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Dima, Bogdan and Cristea, Stefana Maria

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## A WEB OF INTERCORRELATIONS: CULTURE, FINANCIAL REPORTING AND SOCIAL OUTPUT

**Bogdan DIMA, PhD Professor, West University, Timișoara**

**Telephone no.: +40720724197**

**E-mail address: bogdandima2001@gmail.com**

**Ștefana CRISTEA, PhD, Lucian Blaga University, Sibiu**

**Telephone no.: +40751897825**

**E-mail address: stefana\_cristea@yahoo.it**

### ABSTRACT

In the context of a growing literature on the connection between cultural variables and accounting regulations, the general objective of the paper is to provide a theoretical framework and empirical evidence on the recent trends in financial reporting and on their impact on the dynamics of the social output. Thus, the specific objectives are: 1) to provide an operational definition of culture; 2) to advance a model of the interactions between culture, design of accounting regulations and the economic growth; 3) to test some of these interactions at the European based on an empirical pool data model. The dependent variable are: a dummy aiming to capture the specificity of the IFRSs endorsement in EU; the average real GDP rates of growth; and the explanatory variables which are represented by the cultural descriptors derived from World Values Survey questions. The main results of the paper consist in the following theses: the culture is relevant for the national characteristics of IFRSs implementation in European Union; and the accounting framework matters for the outcomes of social decisions.

### KEY WORDS

Accounting harmonization, culture, financial reporting, social output, world values survey, IFRSs

**JEL Classification:** C23, M41, M48

### INTRODUCTION

Starting with the seminal work of Harrison & McKinnon (1986) and Gray (1988), a growing literature addresses the issue of the connections between the cultural variables and the accounting regulations and tries to explain and predict by using such variables the international differences in accounting systems. Several studies have tested Gray's hypothesis including Pourjalali & Meek (1995) who identifies a match between changes in cultural dimensions and the accounting environment in Iran following the revolution. On the other hand, Amat, Blake, Wraith & Oliveras (1999) link the national culture to the characteristics of the Spanish accounting environment. Also, Dunn (2002) concludes that cultural and political barriers are some of the most important limitative factors for the international accounting harmonization.

Meanwhile, there is a significant literature dealing with the situations of “imperfect information” and its consequences on the quality of decisional act. Since the introduction of the “bounded rationality” concept initiated in the ‘50s by Herbert Simon, several works have taken into account both the economic implications of this decision-making mechanism and the difficulties to describe it. This literature has discussed the “procedural rationality”, knowledge, memory, choice of what to know, and group decisions by challenging the dominant paradigm of the “rational” decision-making process (“have raised great doubts as to whether this schematized model of economic man provides a suitable foundation on which to erect a theory - whether it be a theory of how firms do behave or of how they 'should' rationally behave”, Rubinstein, 1998; 16).

Thus, the general objective of this paper is to provide a simple theoretical framework and some empirical evidence within the fervent debate over the recent evolution in European countries' financial reporting. The paper is organized as it follows: *Section 1* provides a general framework of the decisional

determinants of IFRSs adoption together with an operational definition of culture - as the dominant collective mental model that individualizes a society from another by being the subject of a learning and inter-generational transmission process - along with an analysis of the impact of IFRSs adoption status on the social output. Moreover, this section identifies some particularities of the accounting regulations in the European Union which make the general conceptual background a feasible descriptor; *Section 2* tries to provide an empirical support for the thesis that there are some significant connections between the characteristics of the **cultural paradigm** and the financial reporting in the European Union and also for the connections between the impact of financial reporting on the social output dynamics *via* the **quality of the informational social system**; *Section 3* includes derived comments and (auto) critics.

Therefore, the main results of the paper consist in the theses that the culture matters in explaining the national characteristics of the accounting standards' implementation whereas the accounting framework matters for the outcomes of social decisions.

## 1. THE CONCEPTUAL BACKGROUND

The European accountancy undertakes the most significant revolution since the issuance of the IV<sup>th</sup> Directive in 1978. Since 2005, *IAS Regulation* (Regulation No.1606/2002/EC) has required European companies listed in a European securities market to use **International Financial Reporting Standards (IFRSs)** for the preparation of their consolidated financial statements. This requirement affects almost 8000 European listed companies. In addition, Article 5 of the IAS Regulation allows Member States to permit or require the unlisted entities to draw up their individual and consolidated accounts according to IAS.

In order to provide an auto-consistent explanation for the different countries' decisions to adopt or converge with **IFRSs**, it is minimally necessary: 1) to provide a general framework of regulations adoption by different authorities; 2) to identify the particularities of the **IFRSs** adoption mechanisms susceptible to allows the usage of this framework.

### 1.1. A framework of the regulations adoption

The manner in which a *formal public, semi-public or private authority* adopts different regulations depends on a complex set of "objective" and "subjective" determinants originating from economic, social and psychological fields. Of course, it could be simply argued that a certain set of regulations will be adopted if such process leads to attain at least a "second best" state. But this sounds a little bit like "Hamlet without the prince of Denmark". While the "hard" economic factors were analyzed in a large number of studies, less attention was paid to the "psychic" motivations of the regulatory mechanism. In fact, each authority acts based on a *social mandate*. Or, one could observe that the nature of the *social contract* is critical for the soundness of the entire proposed argumentation. As Hirshleifer (2001: 126) notices: "It is useful to distinguish vertical from horizontal social contracts. The vertical alternative, Thomas Hobbes's version, would be represented by arrangements such as hierarchical in the biological realm or dictatorship on the human level. John Locke's version, the horizontal alternative, corresponds to more egalitarian arrangements in either sphere". Each of such arrangements will generate different costs of *imposing/supervising/punishing the non-followers* for a given set of regulations.

