ACCOUNTING AND THE ENVIRONMENTAL FACTORS - AN EMPIRICAL INVESTIGATION IN POST-COMMUNIST ROMANIA

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ABSTRACT

This research covers the Romanian financial reporting in the Post-Communist period. Firstly, through a qualitative analysis, it demonstrates the existence of three different accounting stages for the period 1997-2009. The research is based on the distinction between accounting systems of Continental-European type and Anglo-Saxon type respectively, and tests the relevance of the criterion in the historic context. Secondly, a framework comprising economic, legal and cultural factors is developed. Using this framework the accounting environment of each historical stage is defined. The political influential factors of accounting are identified as the choices regarding accounting rules. Thirdly, through an empirical approach based mainly on the binary regression technique, the study interprets the compliance degree between accounting rules (political factors) and the accounting environment (economic, legal and cultural factors). The research propositions about the Romanian environmental factors are confirmed, namely: for the stage 1997-2000 the accounting environment was of Continental-European type; for the stage 2001-2005, the accounting environment was of Anglo-Saxon type; for the stage 2006-2009, the accounting environment had both Continental-European and Anglo-Saxon type characteristics, the latter being predominant. These primary findings are endorsed by other conclusions regarding the influence of environmental factors in the Romanian context over time. The results confirm the thesis of political influence on accounting, arguing that for Romania there has not been a strong correlation between the choice for accounting rules and the economy’s level of development. The frequent and rough change of...
accounting rules has shaken the accounting reform process. The mixed thesis and Continental-European influence, expressed in different and rather uncoordinated public measures, have affected the utility and relevance of financial reporting and thus, the quality of financial information. Furthermore, the findings corroborate the difficult adjustment to the new accounting rules (mainly to IFRS) of emergent countries. The influence of factors and drivers in different accounting environments is empirically measured. The fiscal features (creative accounting practices and fiscal incentives) had the highest explanatory power regarding accounting environments, especially in the first two stages (1997-2005). The financing systems drivers (capital structure, financial market development incentives) proved to have a certain influence, which denotes a development in stages of the capital market and the diversification of the financing resources to the end of the analysis period (2006-2009). After 2005, the accounting environment takes on certain characteristics of the Anglo-Saxon accounting system, leading to a stronger similarity to the accounting rules adopted, following the global trend of IFRS alignment. Finally, this research argues that the current Romanian accounting model (2006-2009) encompasses mixed influences. A pure accounting model, identifiable by reference to the ‘classic’ accounting systems presented in the literature, can no longer be identified. This may suggest that accounting systems classification schemes have become obsolete in the context of international accounting harmonization.

Romanian accounting history; emergent economy; accounting rules; environmental factors

INTRODUCTION

This study examines the changing process of the accounting system, based on the case of Romania as an emergent country, having a longitudinal approach, which covers the Post-Communist period (between the years 1991 and 2009). We try to understand the interaction between financial reporting (featured by accounting rules, viewed as political choices) and the environmental factors (hereinafter defined as a sum of economic, legal and cultural factors and designated as an accounting environment).

Firstly, the paper considers the classification of the accounting systems, aiming to explain the use of the Anglo - Saxon (hereafter AS) - Continental European (hereafter CE) accounting systems classification on which its framework is based.
The studies focusing on financial reporting differentiation establish different groups of countries or accounting systems when they analyze the influential factors of financial reporting or the effects of accounting standards implementation. They resort to cross countries comparisons (including developing and emergent countries). Nair and Frank (1980) established groups with similar accounting systems that include, with the exception of the Continental European group, developing countries applying British Commonwealth, Latin American or United States models. Ball et al. (2003) referred to the financial reporting of four developing countries from South-East Asia, whose accounting standards, largely derived from common law and likely similar to IFRS, are compared to the standards from code law countries. Barth et al. (2007) analyzed 21 countries, out of which a third are developing and emergent countries, from Asia and Europe. Other studies appealed to the comparative analysis of several sets of accounting standards for one or two countries, over a given period of time. Eccher and Healy (2003) studied the case of China, comparing the value relevance of accounting amounts based on IFRS and on Chinese standards. For Europe the comparison is frequently done between German Generally Accepted Accounting Principles (hereafter GAAP) and International Financial Reporting Standards (hereafter IFRS) or UK GAAP. Joos and Lang (1994) compared financial reporting from Germany and UK. Hung and Subramanyam (2007) focused on the case of Germany discussing the national GAAP versus IFRS. Beside these papers, there are also studies that contest or have certain concerns regarding the relevance of the classification of accounting systems. Cairns (1997) considers it out of date. Alexander and Archer (2000) believe that the inclusion of US and UK financial reporting in the same group is refutable. D’Arcy (2001) empirically observed the difficulty to identify a homogeneous AS group or a purely CE group.

We notice that for the past years, the separation between Anglo Saxon and Continental European systems has been less and less focused upon. Indeed, at least after 2000, we can no longer talk about a clear delimitation between the AS and CE systems. Related references are the differences between US GAAP and UK GAAP financial reporting, even if they were initially classified in the same group. Moreover, between 2000 and 2007, UK GAAP was completely in conformity with the Fourth Directive applied by all European countries. Likewise, as a consequence of the high number of new standards or of the amendment of existing standards, some authors claim that US GAAP has more rules even than some European GAAP. The literature had mentioned the association of these systems with principles and not with rules as a general characteristic of the AS group. Another example concerning an exception from the characteristics attributed to the AS and CE systems and which is valid again for US GAAP, is related to the number of options. Even if an association between the large number of options and the AS system is demonstrated, this is not the case for US GAAP. Moreover, as far as the audit is concerned, which is mandatory within the AS systems and optional within the CE accounting systems and countries, we can see that in the USA only listed
entities have to be audited, while a far wider scope of audit is required in France for example.

All these exceptions from the general characteristics of the AS and CE groups certify the actual trend of harmonization of financial reporting. We believe that one of the causes is the spread of IFRS implementation and the assumption that IASB will become the global standard setter. As a result, the literature is concerned with the effect of IFRS implementation mainly on accounting quality (Barth et al., 2007; or Soderstrom & Sun, 2007 and Jacob & Madu, 2009 surveys). The analysis of the papers on the impact of IFRS draws a conclusion related to our objective. The separation AS-CE can be considered outdated except for the case when the AS system is associated with IFRS. Even if their number is scarce, there are papers that clearly state the fact that IFRS are influenced by US GAAP, UK GAAP or the AS system generally (Hove, 1990; Kenny & Larson, 1993; Hoarau, 1995; Hung & Subramanyam, 2007; Ionășcu et al., 2007 on the implementation of IFRS in Romania). As to the IFRS – US GAAP relation, other studies, without underlining a certain influence, show that there are no differences concerning the measures of the two sets of standards (Harris & Muller, 1999), value relevance (Bartov et al., 2005) or the effect on the cost of capital (Leuz & Verrecchia, 2000).

Even if the topicality of the AS and CE accounting systems differentiation is subject to discussion, our research considers it relevant to the case study on Romania, a European country, part of an area in which the two types of influence have manifested all through its accounting history. Also, we consider the AS-CE binominal to be the most complex classification criterion, taking into consideration the characteristics of the legal system (common law, code law), the theoretical fundamentals of the accounting systems (principles or rules), the two approaches regarding the main users of accounting information (shareholders or stakeholders), and the view to protect investors versus creditors. These separation criteria could represent choices regarding the analysis of the accounting systems. Ultimately, we try to identify if and up to which point in the Romanian history this differentiation existed. Even if the Romanian case cannot be necessarily generalized, it can still give some hints as to the time and extension of the interpenetration of the accounting elements of the two classical accounting systems. We consider this a consequence of the globalization phenomenon that led to the changes in the characteristics of the environment of different countries and to the IFRS dissemination.

