6 (\text{acomp}) + \xi$$

Str : Accounting strategy adopted by the company (1,2,3,4,5).

Log(act) : natural logarithm of the total assets of the company.

Df/cp : ratio debt / equity.

Rd : system of manager's compensation based on accounting results (0,1).

Sac : Industry.

Acomp : Accompanying accountant during the accounting transition (0,1).

legal status : public or private (0,1) .

ξ : error term.

RESULTS AND DISCUSSION

First, we are interested to the presentation of preliminary descriptive statistics. second, we test the presence of multicollinearity between independent variables. Then, we present the model result. Then, we test the models' robustness. Finally, we interpret and discuss the results from multinomial logistic regressions.

1- Descriptive statistics:

Multiple variable of accounting strategy follows the following statistical distribution:

Table 3: Frequency table of accounting strategy

| Y | frequency | percentage |
|------------|-----------|------------|
| Strategy 1 | 7 | 10.29% |
| Strategy 2 | 15 | 22.07% |
| Strategy 3 | 13 | 19.12% |
| Strategy 4 | 7 | 10.29% |
| Strategy 5 | 26 | 38.23% |
| TOTAL | 68 | 100% |

The table results show a dispersion of firms in our sample, where the strategy 5 whose minimize the earning management, take the dominant part by 38.23%. Consequently, strategies 2, 3 and 4 that are a combination of accounting choices increasing earning management and others reduced it by 22.07% and 19.12% and 10.29%. Last, strategy 1 that maximize the earning management by 10.29%.

2- Correlations results of the independent variables:

In general, there is a weak correlation between the explanatory variables that mean the absence of multicollinearity between these variables.

Table 4: Correlation between independent variables

| | LOG(ACT) | DF/CP | RD | SAC | ACOMP | SJ |
|----------|-----------|-----------|-----------|----------|----------|----------|
| LOG(ACT) | 1.000000 | | | | | |
| DF/CP | -0.019679 | 1.000000 | | | | |
| RD | 0.196198 | 0.008052 | 1.000000 | | | |
| SAC | 0.192859 | -0.115852 | -0.103429 | 1.000000 | | |
| ACOMP | -0.065823 | -0.173367 | 0.241664 | 0.219394 | 1.000000 | |
| SJ | -0.482262 | 0.010401 | -0.380717 | 0.088061 | 0.069567 | 1.000000 |

It should be noted just the highest correlations between variables in the table:

- On one hand, the correlation between legal status and size can be explained by the biggest companies are public and private companies have a small and medium in size.
- On the other hand, the correlation between legal status and managers' compensation explains the existence of compensation contracts based on earning management more in the public firms.

3- Multinomial Logistic Regression Results:

The model includes variables that are estimate to test the explanatory power of both these theories (positive accounting theory and institutional theory). Here are the results:

| Variable | Coefficient | Prob. |
|----------|-------------|-----------|
| C | -0.905748 | 0.3130 |
| LOG(ACT) | 0.028086 | 0.6288 |
| DF/CP | -0.039367 | 0.4635 |
| RD | 1.007518 | 0.0007*** |
| SJ | 0.662528 | 0.0297** |
| SAC | 0.189393 | 0.5371 |
| ACOMP | 0.816540 | 0.0115** |

** significatif at 5 %, *** significatif at 1 %

The model as a whole is a significant predictor of the accounting strategy. The LR statistic allows rejection of the null hypothesis of no effect from the independent variables (Prob (LR statistic)= 0.000015).

The managers' compensation system based on accounting result is positively related to the choice of accounting strategies (1.007518) at the 1% level of significance (0.0007) since legal status and accompanying accountant are positively related (0.662528) (0.816540) at the 5% level of significance (0.0297) (0.0115). On the other side, the variables size, leverage and industry are not significant in our research.

4- Robustness test model

The Wald test computes a test statistic based on the unrestricted regression. The Wald statistic measures how close the unrestricted estimates come to satisfying the restrictions under the null hypothesis. If the restrictions are in fact true, then the unrestricted estimates should come close to satisfying the restrictions. In our case, we test coefficients of size, leverage and industry equal 0.

| Test Statistic | Value | Probability |
|----------------|----------|-------------|
| F-statistic | 0.501639 | 0.6826 |
| Chi-square | 1.504917 | 0.6811 |

H0: $\beta_1 = \beta_2 = \beta_5 = 0$ and probability (Chi-square)= 0.6811 > 10%, therefore we accept the null hypothesis which confirms the results (the no significance of size, leverage and industry) of the model.

Also, we test the stability of the model through Ramsey RESET Test whose tests the hypothesis that this (null) model is specified correctly. The results are mentioned in the following table:

| | Value | Probability |
|------------------|----------|-------------|
| Likelihood ratio | 0.024569 | 0.8754 |

According to the results (probability = 0.8754 > 10%), we accept the null hypothesis which confirms the stability, robustness and correct estimation of the model.

5- Discussion of Results:

Both variables size and leverage don't show significant results. In Algeria, the lack of an active market and stock exchange motivate the company to focus just on tax side without its size and funding criteria. Also, environmental exposure is not an explicative variable of accounting policy in Algerian companies. This is an unexpected finding. The institutional theory

purposes that firms in exposure sectors minimize their accounting management. This means that companies less exposed also tend to adopt strategies that minimize earning management.

More managers' compensation contracts are based on accounting results over the accounting practices tend to strategy 5, i.e. to minimize earning management. This result is inconsistent with the predictions of managers' opportunism of positive accounting theory. The influence of managers' compensation contract on the accounting policy is limited by economic and social circumstances of the company. For example, European managers are not motivated to manipulate earning management to increase their own interest by the same degree as USA managers. In this regard, the variable part of the remuneration of American managers according to their contracts is much higher than European managers (Charreaux, 1997).

In our sample, 28 companies have compensation contracts based on accounting results, of which 21 are public companies. So, the most of the manager's compensation systems according to accounting result exist in the public companies. Thus, the terms of compensation contracts do not stipulate a threshold of positive accounting results. Also, the variable portion based on accounting results of these contracts is minimal and does not exceed 20%.

In a similar vein, the legal status plays an important role in explaining accounting strategy that private companies tend to choose strategy minimizing results (strategy 5). It should be noted that, generally, the Algerian private company is a family firms' where the manager is the owner. So he adopted accounting practices that maximizes the costs to avoid paying taxes.

Finally, most companies supported during the transition to the SCF, adopt the accounting strategies that minimize earning managements. Because of resistance to changes from tax accounting to financial accounting, professional actors (auditors, consultants etc.) in Algeria legitimize these practices (reducing accounting results) and breathe as rational.

CONCLUSION

The main objective of our study tests whether the predictors of positive accounting theory and institutional theory motive the company to choose an accounting strategy that increases its earnings or reduced. Our research has investigated the link between firms' size, leverage, managers' compensation, legal status, industry, accompanying accountant and accounting strategy.

Findings show that managers' compensation, legal status and accompanying factor are positively associated with accounting strategy choices. Managers exercise discretion by choosing income decreasing accounting methods.

We can say that both the positive accounting theory associated with the institutional theory have a strong explanatory power for determining the factors affecting the choice of accounting strategy for Algerian companies.

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