For the development of the analytical framework, it is useful to distinguish between *objective* and, respectively, *subjective* costs of the regulatory process. We admit it is difficult to *ex ante* discriminate between these types of costs and also between their individual components. However, in general terms, such costs could be described as:

- **Objective costs** involves material, human capital and financial resources, infrastructure, time and information necessary to apply, supervise and punish the non-observance of one or more regulations;
- **Subjective costs** are linked both to the *internal* as well as *external* involved authority's environments. Usually, these are institutional costs generated by the perception of how the adopted regulations will affect the authority's output.

Both categories of costs could be "variables" ("time-depending) or "fix" ("constant over a given time period"). Also both of them could take a quantifiable form or could be perceive in a "fuzzy" "low"/

“high” form. Finally, both of them could be connected to the authority’s capacity to fulfill its *social mandate*.

It may be observed that the existence of the *subjective* costs raises an “aggregation problem”: if some “micro” psychological factors could at a certain extent explain the adoption of a particular set of regulations, it is necessary to extent such determinants at a “macro” level in order to systematically explains different authorities’ decisions on the “long-run”. Or, in other words, it is necessary to take into account the **cultural paradigm** in which these authorities operate as an “aggregate” of their individual set of values and “subjective” motivations.

Also it could be perceived that both types of costs are depending *inter alia* on the **volume, structure and quality** of the available information: if the deciding authority is able to collect and manage a corresponding amount of current and relevant information, then it will be able to make decisions implying lower decisional costs. But with the exception of the “perfect information” situations, there have always been involved some corresponding **informational costs**. As a consequence, it will be necessary to have a corresponding balance for the “excess output” induced by a better informational mechanism and also for the “costs saving” with the aggregate informational costs implied by the design and function of such mechanism.

According to the Merriam-Webster Dictionary, culture is “the act of developing by education, discipline, and social experience” or “training or refining of the moral and intellectual faculties”. In a different view, Cozzi (1998) understands by culture a “social asset” whose acquisition by an agent generates no individual utility but has positive external effects. UNESCO (1992)<sup>1</sup> had described culture as follows: “... culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs”. Such definitions are more focused on the static aspects of the culture as given social artifacts. But cultural characteristic are changing over time; the content of the shared intellectual products does not rest the same over long time spans. Societies are reacting to the variation of the external and internal environment. So that, a more comprehensive view of cultural paradigm admits that its architecture is “stable” only in a “short enough” time horizon.

However, we agree with the definition of **paradigm** provided by Talpoş et al. (2005: 20) <<Through paradigm we understand the dominant collective mental model that individualizes a society from another. This paradigm represents a societal integration factor, by offering common values and goals for the members of the society. Also, this represents the subject of some learning and inter-generational transmission process, which slowly modifies itself, in “long cycles”>>.

Hence, we consider the cultural paradigm as representing “something much more” than a set of “shared values”. This way, one could remark that an interesting definition for the culture as “shared values” is given by Kroeber & Kluckhohn (1952) (cited in Adler, 1986). According to them, culture consist of patterns, explicit and implicit of and for behaviors acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered products of action, on the other conditioning elements of future action.

In consequence, culture is:

- ◆ Something that is shared by all or almost all members of some social group;
- ◆ Something that the older members of the group try to pass on to the younger members; and,
- ◆ Something (as in the case of morals, laws and customs) that shapes behavior, or structures one’s perception of the world.

Our vision is much closer to Hofstede (1991) who defines culture as “the collective programming of the mind which distinguishes the members of one group or category of people from another”. Like him, we emphasize that culture is, at least partially, learned, and not only inherited. Supplementary, it is useful to understand by **culture** a “relational product” generated in the interactions between the social entities and their micro and macro environment. Or, according to Trompenaars & Woolliams (2003: 21) “Culture is

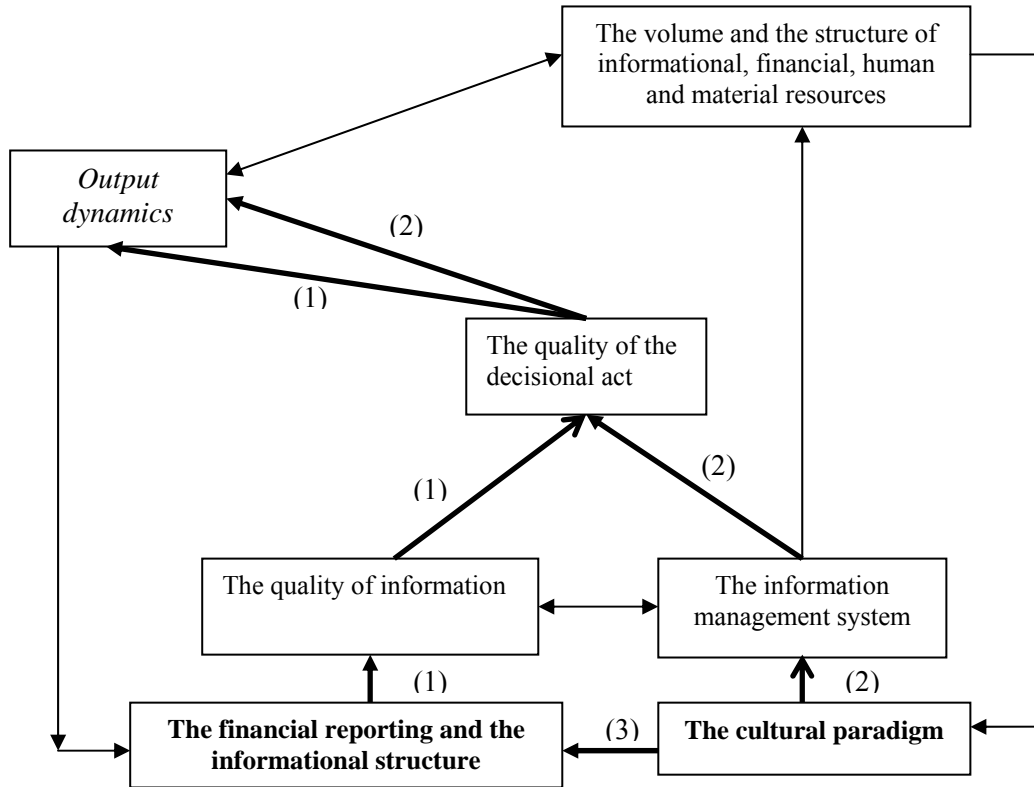
rather the contextual environment, defining much of the essence of the relationships between an organization and the environment in which it operates”.