Secondly, the paper considers the type of economy (the general development level and the accounting profession) criterion, less explored in the accounting literature. We can quote several studies that presented accounting historiographies regarding the changes in standards for transitional countries, either for one country (such as Iskandar & Pourjalali, 2000 for Malaysia; Ong et al., 2004 for Taiwan-China; Mir & Rahaman, 2005 for Bangladesh, 2005; Hassan, 2008 for Egypt; Yee, 2009 for
China), or for a multiple comparison (such as Craig & Diga, 1999 for Korea and Indonesia; Fekete et al., 2008 for Romania and Hungary). During their research, authors have sometimes used comparisons with the accounting evolution of developed countries, generally having a descriptive-interpretative approach. However, these papers did not use the differentiation of the accounting systems to explain the changes in financial reporting and their impact on the environment. Through an empirical approach our research aims to obtain supplementary insights on the impact of choosing certain accounting rules and changes in such a context.

The remainder of the paper is organized as follows: in Section 1 we present the literature review. Section 2 and 3 explain the research framework, propositions and methodology; Section 4 describes the empirical approach construct; Section 5 reveals the statistical analysis results; the final section comments on the compliance between accounting rules and accounting environment and concludes on the accounting perspectives for an emergent economy.

1. LITERATURE REVIEW

1.1 Some basics on the Anglo-Saxon (AS) - Continental European (CE) accounting systems differentiation

The literature on financial reporting and accounting systems’ classification identified the main features that separate the AS and, respectively, the CE accounting systems, taking into consideration both recognition and valuation rules, disclosure and auditing rules. Table 1 presents the main differences between these two classic systems which we selected in order to demonstrate that the accounting systems under discussion are different.

*Table 1. Summary of recognition and valuation rules, disclosure and auditing rules respectively, selected to support the differentiation of accounting systems*

<table>
<thead>
<tr>
<th>Accounting rules</th>
<th>Continental European (CE) accounting systems</th>
<th>Anglo-Saxon (AS) accounting systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Recognition and valuation rules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Number of accounting options alloweda</td>
<td>Limited</td>
<td>Relatively large, as the professional reasoning is encouraged.</td>
</tr>
<tr>
<td>2 Financial instruments use</td>
<td>Limited</td>
<td>Important.</td>
</tr>
<tr>
<td>3 Principle of prudence implementationb</td>
<td>Explicitly asked for, is recognized on the basis of prudent management judgment and it takes the shape of provisions and impairment recognition.</td>
<td>Not explicitly asked for. Provisions and impairments are recognized when they are probable and can be reasonably estimated.</td>
</tr>
<tr>
<td>Accounting rules</td>
<td>Continental European (CE) accounting systems</td>
<td>Anglo-Saxon (AS) accounting systems</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td><strong>A. Recognition and valuation rules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Fair value use</td>
<td>Limited. Historical cost valuation basis is prevalent.</td>
<td>Important.</td>
</tr>
<tr>
<td>5 Legal reserves recognition</td>
<td>Asked for.</td>
<td>Not asked for.</td>
</tr>
<tr>
<td>6 Foreign currency translation adjustment treatment</td>
<td>According to the principle of prudence, unrealized gains are not recognized.</td>
<td>Unrealized gains and losses should be generally recognized.</td>
</tr>
<tr>
<td>7 Construction contracts treatment</td>
<td>Expenses are recognized when they are incurred and gains are recognized when they are invoiced.</td>
<td>Gains and expenses are recognized according to the percentage of finalized work at the date of the balance sheet.</td>
</tr>
<tr>
<td>8 Borrowing costs treatment</td>
<td>Capitalization is not allowed.</td>
<td>Capitalization is allowed.</td>
</tr>
<tr>
<td>9 The effect of correcting fundamental errors and changing accounting policies</td>
<td>It is not allowed to influence the result of previous periods as this contradicts the opening balance sheet intangibility principle.</td>
<td>It is allowed to influence the results of previous periods.</td>
</tr>
<tr>
<td><strong>B. Disclosure and auditing rules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Volume of information in the Financial Statements</td>
<td>Limited.</td>
<td>Large.</td>
</tr>
<tr>
<td>11 Profit and Loss Account structure</td>
<td>Operational expenses are classified according to their nature.</td>
<td>Operational expenses are classified according to their function.</td>
</tr>
<tr>
<td>12 Cash-flow Statement and Statement of changes in owners’ equity disclosure</td>
<td>Not asked for.</td>
<td>Asked for.</td>
</tr>
<tr>
<td>13 Result per share disclosure</td>
<td>Not asked for.</td>
<td>Asked for.</td>
</tr>
<tr>
<td>14 Disclosure of events after the reporting period</td>
<td>Not asked for.</td>
<td>Asked for.</td>
</tr>
<tr>
<td>15 Contingent elements disclosure</td>
<td>Not asked for.</td>
<td>Asked for.</td>
</tr>
<tr>
<td>16 Segment reporting</td>
<td>Not asked for.</td>
<td>Asked for.</td>
</tr>
<tr>
<td>17 Financial statements auditing</td>
<td>Not compulsory.</td>
<td>Compulsory.</td>
</tr>
</tbody>
</table>
Accounting and the environmental factors -
An empirical investigation in post-communist Romania

Notes: The accounting rules ‘Financial instruments use’ and ‘Fair value use’ are explained in section 2.2. of the study, as they are factors tested in our empirical approach.

a Number of accounting options allowed (rule no. 1 in Table 1): is limited within the CE system, where professional reasoning can be used in a small number of cases. If we consider the case of Romanian accounting in the periods in which the influences of this type of financial reporting have manifested, examples of accounting options would be inventories valuation methods or tangible assets amortization methods. Even in these cases, professional reasoning is limited by tax deduction rules for recognized expenses.
b According also to Hung and Subramanyam (2007).
c According also to Nobes (1998a).
d According also to PricewaterhouseCoopers (2002) and Nobes (1998a).
e According also to Hung and Subramanyam (2007), Nobes (1998a) and PricewaterhouseCoopers (2002).
f According also to Langot (2002).
g According also to Langot (2002).
h Volume of information in the financial statements (rule no. 10 in Table 1): it has been demonstrated through empirical research that entities from code law countries (Roman code, like the case of Romania) make fewer disclosures (Jaggi and Low, 2000). Nobes (2006:234) supports extensive disclosure for UK and US markets. For Romania, we compared the number of positions in the financial statements, in two stages in which we presumed the existence of different financial reports, and we observed a lower volume of information asked for by the CE system. This is consistent with the dominant financing resource thesis: where capital market financing resources are dominant, shareholders have a significant control over managers, as they have no access to internal information and so ask for a higher volume of disclosed information in order to know the performance and risks implied by the business.
i According also to Nobes (1998a) and PricewaterhouseCoopers (2002).
j According also to Nobes (1998a).
k According also to PricewaterhouseCoopers (2002).
l According also to Nobes (1998a) and PricewaterhouseCoopers (2002).
m According also to PricewaterhouseCoopers (2002).
n According also to PricewaterhouseCoopers (2002).
o According also to PricewaterhouseCoopers (2002).
p Financial statements auditing (rule no. 17 in Table 1): in credit-based countries there is a strong protection of creditors and so a prudent determination of the payable earnings (Nobes, 1998a). Their financiers (insiders), who can access information directly from the company, do not need an external audit of the disclosed statements. We associate all these with the CE system.

1.2 Central and Eastern European accounting experience in the post-communist period

Before presenting the features of the Romanian accounting in the post-communist period covered by the literature written on the subject of this country and this period (Section 3), other experiences of Central and Eastern European (hereafter CEE) countries are relevant in order to further emphasize the Romanian characteristics.
In each case the common elements were timing (the period 1988-1991) and the methods of transition from a central planning system to a liberalized system in all aspects of political, social and economic life (Deaconu, 2011). The accounting reform was initiated in this period (Hungary started earliest, in 1988) which is described by Richard (1995) as a true accounting revolution, not just a simple transition, for East European countries. In 1991 accounting laws meant to bring consistency between national regulations and European Directives were drawn up, just like in the case of Romania (for example in Hungary, Poland, the Czech Republic and Slovakia) (Daniel et al., 2001; Borbely and Evans, 2006; Strouhal, 2007; Fekete et al., 2008).