A critical consequence of the culture consists in the fact that it modulates the way in which the decisional mechanisms work. The decisional authority is not “neutral” in respect to a certain informational set: according to its own **paradigm**, the usage of the information, the relative informational weight and the estimated importance of certain information are decided based on the cultural variables such as “time perspective”, “uncertainty avoidance”, “performance focused decisions” or “social justice in resources allocation”.

Overall, this conceptual framework could be described as in Figure 1, where are presented three main categories of functional connections:

- (1) the linkage between financial reporting (FR) and the informational structure and the output dynamic *via* the quality of the information generated by FR and implicitly by the decisional quality;
- (2) the linkage between the configuration of the cultural variables and the status of financial reporting;
- (3) the linkage between the cultural paradigm and the output dynamic *via* the configuration of the information management system and the information usage and its *subjective* importance.

**Figure 1: Information, culture and the decisional output**



With these features, a **compact model of the regulation mechanisms** could be formally described as:

$$\begin{aligned}
 r_i = & \lambda_{1_t} \left[ E_t(I^*_{i_t}) - \sum_{j=1}^{t-1} I_{i_j} \right] - \\
 & - \lambda_{2_t} (k^a_{i_t} + E_t(k_{i_t})) - \lambda_{3_t} E_t(C_t) + \lambda_{t_t} \left( \sum_{j=1}^{t-1} F_{ij} + E_t(F_t) - \sum_{i=1}^{t-1} z_{ij} - E_t(z_t) \right) + \\
 & + E_t(\varepsilon_t) \quad (1)
 \end{aligned}$$

Where  $r_i$  is a state variable which describes the regulatory conditions for a certain issue  $i$  in the current period  $t$ ,  $I^*$  is an output index describing the results in the presence of the regulations as  $I$  status for the output index in the absence of such regulations,  $k^a$  are the current adoption costs for the regulatory set as  $k$  describes the imposing/supervising/punishing costs.  $C$  is a set of cultural variables characteristics for the

**paradigm**,  $F$  is an **informational index** described to capture the amount, structure and relevance of the information from the past and current periods as well as anticipated to be obtain in the next period,  $z$  are the corresponding **informational costs** for past, current and future periods,  $\mathcal{E}$  is a “black box” which counts for the influence of other “hidden” variables and  $\lambda_1, \lambda_2, \lambda_3, \lambda_4$  are the relative sensitivity coefficients.

We assuming that  $I^*$  could be written as:

$$I^*_{i_t} = \sum_{l=0}^{\infty} \beta_I^l \left( I_{i_{t+l}} + \phi^I_{i_t} + \eta^I_{i_{t+l}} \right) \quad (2)$$

where  $\beta$  is a discount factor,  $\phi^I$  is a state effect that captures the role played by “fix” elements able to affect the regulations’ impact and  $\eta^I$  measures the “omitted” specific factors. As a further step, we suppose that the expected future output could be predicted inside a *mix* mechanism by incorporating both past and current values<sup>ii</sup>:

$$E(I_{i_{t+l}}) = c_{I_l}(L)I_{i_t} + c_{I^r}I_{i_t} \quad (3)$$

where  $L$  is the lag operator.

Similarly,

$$k_{i_t} = \sum_{l=0}^{\infty} \beta_k^l \left( k_{i_{t+l}} + \phi^k_{i_t} + \eta^k_{i_{t+l}} \right) \quad (4)$$

with  $\phi^k$  the “fix” component of maintaining the regulations and

$$E(k_{i_{t+l}}) = c_{k_l}(L)k_{i_t} + c_{k^r}k_{i_t} \quad (5)$$

also:

$$F_{i_t} = \sum_{l=0}^{\infty} \beta_F^l \left( F_{i_{t+l}} + \phi^F_{i_t} + \eta^F_{i_{t+l}} \right) \quad (6)$$

$$z_{i_t} = \sum_{l=0}^{\infty} \beta_z^l \left( z_{i_{t+l}} + \phi^z_{i_t} + \eta^z_{i_{t+l}} \right) \quad (7)$$

$$E(F_{i_{t+l}}) = c_{F_l}(L)F_{i_t} + c_{F^r}F_{i_t} \quad (8)$$

$$E(z_{i_{t+l}}) = c_{z_l}(L)z_{i_t} + c_{z^r}z_{i_t} \quad (9)$$

Since cultural variables adjust in “long cycle”, it is possible to consider under a “short enough” time period that:

$$E_t(C_{i_t}) \approx C_{i_t} \quad (10)$$

Finally, if  $\mathcal{E}$  is a random exogenous shock then

$$E_t(\mathcal{E}_t) = 0 \quad (11)$$

Relations (1) - (11) could be combined in order to obtain the result from the relation (12). Relation (12) describes a **general framework for the adoption of a regulations’ set**. A particular case is represented by the situation in which the authority that should decide on a certain topic  $i$  is not unique in a given / different social space. More exactly, if there is more than one authority to decide then the individual output *could* (if certain conditions are fulfilled)<sup>iii</sup> depend not only on the *intrinsic* connections between the regulations and their effects but also on the *extrinsic* correlations with the other authorities’ output.