The next similarity moment is represented by the general orientation in CEE countries towards IFRS (Deaconu, 2011), mainly as a result of adherence to the European Union and the compulsory nature of international standards application for listed companies (the year 2005). The difficult adjustment to the new accounting rules represents a common characteristic of CEE countries related to the implementation of IFRS (Jaruga, 1993; Bailey, 1995; Ionașcu et al., 2007; Strouhal, 2007; Fekete et al., 2008), also valid for other developing countries (Ong et al., 2004; Gordon, 2008).

Regardless the similar general evolution, we mostly noticed a Latin affinity of Romania comparing to the other countries taken into consideration. Romania was the only country in the region after 1991 that directly looked for reference at the French accounting system (Deaconu, 2011). The other countries strived for harmonization with the European Directives which comprise general recommendations valid at the European level. Likewise, the assistance received by Romania in order to implement the new accounting system was substantially given by France, as opposed to Hungary and the Czech Republic which were assisted by German specialists, thus maintaining a traditional influence.

Another difference between accounting evolutions in CEE countries is related to the intensity of the connection between national norms and IFRS. Thus, like Romania, Poland tried to insert international standards into national norms after the year 2000. But this process takes much more time in other countries such as Hungary, the Czech Republic and Slovakia.

2. RESEARCH FRAMEWORK

2.1. Accounting rules and accounting environment

We specify for starters that the term accounting system has two dimensions: system of rules, and system of practices, respectively. Nobes (1998; 2006) is preoccupied by that accounting system represented by the financial reporting practices used by an enterprise. In this study we make use of the approach based on the system of rules, analyzing the level of rules adopted by the Romanian regulators in the three
time periods under analysis. This is the reason why we will discuss CE and AS accounting systems as rules, and we are going to add to these sets of rules EU recommendations regarding financial reporting, which in the case of Romania suggests European-Continental elements and IFRS as a standard set with Anglo-Saxon influence in the first analyzed stage of the country’s post-communist history. There are differences between the accounting rules and practices, in time or space. This aspect will be emphasized when laying out the history of accounting.

Furthermore, we consider accounting rules to be politically-influenced choices, as it is certified in several research papers, such as Lehman & Tinker (1987), Bailey (1995) or Sodestrom & Sun (2007). Starting from the thesis of the reciprocal influences between financial reporting and the environment, we investigate if the accounting rules of each stage were appropriate to the Romanian environment in the respective period.

If a set of rules for a country or/and a period is not in agreement with the environment, its implementation is influenced by the local recommendations or interpretations, which depend on the systems of financing, law and tax (Nobes, 2006). The same author (Nobes, 1998b) suggests that a company can turn away from rules or must make choices in the absence of rules. If we refer to developing and emergent countries, out of which many adopted the IFRS, we support the statement that, even if certain contextual variables are common to other developed countries, their environments significantly differ (Hoarau, 1995; Points & Cunningham, 1998; Mir & Rahaman, 2005). To be effective, financial reporting must reflect the firm’s context in which it is functioning. Moreover, choosing a set of accounting rules under the influence of the political factors, either external or internal, might prove to be inappropriate to the market’s development level, the firms’ incentives, or the evolution of the accounting profession, all of these being the drivers of the economic, legal and cultural factors. A significant discrepancy between rules and the environment which persists in time or a significant fluctuation of the accounting rules diminishes the role of financial reporting.

In order to analyze the interaction between accounting rules and environmental factors, our research is based on the classification model developed by Doupnik and Salter (1993), on Nobes’ taxonomy (1998a) and it is in accordance with the accounting quality determinants scheme of Soderstrom and Sun (2007). The model of Doupnik and Salter (1993) helped us classify the factors as cultural and institutional. The authors of this model include individualism, power distance, uncertainty avoidance and masculinity in the cultural factors category, and give legal system, capital market, tax, inflation levels, level of education and level of economic development as examples of institutional factors. Nobes (1998a) proposes an analysis model which includes institutional, cultural, and accounting factors (*macro-uniform* – mainly CE system or *micro-based* – mainly AS system). These factors are the type of country culture, strength of the equity-outsider
financing system or the nature of equity markets, the type of company, the
country’s degree of cultural self-sufficiency and the type of financial reporting
system (AS, noted by the author as class A, and CE, noted as class B). Soderstrom
& Sun (2007) show in their review that accounting standards, together with the
incentives from financial market development, capital structure, ownership and tax
system, determine the accounting quality. The same authors consider both
categories of factors as being derived from the legal and political system.

The shape of the cultural, institutional and accounting factors presented in Doupnik
& Salter (1993), and Nobes (1998a) papers is the starting point in designing the
specific approach of our study. Moreover, after analyzing the meaning the authors
gave to the accounting factors, we consider that they refer to the accounting rules.
Also, as they are choices made by the regulators, we treat them to be political
factors.

Our framework is based on the relationship between those political (accounting)
factors and the cultural and institutional factors (the latter considered to be of
economic and legal type). We identify the cultural, economic (including financial)
and legal factors as the accounting environment observed for a certain period of
time. Figure 1 highlights the logic behind this framework.

**Figure 1. The correlation between accounting rules and the accounting environment**

Between the cultural and institutional factors we are going to test the latter
category using the analysis of financial statements of a sample of listed entities.
The cultural factors are indirectly reflected within the empirical approach. They are
implicit in the choice for accounting rules and within the accounting environment
which will be presented. Thus, we presume that choosing an AS or a CE
accounting system (rules level) bears the print of cultural domination and cultural
affinities of the country in question, together with the political choices. In what
concerns the influence of the cultural factors on the accounting environment, we
believe that the cultural variables have had the same characteristics in Romania in
the analyzed period, thus not differentiating the accounting environment of each
stage. We consider Hofstede’s (1983) values discussed by Littrell and Lapadus
(2005) for Romania, namely low individualism, uncertainty avoidance and high
power distance. Gray (1988), while converting Hofstede’s cultural values in accounting values, defines accounting professionalism in relation to the extent of individual professional reasoning in uncertainty accounting tasks. For Romania this means a lower accounting professionalism associated with a low level of ambiguity tolerance, argued also by Harding and Ming-Chuan’s (2007) for China as a developing country which focused on the cultural and social influential factors. However, judging that this dimension may not be completely verifiable at this date, it is recommended to correlate it with the evolution of the profession in Romania as Section 3 is going to demonstrate. Finally, accounting environment will be assessed in our research by the institutional factors, economic and legal, as influential factors.

In order to categorize the accounting environment, our study starts from the premises of financial reporting differentiation, specifically of the de jure classification (based on accounting rules) of the accounting systems (see Section 1.2.). We then identify the type of accounting system (de facto) at the environment level, differentiating the AS, respectively the CE accounting environment. For this, we consider the motivations or drivers that influence the implementation of accounting rules. Thus, applying a certain accounting rule implies the existence of certain legal (financing) or tax-related features that exist in the analyzed context and period. Such examples are the trade legislation concerning the use of financial instruments, the lease or the access on the capital market; the tax legislation related to the respective period. The influential factors analyzed in our research are the financing and tax systems, which sum up in our opinion the elements mentioned in the three studies at the base of our framework. These are the premises of the accounting options and accounting reasoning of the entities starting from the accounting rules in force. They determine the accounting environment and associate to it characteristics of the AS and CE systems. After identifying drivers, metrics and proxies that can be empirically tested starting from the financial statements of a sample of entities, we are going to be able to determine the accounting environment of a given period and we will compare it to the adopted accounting rules in that stage. Thus the pertinence of the political choices and their effect on accounting practice are verified.

2.2. Accounting environment influential factors

We consider as drivers of the financial system the capital structure and the incentives from financial market development. For the tax system we choose other two drivers, namely creative accounting practices and incentives from fiscal rules. Four out of six metrics are accounting practices and the other two reflect characteristics of the financing system which can be reflected by accounting data.
The financing system as accounting environment influential factor and his drivers

(a) Capital structure

It indicates the stakeholders on which the entity depends financially and whose interests should be taken into consideration in financial reporting. Grounded on the financial theory concepts, the analysis focuses on the main financing resources, equity and financial debts. Debt/equity ratio as the metric of capital structure suggests the closeness to one of the accounting environment i.e. AS or CE type. Thus, according to the literature (for example, Tzovas, 2006), the prevalence of financial debts as to equity suggests a type of financing specific to CE environment, and the opposite ratio with prevalence of the capital market financing is associated with AS environment.