$$\begin{aligned}
r_{i_t} = & \lambda_{1_t} \left[ \sum_{l=0}^{\infty} \beta_l^l (c_{l1}(L)I_{i_t} + c_l^r I_{i_t} + \phi^l_i + E_t(\eta^l_{i_{t+1}})) - \right. \\
& \left. - \sum_{j=1}^{t-1} I_{i_j} \right] - \\
& - \lambda_{2_t} \left[ k^a_{i_t} + \sum_{l=0}^{\infty} \beta_k^l (c_{kl}(L)k_{i_t} + c_k^r k_{i_t} + \phi^k_i + E_t(\eta^k_{i_{t+1}})) \right] - \\
& - \lambda_{3_t} C_t + \lambda_{4_t} \left[ \left( \sum_{j=1}^{t-1} F_{i_j} - \sum_{j=1}^{t-1} z_{i_j} \right) + \right. \\
& \left. + \sum_{l=0}^{\infty} \beta_F^l (c_{Fl}(L)F_{i_t} + c_F^r F_{i_t} + \phi^F_i + E_t(\eta^F_{i_{t+1}})) - \right. \\
& \left. - \sum_{l=0}^{\infty} \beta_z^l (c_{zl}(L)z_{i_t} + c_z^r z_{i_t} + \phi^z_i + E_t(\eta^z_{i_{t+1}})) \right] \quad (12)
\end{aligned}$$

It could be noticed that such thesis could be valid even in the situation of a weak *linkage* between the involved authorities but generally it stands in a *higher interdependence* context. If this is taken into account then the relation (12) should be rewrite as:

$$\begin{aligned}
r^{e}_{iX,Y_t} = & \lambda_{1X,Y_t} \left[ \sum_{l=0}^{\infty} \beta_l^l (c_{l1}(L)I^{e}_{iX,Y_t} + c_l^r I^{e}_{iX,Y_t} + \phi^l_i + E_t(\eta^l_{i_{t+1}})) - \right. \\
& \left. - \sum_{j=1}^{t-1} I_{i_j} \right] - \\
& - \lambda_{2_t} \left[ k^a_{i_t} + \sum_{l=0}^{\infty} \beta_k^l (c_{kl}(L)k_{i_t} + c_k^r k_{i_t} + \phi^k_i + E_t(\eta^k_{i_{t+1}})) \right] - \\
& - \lambda_{3_t} C_t + \lambda_{4_t} \left[ \left( \sum_{j=1}^{t-1} F_{i_j} - \sum_{j=1}^{t-1} z_{i_j} \right) + \right. \\
& \left. + \sum_{l=0}^{\infty} \beta_F^l (c_{Fl}(L)F_{i_t} + c_F^r F_{i_t} + \phi^F_i + E_t(\eta^F_{i_{t+1}})) - \right. \\
& \left. - \sum_{l=0}^{\infty} \beta_z^l (c_{zl}(L)z_{i_t} + c_z^r z_{i_t} + \phi^z_i + E_t(\eta^z_{i_{t+1}})) \right] \quad (12.1)
\end{aligned}$$

where the superscript *e* denotes the differential between two authorities *X,Y* output.

It could be observed that:

- The relation (12.1.) takes into account only the output differential: there is not *objective* costs' linkage between authority's regulatory measures. The main reason for such approach consists in the fact that such linkage must be explained under a supplementary set of conditions with adequate descriptions of the costs *transfer/contamination* mechanisms which are far to be trivial ones. So that, for the sake of the simplicity, this extension is ignored;
- The relation does not account for cultural differential: the *subjective* costs are supposed to not be interrelated. Since each authority operates inside its own **paradigm**, the analytical price of such simplification is apparently low. But in fact there could be some important *cultural values transfers* so that the isolation of the cultural impact on regulatory processes is susceptible to affect the description realism. The only possible counter-argument consists in the thesis of the "long-run" viability of the transfer mechanisms and complementary the postulation of their non-efficiency on a "short" time frame;

- The relation does not account for informational differential: it is supposed that there is not an information exchange between the authorities and / or an *institutional specialization* in the process of information gathering and usage. In other words, the involved authorities are seen working in an “informational autonomy”. Such an hypothesis is more than debatable and could hold only for the “pure internal” regulatory decisions;
- Finally, there is supposed no connection between the “fix” components of the outputs and costs. If such components are supposed to have especially an institutional nature, the “long-run” argument holds and such approach is consistent with the previous observations.

The relation (12.1.) permits to establish the conditions in which an authority will adopt regulatory measures on a certain topic: this will happen as long as the “net” output of such measures will be positive or:

$$\begin{aligned}
 & \left[ \sum_{l=0}^{\infty} \beta_l^I (c_{I_l}(L) I_{iX,Y_t}^e + c_I^r I_{iX,Y_t}^e + \phi^I_i + E_t(\eta^I_{i,t+1})) - \sum_{j=1}^{t-1} I_{i_j} \right] > \\
 & > \frac{\lambda_{2_t}}{\lambda_{1X,Y_t}} \left[ k^a_{it} + \sum_{l=0}^{\infty} \beta_k^l (c_{kl}(L) k_i + c_k^r k_i + \phi^k_i + E_t(\eta^k_{i,t+1})) \right] + \\
 & + \frac{\lambda_{3_t}}{\lambda_{1X,Y_t}} C_t - \frac{\lambda_{4_t}}{\lambda_{1X,Y_t}} \left[ \left( \sum_{j=1}^{t-1} F_{i_j} - \sum_{j=1}^{t-1} z_{i_j} \right) + \right. \\
 & \left. + \sum_{l=0}^{\infty} \beta_F^l (c_{F_l}(L) F_{i_t} + c_F^r F_{i_t} + \phi^F_i + E_t(\eta^F_{i,t+1})) - \sum_{l=0}^{\infty} \beta_z^l (c_{z_l}(L) z_{i_t} + c_z^r z_{i_t} + \phi^z_i + E_t(\eta^z_{i,t+1})) \right] \quad (13)
 \end{aligned}$$

According to relation (13):

**P<sub>0</sub>:** In *caeteris paribus* conditions, an authority will adopt regulatory measures if the “excess” “fix” and “variable” output of such measures as well as the influence of the “omitted” factors over the output observed in a certain past period in absence of regulations will exceed the “objectives” current and future “fix” and “variable” adopting/imposing costs weighted with their relative sensitivity.

**P<sub>1</sub>:** In *caeteris paribus* conditions, an authority will adopt regulatory measures if the “excess” “fix” and “variable” output of such measures as well as the influence of the “omitted” factors over the output observed in a certain past period in absence of regulations will exceed the “subjective” current costs reflected by the **cultural paradigm** weighted with their relative sensitivity.

**P<sub>2</sub>:** In *caeteris paribus* conditions, an authority will adopt regulatory measures if the “excess” “fix” and “variable” output of such measures as well as the influence of the “omitted” factors over the output observed in a certain past period in absence of regulations will exceed the “net” current informational costs (the “brut” informational costs corrected with the “excess” of the output generated by the amount, structure and relevance of the available information) reflected weighted with their relative sensitivity.

Also it could be noticed that **P<sub>3</sub>:** the “net” output in the presence of the regulations will depend on the regulatory conditions status, “objectives” current and future “fix” and “variable” adopting/imposing costs weighted with their relative sensitivity, “subjective” current costs and “net” current informational costs:



$$\begin{aligned}
& \left[ \sum_{l=0}^{\infty} \beta_l^l (c_{I_l}(L) I^e_{iX,Y_t} + c_l^r I^e_{iX,Y_t} + \phi^l_i + E_t(\eta^l_{i_{t+1}})) - \right. \\
& \left. - \sum_{j=1}^{t-1} I_{ij} \right] = \\
& = \frac{1}{\lambda_{1X,Y_t}} r^e_{iX,Y_t} + \frac{\lambda_{2_t}}{\lambda_{1X,Y_t}} \left[ k^a_{i_t} + \sum_{l=0}^{\infty} \beta_k^l (c_{k_l}(L) k_{i_t} + c_k^r k_{i_t} + \phi^k_i + E_t(\eta^k_{i_{t+1}})) \right] + \\
& + \frac{\lambda_{3_t}}{\lambda_{1X,Y_t}} C_t - \frac{\lambda_{4_t}}{\lambda_{1X,Y_t}} \left[ \left( \sum_{j=1}^{t-1} F_{ij} - \sum_{j=1}^{t-1} z_{ij} \right) + \right. \\
& \left. - \sum_{l=0}^{\infty} \beta_F^l (c_{F_l}(L) F_{i_t} + c_F^r F_{i_t} + \phi^F_i + E_t(\eta^F_{i_{t+1}})) - \right. \\
& \left. - \sum_{l=0}^{\infty} \beta_z^l (c_{z_l}(L) z_{i_t} + c_z^r z_{i_t} + \phi^z_i + E_t(\eta^z_{i_{t+1}})) \right] \quad (14)
\end{aligned}$$

## 1.2. The particularities of IFRS implementation

There is no doubt that exist a direct connection between international accounting harmonization and globalization. The first concept could be perceived as an internationalization of accounting by promoting accounting standards in which the global interest prevails in front of the national one (Volker, 2000; Cooke, 2001). The evolutions of a more and more real and nominal integrated global economy, the changes in the architecture of the international financial system, the predominance of the multinational firms, the consequences of technological and informational transfers, all these requires an increased harmonization of the accounting practices. Thus, **IFRSs** arise as a product of the globalization forces, becoming the best choice for many national authorities in ensuring transparency and comparability of the financial information. The main reason for this consists in the fact that a “symbolic economy” implies uniform mechanisms for efficiency estimation since the economic subjects are in a certain sense “detached” from the objects of their decisions. Or, in other words, “abstract” economic relationships are based on uniform, regular and non-specific mechanisms to obtain the relevant information for the “benefits / losses” analysis.

In order to fulfill this task, there became obvious that a choice must be made between **US GAAPs** and, respectively, **IAS/IFRSs**. But, in the last decade, **IFRSs** gained a widely acceptance so that almost 110 countries around the world have adopted them in the issued form or with different modifications / limitations. In this context, FASB and IASB are determined to find a mutual compromise of adopting compatible and high quality solutions for present and future accounting issues. For this purpose, two memorandums of understanding were signed during the years (2002 – *Norwalk Agreement*; 2006). Still, the convergence process is far to be completely and there is not a clear short run perspective for a single international set of standards compatible with both sets of standards.

For the proposed analysis, the critical point consists in the identification of **IFRSs’** main characteristics, which will allow the *application of the general decisional model advanced in the previous subsection*. A brief analysis of the standards highlights that **IFRSs** are:

- A formal set of regulations with a clearly structural internal organization of the information and a uniform prescription of the accounting treatments to be applied;
- A “multi-authority” decisional result since a large number of bodies is involved (**IASC Foundation** that names the members of the Board and **IFRIC**, **IASB** which issues the standards, **IFRIC** responsible with the issuance of standards’ interpretations, **SAC** which provides advisory support – all these being separate but interlinked structures; the European Commission with its entire network of bodies with analysis and advisory duties – **EFRAG**, **TEG**, **SARG**, **ARC**, **Contact Committee**, roundtable; the national regulators and so on);

- A product of a specific cultural and business environment - the Anglo-Saxon one - destined to be assimilated in various other environments characterized by different **cultural paradigms**.

Also:

- The **IFRSs** appliance is susceptible to generate both *objective / subjective outputs* (in terms of an increased informational efficiency of financial statements, a more comprehensive decisional sources and a coherent support for the international placements of financial resources) and *costs* (material, human capital and institutional ones). However, the “costs / benefits” matrix should be carefully judge: the advantages of the increase reliability of international financial information, the better adequacy of the codified standards in the accounting and auditing fields, the contribution to the raise of direct / capital foreign flows of investments, the improvements of the fiscal systems in terms of social resources (re)distribution processes and the increase of international financial markets liquidity are balanced by the important differences between the national accounting practice which requires significant resources to fill the gaps, the lack of specialized professional accountancy bodies for some countries and the importance of socio-economic architecture particularities for different countries;
- As is defined in Art. 1 of the Regulation No.1606/2002/EC, the **IFRSs**’ purpose is “harmonizing the financial information presented by the companies... in order to ensure a high degree of transparency and comparability of financial statements and hence an efficient functioning of the Community capital market and of the Internal Market”. So that, it could be considered that this regulation concerns the informational quality of the financial statements and its appliance is able to generate an “output differential” both at a micro as well at a macro level;
- The **IFRSs** appliance is a “work in progress” under a significant time horizon so that there are some limitations of the “short-run” argument.