(b) Financial market development incentives are suggested in our study by two metrics, financial instruments degree of use and fair value degree of use.

(b.1) Financial instruments degree of use indicate the extent of these elements in a certain period of time by companies that diversify their investments through purchase of financial assets. As Nobes (1998a) states, making reference to Zysman’s paper (1983), in systems based on capital market financing there is a wide range of capital instruments and financial institutions. We consider these systems to be equivalent to the AS-type accounting environment. A lesser degree of use of financial instruments will be associated with the CE-type, mainly based on bank credits and on government subsidies.

(b.2) Fair value degree of use

Some studies (Casta & Colasse, 2001; Obert, 2004; Hung & Subramanyam, 2007) show that one of the differences between the AS and CE systems, mainly supported by practitioners, is the fair value versus historical cost valuation base associated with the principle of prudence. The third study mentioned shows that IFRS (representing the AS system) are more fair-value oriented and are integrating the economic events within the financial statements more quickly, however in a more volatile manner. These considerations are supported by the evolution of fair value accounting itself, propelled since the mid-1980s by standard setters such as Financial Accounting Standards Board (FASB) and IASB, who replaced cost-based measures with market-based measures progressively (Hitz, 2007). On the contrary, historic cost and prudence have won the game in European countries such as Germany or France, after the Second World War, in a context of tax concerns of public authorities. In line with the tradition, the Fourth Directive was connected extremely slowly to market-based values (Deaconu, 2009). Moreover, the association of fair value use with AS systems is based on findings of some empirical studies that demonstrated the fair value relevance only for certain markets from Anglo-Saxon countries, such as the USA, the UK or Australia (Easton et al., 1993; Hopwood & Schaefer, 1989; Lobo & Song, 1989; Aboody et
al., 1999; Barth & Clinch, 1999). We think that the link between fair value and the accounting environment represents the association of fair value to financial instruments. On the one hand, where the capital market is developed, the entities’ financing is also mainly supported by this market, thus it is justified to ask for the disclosure of information regarding the fair value (market value) of equity instruments. On the other hand, market values can be obtained easily and are also reliable for this type of assets.

**The tax system as accounting environment influential factor and its drivers**

Literature describing accounting systems, such as Choi and Mueller (1992), Nobes (1992), Blake *et al.* (1997), Blake *et al.* (1998), Francis *et al.* (2002) or Gallego (2004), suggests that among the differentiating general features there are separated tax rules for AS system, and, respectively, tax dominated for CE system. Although in AS countries (such as the UK) accounting policies can be influenced in certain fields by tax, in CE countries (such as Germany) there is a comprehensive binding link between tax and accounting rules (Blake *et al.*, 1997; 1998). Tax and accounting link is dynamic, so certain changes occurred in time in the landscape of the European countries in terms of dependency degree between accounting and tax. However, even to this date, the link mentioned is preserved, either at rules level or just at practice level (Aisbitt, 2002; Gallego, 2004; Tzovas, 2006). It is estimated (Aisbitt, 2002), on the basis of the conclusion that IFRS is likely to accelerate the differentiation between accounting and taxable profit in the group accounts, that this effect will be perpetuated in entity accounts and that the binding link between tax and financial accounts will be generally removed. This historic evolution of the accounting-tax link is of interest for the period 1991-2009 under analysis for Romania.

(a) Creative accounting practices

Tax rules that induce opportunities or risks concerning taxable profit determine entities to treat them in practice as a constraint on their choice of accounting policies (Llewellyn & Naylor 1993 quoted by Blake *et al.* 1997). In countries with a comprehensive tax-accounting link there is a tendency to conservatism, which is not applied consistently from year to year, and that brings in the ‘earning smoothing’ effect. Such a creative accounting practice is more intensively manifested within a CE-type model, according to Leuz *et al.* (2003) or Blake *et al.* (1997) as compared to common law countries (AS accounting environment), where it is less pronounced. Beside fiscal profit variation, another indication of creative accounting can also be the significant difference in value between fiscal profit and accounting profit (Mills & Newberry 2001; Mauzen & Plesko 2002). All of these measurement solutions suggest the intensity of the link between accounting and taxation and differentiate the accounting environments.
(b) Fiscal incentives
According to a rich literature, the accounting rules concerning provisions and impairment differ between AS and CE financial reporting types. This is the argument behind their selection as elements that suggest fiscal incentives. These elements are the direct effect of applying the principle of prudence, with a greater importance in the CE system than in the AS system (Blake et al., 1997, 1998; Langot, 2002; Hung & Subramanyam, 2007). Meanwhile, the way in which provisions and impairment are recognized within the AS system differs from tax rules, while in the CE systems it usually follows the fiscal rules.

3. ROMANIAN ACCOUNTING STAGES AND RESEARCH PROPOSITIONS

This section consist in a qualitative analysis aiming to support the research propositions and the empirical approach of the study through the presentation of the evolution in the rules applied in the different delimited historical stages.

The evolution of Romanian Post-Communist financial reporting can be broken down into three clear-cut stages: 1991-2000; 2001-2005; and 2006-2009, respectively. This differentiation results from the analysis of the accounting rules adopted by the public authority for the large entities, which had dominated the accounting normalization in Romania and which are enumerate in Appendix 1.

Other studies of Romanian authors who have attempted a gradual developments in post-communist accounting used as a criterion of investigation the chronological sequence of the accounting regulations (Ionaşcu et al., 2007; Matiş et al., 2007; Calu, 2005), respectively the evolution of the economic events and of financial reporting system combined with the evolution of the IASB and IFRS (Mustaţă, 2008). In this research, we opted as investigation criterion for the accounting rules evolution in terms of their content and influences seen on these regulations. Mentioned studies have considered three to five stages to segment the post-communist period. We found a relative similarity of periods 1 (1991-2000) and 2 (2001-2005) analyzed in our research with Ionaşcu et al. (2007) study, and unanimity of views concerning the third stage defined by us the (2006-2009) (these studies stop in the year 2007). The differences between our opinion and of studies discussed are due firstly to the criterion of the content analysis of the accounting rules. Thus, we considered the period 1991-2000 under the influence of European rules, while other studies have divided this period in relation to the succession of various acts occurring during the period. We also appreciated the period 2001-2005 as being under the influence of IFRS, analysing the regulations dedicated to large entities as the object of our empirical analysis. Other authors have considered different stages depending on the time of occurrence for the regulations dedicated to large entities, respectively SMEs (Matiş et al., 2007; Mustaţă, 2008). Secondly, there are differences between our research and Ionaşcu et al. (2007) study, which we approach generally the most, concerning the year of separation between the first
and the second periods. We found that AS influences occurs only in 2001, when the regulation specific to the period is applied to a bigger number of large entities compared to Ionașcu et al. (2007) which considered that the stage start with the moment of an experimental application of this rules to a limited sample of large entities.

For each stage, there is a brief presentation of the specific rules followed by considerations on the impact of these political factors on the environment.


In this stage, the accounting system was of Continental-European origin, an adaptation after the French accounting system. Alexander and Bailey (in Alexander & Archer, 2001: 1474-1480) also confirm that Central and Eastern European countries have been influenced by European directives. The two normative acts adopted, **Accounting Law no. 82/1991** and the **Order of the Minister of Finance no. 704/1993** became the symbol of the accounting reform in Romania, thus renouncing the Soviet-type accounting system that was dominant during the Communist Regime.

According to Bailey (1995) the centralized institutional structures of the socialist economy have disappeared, the mechanism price was reactivated and spontaneous business activity through the market permitted. Commercial banks, financial institutions, capital market, trading and communication networks were formed. Unlike a market economy, in which the evolution of the economy determines the evolution of accounting, in a transitional one, as Romania, several studies attest a non-rhythmicity between the accounting system (rules) adopted after the communist era and the signals of the market (Feleagă et al., 1996; Matiș, 2001). At first, the accounting rules outran the evolution of the market, and afterwards they had to be updated according to the instances and instruments of the new economic environment.