If these postulates stand, then it could be concluded that the general decisional framework is also applicable for the **IFRSs**. However, it should be noted that in the particular case of the European Union a discriminate analysis is applicable only for domestic unlisted companies since all the listed companies are required to use the **IFRSs**.

## 2. AN EMPIRICAL ANALYSIS: THE EUROPEAN UNION’S CASE

The  $P_1$ ,  $P_3$  propositions could be empirically tested in order to provide some support for the existence of some connections between the characteristics of the **cultural paradigm** and the implementation of the **IFRSs** in the European Union. The purpose of this section is to advance a brief description of an adequate testing strategy.

Minimally, such a strategy implies the next stages:

1. The construction of a fuzzy *score* variable able to capture the “permitted / required” adoption of the domestic unlisted companies **IFRSs**. A possible codification system for the construction of this variable is presented in Table 1. This variable takes values in a scale between “0” (meaning that the usage of **IFRSs** is prohibited both for individual and consolidated financial statements) and “2” (which reflects the situation of **IFRSs** requirement). The main statistical characteristics of the *pool* data constructed base on the individual values for the EU countries are displayed in Table 4. It could be observed that data tends to be concentrated in two main subgroups - first with value “1” which counts for 37.5% of the cases and second with value “1.5” representing 45.9% of the cases. This two groups reflects the corresponding combinations of “permitted / prohibited” and respectively “permitted / permitted” for the **IFRSs** adoption status. There are also two “extreme” values of “0” (prohibited / prohibited) for the cases of Latvia and Lithuania as well as two “extreme” values of “2” (required / required) for Malta and Slovakia. These “extreme” values count for 16.6% of the cases.
2. The selection of the relevant components of the **paradigm**. It could be noticed that in the literature the variables are usually deduced from Hofstede (1980) in order to explain the cultural differences between the countries from the data analysis set (eventually by taking into account some limitation in their sphere and content). But one of the most sensitive characteristics in the present analysis of these variables consists in the fact that they are too general to address the particular issue of **IFRSs**. An alternative approach consists in taking into account some of the variables defined by the questions included in *World Values Surveys*. As Inglehart (2008) notes: “The World Values Surveys were designed to provide a comprehensive measurement of all major areas of human concern, from religion to politics to economic and social life and two dimensions dominate the picture: (1)

Traditional / Secular-rational and (2) Survival / Self-expression values. .. The Traditional/ Secular-rational values dimension reflects the contrast between societies in which religion is very important and those in which it is not. The second major dimension of cross-cultural variation is linked with the transition from industrial society to post-industrial societies-which brings a polarization between Survival and Self-expression values”. The selected questions are described in Table 2. These questions are linked with *work valorization and ethic, freedom of decisions at “macro” and “micro” level, the “moral entitlement” of social (re)distributions processes* and an *social auto-referential about the norms and rules obedience*. The involved values are extracted from 1999/2000 waves of survey<sup>iv</sup>.

3. The test of the connections between the *score* variable and the answers to the mentioned questions as a *proxy* for some empirical support of  $P_1$ .
4. The test between the dynamics of the output and the configuration of the *score* variable (between the regulations status and its results). The output is considered at a macro level as the average of the real GDP growth rate for 2001-2006. Such choice is designed to provide a more smooth *proxy* for the output by “cutting off” possible “jumps” in output caused by exogenous factors.

The “stem-and-leaf” plots (not presented in the paper due to size limitations) indicate that in general terms the median values of *score* variable are associated with median values of the considered cultural variables and correlatively its “extreme” values appears in the presence of particularly high / low values for those.

The *pool* data regressions reported in Table 5 suggest that:

- All the cultural variables are positive and statistical significant associated with the *score* variable;
- The strongest explanatory cultural variables are in terms of the **t-test** the questions concerning the support for *following the regulation* and the non-justifiable character of obtaining “*un-entitled*” *benefits from public resources* and to commit “*illegal*” *tax evasion*. In other words,  $C_0$  : *If a society has a strong “legalist” architecture of the paradigm (a strong tendency to formalize the rules of the “social game”) it will tend to require the adoption of the IFRSs for the domestic unlisted companies both at the level of individual as well as at the consolidate financial statements.*
- At a second level, a large capacity to explain the structure of the *score* variable is associated with the *social importance of work*. So that,  $C_1$  : *If a society has a strong “work ethic” it will tend to require the adoption of the IFRSs.*
- Three variables with a similar nature, *a low level of freedom of choice and control of social subjects actions* and, respectively, *a low level of individual initiative both at the general social level as well as inside the work processes* explain the adoption of regulations in this matter.  $C_2$  : *If a society has a more “rigid” system of hierarchical social structures” it will tend to require the adoption of the IFRSs.*
- Correlatively, the variables linked with the perception of the social behavior in terms of “*un-entitled*” *benefits from public resources* and “*illegal*” *tax evasion* has the weakest explanatory capacity. Or,  $C_3$ : *The auto-referential perception of a society about the capacity of its own members to respect the regulations influence less the process of the IFRSs adoption.*

In addition, in accordance with results reported in Table 6:

- The status of **IFRSs** adoption is positive and strongly statistical significant associated with the economic evolution;
- Cultural variables are positive and statistical significant associated with GDP dynamics. The highest explanatory capacity is associated with a larger importance of *freedom of choice and control of social subjects’ actions*: the societies focused more on individual autonomy and on individual initiative benefit from a stronger economic development. Or, in other words,  $C_4$ : *The social output will be higher in the societies with a more “flexible” system of hierarchical social structures;*
- Interesting enough, the *work over valorization and the strong legalist structure* seems to constitute a second group of explanatory factors for the economic growth. So that,  $C_5$  : *If a society has a strong “legalist” architecture of the paradigm and also a strong “work ethic” it will benefit from a more suitable evolution of social output ;*
- As in the case of **IFRSs**, the lowest explanatory importance is connected to the perception regarding the “right” behavior in terms of “*un-entitled*” *benefits from public resources* and “*illegal*” *tax evasion*.

As a consequence,  $C_6$ : *The auto-referential perception of a society about the capacity of its own members to respect the regulations influence less the economic dynamics.*

The  $C_0 - C_3$  findings could be grouped in a single one as follows:  $C$ : *As a society is placed in the area of the “semi-open” of the societal spectrum (as it have a preference for clearly and extended formal formulation of the social rules, with a strong work ethic and with more rigid hierarchical social structures and with a higher preference for the “moral” distribution/redistribution of the social resources processes) it will tend more to **require** the adoption of **IFRSs** for the domestic unlisted companies.* Furthermore, the  $C_4 - C_6$  findings could be grouped as:  $O$ : *As a society is placed in the area of the “open societies” (as it have a preference for clearly and extended formal formulation of the social rules, with a strong work ethic but with less rigid hierarchical social structures and with a higher preference for the “moral” distribution / redistribution of the social resources processes) it will benefit from a better evolution of the social output.*

It could be noticed that these findings could be interlinked. For instance, taking into account their different combinations, **it could be predicted** that the influence of the **IFRSs** adoption status on the social dynamic output will be:

	$C_0$	$C_1$	$C_2$	$C_3$
$C_4$	Undecided	Undecided	Low	Undecided
$C_5$	Higher	Higher	Undecided	Undecided
$C_6$	Undecided	Undecided	Undecided	Low

### 3. CONCLUSIONS

The results presented in the previous section are quite puzzling. On one hand, the image drawn by the cultural variables is *consistent*: at a “median” level the cultural variables and the characteristics of the regulatory set for the **IFRSs** adoption are significant linked. On the other hand, there are no mechanisms to discriminate between the autonomous national decisions and the influence of the extra-national involved bodies. Also, the most “liberal” societies, in terms of individual autonomy but with a stronger focus on respecting the “rules of the social game”, tend to benefit more from the economic dynamics. More generally, the proposed analysis is affected by some important limitations both at the theoretical as well as at the empirical level. Among these limitations, one could note:

#### 3.1. Theoretical “white spots”

##### 1) Culture and individual utility function: what is the connection?

The core argument of this paper is that the social subjects are not “perfectly rational” so that they adopt their decisions (including the decision to regulate on a certain topic) also under the influence of a certain set of psychological factors. The aggregate reflection of such factors is “culture” so that the set of social norms, rules and regulations will be affected by it. But such approach is more an *ex post* one since it implies two rounds of aggregation: one for individual migration decisions and one for the subjective variables. Even more no description of such aggregation mechanism is provided and is not clearly why a “synthetic” macro-view is possible.

##### 2) How could be “culture” measured?

The appeal to the Hofstede’s cultural variables could be criticized due to the fact that these have obviously a certain self-referential in the “occidental” culture and are not able to sustain a more accurate distinction between the characteristics of the cultural artifacts. But isn’t the same situation for the **World Values Surveys** variables? In our opinion, the fact that the questions are based on a “valorization approach” for some universal human values, addresses at least partially this issue.

##### 3) Where are the inter-generational mechanisms?

If “we emphasize that culture is, at least partially, learned, and not only inherited” than, at least on “long run” the relation (8.1.) does not stands anymore and the general decisional model should provide a description of the adaptation mechanism at the level of the cultural variables.

##### 4) What kind of informational mechanisms?

The paper status that the considered anticipation mechanism is derived from a bounded rationality model without clearly explaining the nature of such model.

5) Different types of authorities: what is the difference between them?

In the paper is stated that the decisional model is valid for the decisions adopted by *formal public, semi-public or private authorities*. But it is very difficult to sustain the postulate of institutional aspects neutrality: the meta-framework of the *social mandate* implies the fact that different authorities have different specific mandate and so that different “utility function” at the base of their decisions.

6) No connections between outputs and costs for different authorities: at what analytical price?

For the sake of simplicity, there are not objective/subjective outputs and costs linkages between authority’s regulatory measures. It is not clearly in the advanced analysis how such a hypothesis affects the realism of the decisional models. This issue is particularly important since the IFRSs adoption process is a “multi-authority” one.

7) What is specific for the national differences in the IFRSs adoption?

There are quite few details about the intrinsic mechanisms of adopting / supervising / punishing the non-follows of the regulations for **IFRSs** and is not very clearly if in fact all the required conditions implied by the global decisional framework are fulfilled in this particular case and even more there is not enough highlighted the decisional particularities.

8) How are really influencing the cultural variables the dynamics of the social output?

This paper claims that the cultural variables are influencing the output dynamics. But it could be easily observed the not enough developed analysis of the linkage between the cultural variables and the social transfers as a key factor of economic growth, the absence of any description of the possible “transmission” mechanism of the “institutional” and “behavioral” impact on the sustainable development as well as the absence of any EU case study particularity description as well as many others “blank” aspects.

9) What means the “informational quality”?

In the theoretical framework, the concept of “informational quality” is widely used in order to explain the impact of the regulatory status of financial information on the economic dynamics. But there is nowhere a clear definition on this concept which appears to be a “blank box”.

10) What are in fact the connections between different findings?

The “predictions” from the previous section about the **IFRSs** impact on social output are based on different possible combinations between the  $C_0 - C_6$  findings. But in fact no detailed mechanisms of the interactions mechanism inside of each combination are yet provided.