Analyzing the effects of the CE accounting rules enactment, we can say that the objective of the faithful representation, an undefined and amorphous concept, was not adapted to the Romanian environment and it had led to controversies, being in most cases associated with legal compliance rather than economic compliance, as it was initially created in the UK (see Bailey, 1995; Feleagă et al., 1996; Pop, 2002). The effect of passing from cash accounting to accrual accounting was not the one intended by the entities confronted with payment difficulties, which would have preferred to know and emphasize the cash-flow statement without additional costs. Also, the accrual system complicated the collection of taxes as accounting was used to determine them, thus leading to taxing certain unrealized earnings. Hyperinflation demonized the prudence principle and the historical cost basis for valuation, useful in conditions of relative economic stability, when it assures the reliability of information (also see Feleagă et al., 1996; Malciu, 1998; Matiș,
The going concern principle was not relevant in a period in which entities considered survival, and not necessarily profitability, an objective.

Stage 2 (2001-2005)
In this stage, Order of the Public Finances Minister [OPMF] no. 94/2001 for approving Accounting Rules Harmonized with the Fourth Directive of UE and with the International Accounting Standards was issued and the entities which were considered to be large, listed or not, had to apply it for their individual accounts. As Ionașcu et al. (2007) state, a harmonization with the European directives was aimed as a component of the political objective of EU integration, in parallel with the enactment of IFRS. In our opinion, independently of its title, the content of OPMF no. 94/2001 reflected preponderantly the spirit of IFRS, while the elements of Continental-European accounting were less significant, as the next paragraph will show by using some examples.

The accounting system of the 2001-2005 stage can be classified as AS type even through its characteristics result from the content of the national GAAP in this stage. Hence, the influence of IFRS on Romanian rules is manifested mainly by the taking over of IASB’s Conceptual framework and of certain principles stipulated by it, principles which were new for a CE accounting system, for example substance over form, separate valuation of financial statements elements, and materiality, respectively. Based on the new set of accounting principles, new accounting rules were adopted, suitable for the new instances and elements which appeared on the market (for example, intangible assets, transactions expressed in foreign currencies, methods of stock valuations in the conditions of price fluctuations). The importance of disclosed information rose, also through the introduction of two new components of financial statements, the Cash-flow statement and Statement of changes in owners’ equity. This shows a higher focus on the information function of financial reporting. The horizontal balance sheet scheme, the only one known until then in Romania, was replaced with the vertical balance sheet (list). Thus, greater accent was put on the financial aspects (solvency) and on informing the investors. The profit and loss account enabled operational expenses to be disclosed according to their nature, practice which existed previously, but also according to their destination. This possibility suggests how important financial information is to managers. The role of the financial reporting in corporate governance was thus emphasized in this stage. Other details regarding the new adopted rules are found in Matiș (2001), Feleagă and Malciu (2002), Pop (2002), Pântea and Bodea (2008), Pop et al. (2008), Deaconu (2009).

With respect to the appropriateness of such an accounting system for the Romanian environment, critics regarding the adaptation of IFRS are based on the insufficient education in Romania, from a cultural point of view (the mentality), technical (needed knowledge, practical experience of Romanian professionals), and legal (accounting was strongly anchored in fiscal rules). Ionașcu et al. (2007) quotes
Roberts (2000) when he states, regarding the East European countries, that the mixture of accounting philosophies through superposing of an Anglo-Saxon accounting system on a legalistic one is a cultural intrusion. In the same manner, Nobes (1998b) shows that the introduction of a system of class A (AS type) in former communist countries might be inappropriate; except for the case in which a development of the capital market associated with the AS system is observed, like in the case of large or listed entities. Finally, certain studies (Bailey, 1995; Ionaşcu et al., 2007; Gordon, 2008) show that cost-effectiveness of the respective changes was insignificant for the developing and emergent countries, at least during the implementation period.

We add to these remarks our own observations concerning the effect of the stage specific rules. Thus, while some new accounting options adequate to the evolution of the economy were introduced other elements have proved to be introduced prematurely. For example, according to Deaconu (2009), fair value was a totally incomprehensible concept in this stage of Romanian accounting evolution. The influence of the fiscal regime remains important, as priority was still given to the accounting function of determining the taxable profit. The professional accounting reasoning took into consideration the fiscal requirements rather than the accounting principles (see also World Bank, 2003 quoted by Ionaşcu et al., 2007).

Stage 3 (2006-2009)
In this stage, OMFP no. 1752/2005 for approving Accounting Rules Harmonized with the European Directives is adopted, which requires all entities to apply accounting rules aligned with the European rules, starting with January 1st, 2006 (this act was replaced in 2009 by OMFP no. 3055 on January 1st, 2010, which brings some updating in compliance with IFRS). As Ionaşcu et al. (2007) also show this was the end of the Romanian regulator’s attempt to harmonize on its own – with the European directives and IFRS. The action of the Ministry of Public Finances is justified by Romania’s imminent integration with full rights in the EU, integration that materialized at the beginning of the following year. The entities formerly considered ‘large’ applying in the previous stage rules of AS type (complying with IFRS), had to adopt in the current stage the new rules of CE essence. In this stage IFRS are mandatory for the credit institutions and optional for the other entities considered publicly accountable. The movement in circle (from a CE system to an AS system and back) continues for some entities – namely listed entities – together with the compulsory adoption of IFRS for their consolidated accounts on January 1st, 2007. Because of the mixture of accounting rules in this period, and given the fact that we anticipate an evolution of the accounting environment in this period, we find it reasonable to analyze distinctively this stage.
The influence of the EU and the CE system are to be found in the accounting-taxation relation. The legislator has a significant influence on the organization of accounting, being cautious with the calculation of the profit that has to be distributed and taxed. Moreover, compared to the legislative requirements of the previous stage, the new accounting rules do not undertake the qualitative characteristics of the financial information, and setup costs are recognized as assets, although they do not meet the recognition criteria specific to IFRS (Deaconu, 2009). The influences of the AS type are determined by comparison with the rules of the previous stage. Thus, the accounting principles of the previous stage that introduced items specific to the AS system are kept. The structure of financial statements is the same, including the documents specific to the AS system. Also, the list format of the balance sheet is preserved. With the exception of setup costs, the definitions and recognition criteria resulting from the IASB conceptual framework are maintained. The financial instruments are demarcated more clearly, recognizing in this way their growing importance.

With respect to the effect of applying stage rules, we appreciate a larger closeness with the accountants’ expertise, compared to the previous stages, which denotes a favorable evolution of the accounting profession and of the educational system.

Based on the framework and on the accounting systems features, we have established the following propositions (P) on the accounting environment in the different historical stages of the Romanian financial reporting:

\[ P1: \text{For the stage 1991-2000 (1997-2000 for the empirical approach) the accounting environment was of CE type;} \]
\[ P2: \text{For the stage 2001-2005, the accounting environment was of AS type;} \]
\[ P3: \text{For the stage 2006-2009, the accounting environment had both CE and AS type characteristics, the latter being predominant.} \]

4. THE EMPIRICAL APPROACH ITEMS

4.1. Influential factors metrics and proxies

Based on the framework development in Section 2, Table 2 presents our choices concerning the metrics and proxies used to measure the extent of influential factors which characterize a certain accounting environment in a given stage.
### Table 2. Accounting environment metrics

<table>
<thead>
<tr>
<th>Influential factors</th>
<th>Drivers</th>
<th>Metrics</th>
<th>Metrics proxies</th>
<th>Proxy type</th>
<th>Proxy signification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financing system</td>
<td>Capital structure</td>
<td>Equity and debts</td>
<td>Debt/Equity Ratio</td>
<td>Quantitative</td>
<td>Values &gt;0.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(continuous)</td>
<td></td>
</tr>
<tr>
<td>Financial market</td>
<td>Financial instruments use</td>
<td>Changes in financial instruments value</td>
<td>Quantitative</td>
<td>(continuous)</td>
<td>Insignificant values</td>
</tr>
<tr>
<td>development incentives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fair value use</td>
<td>Fair value frequency</td>
<td>Quantitative</td>
<td>(discrete)</td>
<td>Insignificant values</td>
</tr>
<tr>
<td>Tax system</td>
<td>Creative accounting practices</td>
<td>Fiscal profit</td>
<td>Changes in fiscal profit</td>
<td>Quantitative</td>
<td>Significant differences between stages</td>
</tr>
<tr>
<td></td>
<td>Provisions and impairment use</td>
<td>Provisions and impairment recognition</td>
<td>Dummy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- The interpretation in the table is related to the CE accounting environment, the opposite situation being representative for an AS type accounting environment;
- This category includes bank credits, i.e. other financial debts than the ones related to lease, respectively the ones resulted from the issue of obligations (the latter being suggested by the purchases of such financial instruments and are illustrated by the *Financial instruments use* metric);
- This proxy represents the variation in absolute value from one year to the other; the value of balance sheet positions regarding the financial instruments are scaled with the turnover;
- The number of occurrences in The Notes to the financial statements regarding the estimation of fair value;
- This proxy represent the variation in absolute value from one year to the other; It is reconstructed based on the value of balance sheet positions of earnings before tax, respectively of the corporate tax, scaled with the turnover;
- This metric suggest the principle of prudence implementation; For this metric, other proxies could be chosen, such as the value of balance sheet positions regarding provisions and impairment; in this study we did not prefer this solution because of a low number of observations, which could have affected the quality of the analysis; This proxy is expressed as dummy variables and takes the value 1 when the accounting items concerned were recognized and the value 0 in the opposite case.
4.2. Sample

According to Nobes (1998a), in order to identify the accounting system type of a country, it is recommended to perform an analysis of the dominating accounting system. Considering that two sets of accounting standards can coexist in one country, one specific to large entities and the other one to SMEs, as it is the case of Romania, we considered the dominant accounting system of this country as the one associated with listed entities, mainly large entities. Therefore, we collected information disclosed in the financial statements of the entities listed on the Bucharest Stock Exchange (BSE), between 1996 and 2009. As to the period between 1991 and 2009 illustrated in the analysis performed in Section 2, data referring to 1991-1995 is not available due to the fact that the stock exchange was not functional during that period, as it reopened in 1995, after 50 years of absence. As some proxies are expressed as variation compared to the previous year, we did not use the 1996 data within certain statistical tests were we had no comparable data. The sample contains 328 observations from 24 companies, which could be tracked constantly during the 14 years (1996-2009) period involved in empirical tests, other companies being listed or unlisted during that period. The entities belong to manufacturing, constructions and services industries. Financial institutions were not taken into consideration. The elements of the financial statements were transformed in proxies reflected as ratios, frequencies or nominal values. The database was set up in Lei (RON), at comparable values, by integrating the effects of inflation [according to the National Socio-Economic Statistical Institute], and the effects of monetary denomination [the ratio of RON 1/ ROL 10,000, into force starting with July 1st, 2005 and regulated by the National Bank of Romania].

4.3. Statistical tests

Firstly, the empirical approach analyzed the data homogeneity during each stage and the differences between the three stages. The purpose was to validate the existence of the three historical stages and of some particular accounting environments in the Romanian financial reporting history. Secondly, we applied the binary regression technique, in order to find the function that determines the probabilistic component and to be able to predict the accounting environment specific to the third stage of the study. This was because in the case of the first two stages the arguments for establishing an AS or CE-type accounting environment were stronger, taking into consideration the type of accounting rules specific to each of the two stages. On the contrary, in the case of the third stage, rules are declared as compliant with the European Directives, but the analysis from Section 2 does not fully support this qualification. We intend to determine the degree of inter-correlation the elements specific to the AS and CE systems and to see if we can still talk, for this last stage, of a pure AS or CE-type environment. On the other hand, we used this technique to check our hypothesis concerning the accounting environment type for the first two stages, namely a CE type in the first and an AS type in the second.
5. ANALYSIS RESULTS

5.1 Accounting stages differentiation

We have chosen two sets of tests, the first designed to the data homogeneity analysis from each stage to another and the second focusing on possible differences between stages. Both types of tests led us to other useful observations for the validation of our hypotheses.

For all the metrics beside those that express the creative accounting practices, we looked if the means were not differentiating significantly indicating that proxies’ variation was constant (Table 2).

Table 3. ANOVA Test for each stage

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-Value</td>
<td>p-Value</td>
<td>t-Value</td>
</tr>
<tr>
<td>D/Eq*</td>
<td>0.800</td>
<td>0.528</td>
<td>1.039</td>
</tr>
<tr>
<td>∆FIVal b</td>
<td>0.550</td>
<td>0.649</td>
<td>1.322</td>
</tr>
<tr>
<td>FVFq c</td>
<td>-</td>
<td>-</td>
<td>2.764</td>
</tr>
<tr>
<td>∆FP d</td>
<td>7.785</td>
<td>0.000</td>
<td>34.996</td>
</tr>
<tr>
<td>PIR b</td>
<td>0.291</td>
<td>0.883</td>
<td>0.589</td>
</tr>
</tbody>
</table>

Where, D/Eq – Debt/Equity Ratio; ∆FIVal – Changes in financial instruments value (scaled with the turnover); FVFq - Fair value frequency; ∆FP – Fiscal profit changes (scaled with the turnover); PIR - Provisions and impairment recognition.

Notes:

* 120 observations were registered for the 1996-2000 stage, with the mention that only 96 observations existed for ∆FP;

b For these proxies, homogeneity can be observed within the period, \( p > 0.05 \);

c For the first stage, no variance within groups-statistics for Fair value frequency (FVFq) can be determined because of the lack of information; there is homogeneity within the 2001-2005 stage for \( p > 0.01 \), and, respectively, for the 2006-2009 stage for \( p > 0.05 \);

d For the fiscal profit proxy, variation can be observed during the first two stages, \( p < 0.001 \) and constancy in the final stage, \( p > 0.05 \).

For the other proxies than those reflecting creative accounting practices, untabulated descriptive statistics and the ANOVA test show that during each stage the hypothesis regarding equal means in the stage is confirmed. This aspect highlights that there is a certain constant evolution of the influential factors of the accounting environments and it long-establishes the time delimitation that we observed at the level of accounting rules. Some remarks must be done here concerning Fair value frequency (FVFq) from the second stage, 2001-2005, when it registered a relative homogeneity for \( p = 0.031 > 0.01 \). The issue can be explained by the novelty of the concept for that timeframe, by the difficulties of understanding the notion and by the toughness in estimating a fair value due to less active markets.
For the fiscal profit proxy that reflect the creative accounting, we investigated if there were differences between the years 1996 and 2000, in order to check our assumptions regarding the interpretation of the metrics in relation to the CE and AS models. The statistical numbers \([t-\text{Value}=7.785, \ p-\text{Value}=0.000 < 0.001]\) of the first stage confirm our expectations regarding a CE accounting environment (due to significant variations between years). However, the prediction for the other two stages that the accounting environment was very similar with an AS environment is confirmed only for the final stage, 2006-2009 \([t-\text{Value}=1.746, \ p-\text{Value}=0.163>0.05]\), which suggests that the accounting environment is influenced by taxation also in the second stage despite accounting rules that are of AS type. All these are indications of creative accounting through earnings smoothing. It is important to clarify that the numbers were not influenced by the corporation tax percentage evolution. According to the fiscal law, those percentages were: 38% in the stage 1995-2001, 25% for 2002-2004, respectively 16% after the year 2005.

Table 4. ANOVA Test between the first two stages

<table>
<thead>
<tr>
<th>Proxies</th>
<th>D/Eq</th>
<th>ΔFIVa</th>
<th>FVFq</th>
<th>ΔFP</th>
<th>PIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(t)-Value</td>
<td>3.146</td>
<td>3.018</td>
<td>23.235</td>
<td>13.905</td>
<td>41.184</td>
</tr>
<tr>
<td>(p)-Value</td>
<td>0.077</td>
<td>0.084</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The analysis of the statistical numbers from Table 3 indicates the proxies variation between the first two stages, 1996-2000 and respectively 2001-2005 (for \(p<0.01\) for three cases and \(p<0.1\) for the other two). This confirms the previous findings referring to the differentiation of the accounting systems in CE, respectively AS.