### 3.2. Empirical estimation problems

Not only the theoretical but also the empirical part of the paper is affected by imperfect clarifications. Some of them are connected with:

- The stability of the regression models and the quality of the results (for instance, in terms of properties of the residuals variables);
- The identification problems for the involved parameters;
- The possible existence of non-linear interactions between the variables and the effects of such interactions;
- The insufficient number of observation and the absence of an explanation for the composition of the samples;
- The fact that the *pool* data are not constructed based on individual time-series so that there is no possibility for cross-section analysis, etc.

**Therefore**, despite all these caveats, we argue that the paper could be seen as a small breakdown into a usual yet manner to deal with the decisional problems in general and with the **IFRSs** topic in particular like they are isolated for their “subjective” aspects. The human specie is not motivated in its fight for control over the natural and artificial environment only by “rational” motifs. Instead, the emotions could balance the logic and fear, solidarity, empathy and hope twins could shape the way in which people are doing business and are living together in the same social realm.

## ANNEX

**Table 1. The codification system for the domestic unlisted companies- the use of IFRSs** (Consolidated financial statements - CFS; Individual financial statements - IFS)

CFS	IFS	SCORE
required	required	<b>2,00</b>
required	permitted	<b>1,75</b>
permitted	required	<b>1,75</b>
permitted	permitted	<b>1,50</b>
permitted	prohibited	<b>1,00</b>
prohibited	permitted	<b>1,00</b>
prohibited	prohibited	<b>0,00</b>

(Source: inspired by Use of IFRS by Jurisdiction updated at 11.01. 2008, www.iasplus.com; accessed January 14, 2008)

**Table 2. The World Values Survey questions**

Code of Question	Formulation	Data represents
A005	Please say, for each of the following, how important it is in your life- <i>Work</i>	Very important
A173	Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "none at all" and 10 means "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns out.	None at all
C016	Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job?- <i>An opportunity to use initiative</i>	Not mentioned
C034	How free are you to make decisions in your job?	None at all
C061	People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instructions only when one is convinced that they are right. With which of these two opinions do you agree?	Follow instructions
F114	Tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. <i>Claiming government benefits to which you are not entitled</i>	Never justifiable
F116	Tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. <i>Cheating on taxes if you have a chance</i>	Never justifiable
F145	According to you, how many of your compatriots do the following?- <i>Claiming state benefits to which they are</i>	Almost all
F146	According to you, how many of your compatriots do the following?- <i>Cheating on tax if they have the chance</i>	Almost all

(Source: <http://www.worldvaluessurvey.org/>; 2008)

**Table 3: The countries cross section identifiers set**

Austria	Denmark	Germany	Italy	Netherlands	Slovakia
Belgium	Estonia	Greece	Latvia	Poland	Spain
Bulgaria	Finland	Hungary	Lithuania	Portugal	Sweden
Czech Republic	France	Ireland	Malta	Romania	United Kingdom

**Table 4: The general characteristics of the pool data for the score variable**  
(Minimum – Min.; Maximum – Max.; Statistic – Sta.)

Descriptive Statistics												
Score	N	Range	Min.	Max.	Mean		Std.	Variance	Skewness		Kurtosis	
	Sta.	Sta.	Sta.	Sta.	Sta.	Std. error	Sta.	Sta.	Sta.	Std. error	Sta.	Std. error
	24	2.00	.00	2.00	1.2292	.09972	.48855	.239	-1.093	.472	1.873	.918

One-Sample Test						
	Test Value = 0					
	t	Degree of freedom	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
<b>Score</b>	12.326	23	.000	1.22917	1.0229	1.4355

**Table 5: Pooled One-Stage estimations for score variable**

<i>Dependent Variable: Score variable</i>	<i>Cross-sections included: 24</i>
<i>Method: Pooled Least Squares</i>	<i>Total pool (balanced) observations: 24</i>
<i>Included observations: 1</i>	<i>White diagonal standard errors &amp; covariance (degree of freedom, corrected)</i>

Variable	Coefficient	Std. Error	t-Statistic	Prob.
A005	0.020220	0.001988	10.17280	0.0000
A173	0.284716	0.056652	5.025712	0.0000
C016	0.020879	0.003045	6.855877	0.0000
C034	0.080380	0.037177	2.162077	0.0413
C061	0.037014	0.002730	13.55577	0.0000
F114	0.019632	0.001458	13.46530	0.0000
F116	0.022028	0.001598	13.78075	0.0000
F145	0.040559	0.017313	2.342729	0.0282
F146	0.044607	0.016425	2.715853	0.0123

**Table 6: Pooled One-Stage estimations for output**

<i>Dependent Variable: 2001-2006 average real GDP growth</i>	<i>Cross-sections included: 24</i>
<i>Method: Pooled Least Squares</i>	<i>Total pool (balanced) observations: 24</i>
<i>Included observations: 1</i>	<i>White diagonal standard errors &amp; covariance (degree of freedom, corrected)</i>

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>Score variable</i>	2.205980	0.378649	5.825917	0.0000
A005	0.058733	0.009263	6.340836	0.0000
A173	1.158734	0.159079	7.284036	0.0000
C016	0.068561	0.008966	7.646994	0.0000
C034	0.404220	0.064473	6.269601	0.0000
C061	0.097876	0.015178	6.448497	0.0000
F114	0.052601	0.009193	5.722116	0.0000
F116	0.059662	0.009769	6.107195	0.0000
F145	0.110572	0.046106	2.398236	0.0250
F146	0.121409	0.044721	2.714811	0.0124

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<sup>i</sup> Universal Declaration on Cultural Diversity.

<sup>ii</sup> The adopted framework for the expectations derived from a *bounded rationality* approach in which the information is imperfect but is "completely" used by the social subjects.

<sup>iii</sup> The description of the nature and the impact of such conditions exceed the analytical framework of the present paper.