Beside the tests concerning the differentiation of the accounting stages, descriptive statistics on means of variables reflecting the influential factors, considered for each year of the three stages and also between the stages, bring additional information.

By analyzing the financing system drivers, firstly our expectations concerning the capital structure was confirmed. In the first stage the debts increase annually surpassing equity at the half of the interval, thus indicating a CE accounting environment. There are some arguments for the equity predominance in the first part of this stage. The former state owned enterprises got privatized and their capital was kept with a high recognized value and sometimes it was even distributed to the employees and to managers, without a real coverage in assets. Also, the hyperinflation determined the recognition of some revaluation reserves for fixed assets, so a series of government decisions related to this aspect were issued and applied with binding title to companies having major state owned capital. In the 2001-2005 stage there are two years with negative equity and the others, mainly at the end of this stage, with the predominance of equity as opposed to debts. This finding denotes an AS environment. The same characteristics are present in the final stage, in which equity prevails, but not far from the value of debts, implying a mixture of CE and AS environments. Fair value use is noticed
starting with the second stage and it has an ascendant trend until 2009, although its frequency stays modest. Although low the evolution of these values can be associated with an AS environment for the last two stages. The financial instruments metric is the only one that does not differentiate the three periods by its average annual values. It registered extremely low, often negative, values during the whole analyzed period, indicating the availability of this type of assets. The average values of fiscal profit changes fluctuate in the first stage. The discontinuous evolution is also noticed to a certain extent in the second stage. In the third stage, the annual values are relatively homogenous. This evolution represents an argument for a CE environment in the first stage, when the creative accounting practices prevail. The influence of these techniques is present to some extent in the second stage, and only in the last stage the environment suggested by this metric is closer to an AS type. On the other hand, the recognition of impairment and provisions, which is another proxy suggesting tax system influence, is felt more intensely in the last two stages, when it registers doubled values compared to the first stage. This aspect suggests the decrease in the importance of fiscal issues influence on the Romanian accounting professionals reasoning and denotes the proximity of an AS environment.

5.2. Binary regression results

This technique provides information on the importance of variables in differentiating classes and on classification of observations in a certain group (Freedman, 2005). Binary regression accepts the quantitative and dummy variables as explicative variables. Consequently, this analysis takes into consideration all proxies developed initially and presented in Table 1. In order to find the significant variables, Forward Stepwise (Likelihood Ratio) method was applied. The synthetic results on the representativeness of the model are presented in Table 4.

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R²</th>
<th>Nagelkerke R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>264.032</td>
<td>0.132</td>
<td>0.177</td>
</tr>
<tr>
<td>2</td>
<td>248.724</td>
<td>0.192</td>
<td>0.257</td>
</tr>
<tr>
<td>3</td>
<td>242.718</td>
<td>0.215</td>
<td>0.287</td>
</tr>
</tbody>
</table>

Three steps are necessary to obtain a final representative model. Variables have been introduced in the model on the basis of the score given to each one and that measures the importance of the variable in explaining the accounting environment (PIR -29.809, ΔFP -13.172, D/Eq -4.925, FVFq -3.666 and ΔFIVal -3.004). According to the score obtained, proxies have been introduced in the model as follows: PIR on step 1, ΔFP on step 2 and D/Eq on step 3.

The model reached by applying the binary regression logistic explains the affiliation to one or another accounting model, Nagelkerke R²=0.287 (Table 4).
Moreover, the application of Hosmer and Lemeshow test with \(\text{Chi-square}=13.2\) and \(p=0.115\) confirms that the frequencies observed are not far from the estimated ones. The variables in the model have a satisfactory acceptance level (\(p<0.001\) or \(p<0.01\)), which indicates their influence on the Romanian accounting environments differentiation (Table 5).

**Table 6. Variables in the equation**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Df</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR</td>
<td>-1.681</td>
<td>0.340</td>
<td>24.398</td>
<td>1</td>
<td>0.000</td>
</tr>
<tr>
<td>(\Delta)FP</td>
<td>-4.081</td>
<td>1.440</td>
<td>8.030</td>
<td>1</td>
<td>0.005</td>
</tr>
<tr>
<td>D/Eq</td>
<td>-0.446</td>
<td>0.232</td>
<td>3.702</td>
<td>1</td>
<td>0.044</td>
</tr>
<tr>
<td>Constant</td>
<td>0.823</td>
<td>0.200</td>
<td>17.007</td>
<td>1</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The equation variables denote the influential factors with stronger power in the evolution of the Romanian accounting environment. Firstly, it is about the two proxies of the fiscal system (\(\Delta\)FP and PIR). Along with the fiscal message the profit proxy, provisions and impairment, are closely linked in practice with their fiscal deductibility. Both indicate a significant influence of the tax system. Secondly, the presence of Debt/Equity Ratio should be noted; this suggests the capital structure influence, namely the type of financing adopted by Romanian entities.

After determining the probability of affiliation to an accounting environment, the number of correctly predicted cases is 72.4\% (58.33\% for the CE model and 83.1\% for the AS model). In the case of the 90 observations during 2006 and 2009, we obtained the following results: for the CE model 23\% of the cases and for the AS model 77\% of the cases. The detailed predictions per years are presented in Table 6.

**Table 7. Observed year * Predicted group Crosstabulation**

<table>
<thead>
<tr>
<th>Observed year</th>
<th>Predicted group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CE environment</td>
</tr>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>1997</td>
<td>15</td>
</tr>
<tr>
<td>1998</td>
<td>14</td>
</tr>
<tr>
<td>1999</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>12</td>
</tr>
<tr>
<td>2001</td>
<td>3</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
</tr>
<tr>
<td>2003</td>
<td>5</td>
</tr>
<tr>
<td>2004</td>
<td>4</td>
</tr>
<tr>
<td>2005</td>
<td>2</td>
</tr>
<tr>
<td>2006</td>
<td>8</td>
</tr>
<tr>
<td>2007</td>
<td>5</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
</tr>
</tbody>
</table>
DISCUSSION AND CONCLUSIONS

This research had two objectives: (a) to empirically demonstrate the existence of three accounting environments of, or similar to, CE or AS type that were successively applied during the Post-Communist period in Romania; (b) to observe the effect of the interaction between accounting rules, on the one hand, and the economic environment on the other hand, and therefore the utility of accounting information for each historical stage. For this purpose, this research firstly selected certain drivers, on the basis of a specific framework, in order to investigate the accounting environment for each historical stage.

Secondly, the evolution of the Romanian financial reporting was presented – at the rules level - in the last 18 years, when Romania was considered an emergent country. In the empirical approach, due to data availability, three stages of rules changes were established, i.e. 1997-2000 (with European-French rules), 2001-2005 (with rules complying with the Fourth European Directive and with the IFRS for large entities and with the European Directive for SMEs), 2006-2009 (with rules complying with the Fourth European Directive).

(a) The objective related to the existence of the three accounting environments in the analyzed period is reflected in propositions P1-P3, which are confirmed. For the first stage, the accounting environment was of CE type, the second stage corresponded to an AS environment, and finally the third stage was a hybrid between CE and AS the latter being predominant.

(b) The objective referring to the compliance of the rules with the specific environments is sustained by the following analytical comments.

The fiscal features had the highest explanatory power regarding accounting environments. The most significant impact is in the first two stages, with a tendency to decrease during the final one. Contrary to our expectation that only the first stage would have a CE accounting model, the second stage, 2001-2005, keeps in practice certain fiscal characteristics of CE accounting systems while the accounting rules register a sudden turn towards the AS accounting type.

The financing systems drivers proved to have a certain influence, which denotes a development in stages of the capital market and the diversification of the financing resources to the end of the analysis period. This statement is sustained by the capital structure metric which clearly associates the 2001-2005 and 2006-2009 stages with the AS environment. The other metrics suggesting the financing system, regarding the financial instruments and fair value use, even if they allowed the differentiation of the accounting models in the three stages, they had no significant contribution in defining the type of accounting model and, especially, in predicting the type associated with the third stage. The results determined for this
last metric in 2001-2009, especially for the stage 2001-2005, assumed to be part of the AS model, for which the number and value of the observations was extremely limited and the statistical influence relatively low, lead us to observe the discrepancy between the accounting rules and the economic environment (slow development of the capital market and lack of active markets).

The common assertions for these two assumed objectives, (a) and (b) are presented hereinafter.

In the first stage, 1996-2000, a CE accounting environment was argued. However, the correctly predicted number of cases through the binary regression (58.33%, with a minimum annual value of 50.0% and a maximum value of 62.5%) reveals a lower degree of compliance with accounting rules than expected. This indicates that the economic environment was not ready for transitioning to the new accounting system.

The second stage, 2001-2005, is part of the AS accounting environment, confirmed with 83.1% results. This mean and the endpoints of the interval reflecting maximum annual values of more than 91.7% reveal a higher compliance level between the rules adopted by the Romanian Government and the environment than in the previous stage. However, taxation continued to influence the behavior of the entities. Moreover, in the year 2003 (with a 78.3 percentage validated cases for AS accounting model) OMPF no. 306 came into force (its title indicating the compliance with the European Directives, see Appendix 1) and some of the sampled entities (SMEs) have started implementing it, which again, denotes an inappropriate mix of AS and CE rules. The economic environment was not completely ready to assimilate the new concepts and principles brought in by IFRS, according to the AS spirit, which created difficulties for the professionals and for the financial information users.

For the third stage, 2006-2009, it was clearly demonstrated an AS environment (with an average of 77.18 % concerning the predicted number of cases), which outlines two facts. Firstly, the acute inconsistency with the type of adopted regulation, i.e. OPMF no. 1752/2005 into force since January 1st, 2006, which is said to be in accordance with the Fourth European Directive. Secondly, if we only consider the title as mistaken while the content of the regulatory act resembles more to the rules of an AS model, that means either that the European Directive is highly influenced by IFRS and the AS model, or that the Romanian practice has made a step forward as compared to European recommendations for accepting the dominance of IFRS.

The theoretical listing and empirical validation of the “stages” concept, judged in relation with the accounting system type may be considered one of the study’s contributions with significance for the accounting developments in Eastern Europe.
The demonstrated alternation of accounting models for Romania is in accordance with Nobes (1998a) inferences related to the temporal-historical measure regarding change in financial reporting in relation to a certain area. Also, the present research interprets Romanian accounting history in relation to an original framework of the environmental factors. This framework could be used for comparative national studies related to emergent and developing countries. This study confirms Nobes’ (1998a), respectively Doupnik and Salter (1993) influential factors delimitation (cultural, institutional and accounting – for us, political factors), respectively the Soderstrom & Sun (2007) review on the accounting quality determinants (accounting standards - for us, political factors, respectively financial, ownership and tax incentives). Also, it is in line with Carnegie & Napier’s thesis (2002) according to which taxation systems, professional accountancy bodies and providers of finance are factors with a strong influence on financial reporting.

The arguments presented regarding the interaction between the economic environment and political factors which influenced the evolution of Romanian accounting starting with 1991 (1997 in our empirical analysis) until present is another contribution of the study. The political influence on accounting thesis is thereby confirmed. Thus, the research argues that for Romania there has not been a strong correlation between the choice for accounting standards (rules) and the economy’s level of development. Despite the fact that this conclusion is justified in an emergent economy, the frequent and rough change of accounting rules has shaken the accounting reform process. Our belief is that applying the IFRS in one way or another (within the accounting systems we called of AS type) and the mixed AS and CE influence, expressed in different and little coordinated public measures, has affected the utility and relevance of financial reporting and thus, the quality of financial information. The difficult adjustment to the new accounting rules (mainly to IFRS) of emergent countries is confirmed as well by the studies on this context, discussed in Section 1.2. Also, in Romania, the needs of financial reporting users, except the government and perhaps financial creditors, have been neglected. Consequently, the perception of managers and investors did not benefit accountancy at all, even if lesser during the last stage. In the latter stage (after 2005) we notice a larger closeness between the accounting rules and practice. A favorable evolution of the accounting profession can be observed, the adaptation of professionals to the accounting environment being improved. Under the positive influence of education, the actions taken by the professional body and the experience accumulated in the previous stages, the new euro-international concepts are managed better, even if certain particular accounting specifications promoted by the AS system (fair value, financial instruments) remain of narrow-scope.

The final contribution of this research is the confirmation of the fact that the current accounting models comprise mixed influences. Thus, after 2005, in Romania the two accounting environments types (one with Continental-European
influence and the other with Anglo-Saxon influence) are combined. Thereby a pure accounting model identifiable by reference to the classic accounting systems presented in the literature can no longer be identified. Consequently we can state that accounting systems classification schemes have become obsolete in the context of international accounting harmonization although they are useful in determining accounting history. We therefore submit to the opinions of Cairns (1997), Alexander and Archer (2000), and D’Arcy (2001). According to one of our former ascertainties that the Romanian accounting history can provide indications concerning the European accounting future (at least for emergent countries), we consider that Romania is aligned with the global trend of IFRS harmonization, even given the difficulty and the gripping process revealed in this study.

Our approach has some limits underlined for example by Nobes (2004) when talking about inductive/empirical studies on accounting systems classification. Out of these, we take into consideration the data reliability. Likewise, our study tests information disclosed by entities, not the recognized data. All these considered, a limitation regarding the degree of disclosure of financial statements can be taken into account, as this restriction has also been contained by other studies (e.g. Nair & Frank, 1980; Doupnik & Salter, 1993; Schipper, 2007). Also, the results of the study should be interpreted with caution because they are based on a relative restraint number of cases. Another possible limitation relies on the exploratory type of the study. It is possible for other researchers to make another selection and prioritization of the drivers and metrics defining the accounting environments. Finally, it is possible for the accounting options of the analyzed entities to be due to other factors, whose influence may not be sufficiently isolated.

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Accounting and the environmental factors -
An empirical investigation in post-communist Romania


PricewaterhouseCoopers (2002), www.pcw.org

**Appendix 1. Summary of Romanian financial reporting acts between 1991 – 2009 applied for the large entities**

<table>
<thead>
<tr>
<th>STAGE</th>
<th>NUMBER AND DATE OF THE ACT</th>
<th>DATE OF COMING INTO FORCE</th>
<th>OBJECTIVE</th>
<th>SUBJECT OF COMPULSORY IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-2000</td>
<td>Accounting Law no. 82 of December 24th, 1991</td>
<td>Start of the Post-Communist accounting reform</td>
<td>All entities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Order of the Minister of Finance no. 704 of December 14th, 1993</td>
<td>January 1st, 1994</td>
<td>Approving the implementation of the Accounting Law no. 82/1991.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Order of the Minister of Finance no. 403 of April 23rd, 1999</td>
<td>Starting with the financial statements of the financial year 1999</td>
<td>Experimental for 13 entities: Harmonization with the Fourth Directive of the EU and with the International Accounting Standards</td>
<td></td>
</tr>
<tr>
<td>2001-2005</td>
<td>Order of the Minister of Public Finance no. 94 of January 25th, 2001</td>
<td>Starting with the financial statements of the financial year 2000</td>
<td>Starting with a sample of 200 entities: Harmonization with the Fourth Directive of the EU and with the International Accounting Standards</td>
<td>Large entities</td>
</tr>
<tr>
<td>2006-present</td>
<td>Order of the Minister of Public Finance no. 1752 of November 17th, 2005</td>
<td>January 1st, 2006</td>
<td>Conformity with the Fourth Directive of the EU</td>
<td>All entities</td>
</tr>
<tr>
<td></td>
<td>Order of the Minister of Public Finance no. 1121 of July 4th, 2006</td>
<td>January 1st, 2007</td>
<td>IFRS application</td>
<td>Listed entities, consolidated accounts</td>
</tr>
<tr>
<td></td>
<td>Order of the Minister of Public Finance no. 3055 of November 10th, 2009</td>
<td>January 1st, 2010</td>
<td>Conformity with the Fourth Directive of the EU, replace CMPF 1752/2005</td>
<td>All entities</td>
</tr>
</tbody>
</table>

1 www.insse.ro
2 www.bnr.ro