

EUROPEAN HARMONIZATION OF CONSOLIDATED FINANCIAL STATEMENTS REGULATIONS?

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The purpose of this paper is to analyze the degree of formal accounting harmonization within the European Union with respect to the EC Regulation No. 1606/2002 adopted by the European Parliament and European Council on the 19th of July 2002, which regulates the application of IAS/IFRS regarding the financial reporting of listed European companies. The conclusions of the paper were drawn after the completion of a thorough analysis performed by using correlation and/ or association coefficients, namely: the Jaccard's Correlation Coefficients, Rogers and Tanimoto Coefficient, Lance and Williams Coefficient and Binary Euclidian Distance Coefficient. The results lead us to conclude that although our first hypothesis is verified, the degree of harmonization between the accounting systems of EU Member States could be truly quantified only through an analysis of the material accounting harmonization, more precisely by analyzing the way the companies put into practice the requirements imposed through the EC Regulation No. 1606/2002.

KEYWORDS: formal accounting harmonization, consolidated financial statements, regulatory framework

JEL: M40, M41, M48

I. Introduction

Nowadays, more than ever, the effort to improve the international accounting system through a set of globally accepted and implemented financial reporting standards is considered a topic issue. The main reason for this is the extensively discussed possibility by the international forums according to which the international accounting system and the extant accounting regulations represent one of the factors, if not the most important factor that instigated, or at least led to the exacerbation of the economic and financial crisis in 2007. (Ojo 2010: 606-607)

This paper approaches the international accounting system domain by proposing a special focus on the formal accounting harmonization process regarding the consolidated financial reporting standards. The central theme of the paper is developed in a structure consisting of three parts. The first part includes a brief overview of the extensive literature on formal accounting harmonization process in order to develop a perspective on the current state of knowledge of the topic addressed, but also for a better understanding of key concepts that are operating in this field of study. The key concepts are also summarized in the first part of this work. Our study is completed with an empirical analysis over the degree of comparability between the accounting system of Romania with respect to consolidated financial reporting standards, on the one hand, and the accounting system of each member state of the European Union, all in the light of the EC Regulation No. 1606/2002 adopted by the European Parliament and the EU Council on July 19, 2002. The comparability analysis was performed by measuring the degree of formal accounting harmonization with respect to consolidated financial reporting standards, from two major points of view. First, the similitude, or the degree of similarity extant between the accounting systems was analyzed. Afterwards, the focus was shifted on the analysis of the dissimilitude, or the degree

of dissimilarity between the accounting systems, taking into account the EC Regulation No. 1606/2002. Following the empirical analysis we were able to draw certain conclusions presented in the last section of this paper.

II. Literature review

The existing body of research papers on formal (*de jure*) accounting harmonization process includes studies that address this issue through a theoretical viewpoint, by analyzing the accounting systems and/ or the accounting regulations, or the extant studies published on the subject (Standish 2003: 1-25; Larson and Street 2004: 89-119; Yüksel et al. 2008: 279-294; Wüstemann and Wüstemann 2010: 1-27; Feleagă et al. 2009: 1-12). Other studies approach the subject of formal accounting harmonization by analyzing the factors that have contributed the most to this process by influencing it's development (Judge et al. 2011: 161-174). The subject of formal accounting harmonization process has also been developed through research papers in which the analysis is based on the actual measurement of formal accounting harmonization. This body of research literature can be distinguished taking into account the research methods used in the analysis. Thus, based on these criteria the studies extant on this subject can be organized into two categories, the first of which includes papers presenting research methods grounded on descriptive statistics, in which the analysis involves determining the number, or percentage of the sample analyzed according to certain selection criteria considered. The second category includes studies containing analysis that was developed on the basis of correlation and/or association coefficients, or analysis developed by using other mathematical methods. In this category we find research studies using methods based on the concept of distance, namely: Mahalanobis Distance Method (used for the first time in the study of Rahman et al. 1996: 316-333); Euclidean Distances (Garrido et al. 2002: 1-26; Fontes et al. 2005: 415-436); or fuzzy clustering analysis (Qu and Zhang 2010: 334-355); studies using correlation coefficients, respectively: Spearman Rank Correlation Coefficient (Fontes et al., 2005: 415-436) and Pearson Correlation Coefficient (Ding et al. 2007: 1-38), but also studies in which we can find the association coefficients: Jaccard's Coefficients (Fontes et al. 2005: 415-436).

Conceptual framework

After consulting the research literature, we appreciate that the concept of *accounting harmonization* designates the decrease in the degree of international accounting diversity and the growth of accounting uniformity (Tay and Parker 1990: 73; Mustață 2008: 60-93). The concept of accounting harmonization also refers to the degree of compatibility and/ or comparability between a national and an international accounting referential, in the same time implying the orientation of the national accounting referential towards the international financial reporting framework by assuming greater efforts to reduce disparities (Mustață 2008: 60-93).

The concept of accounting harmonization was developed in the research literature by Tay and Parker 1990: 73. Thus, two other new concepts were created, respectively: *formal (de jure) accounting harmonization* and *material (de facto) accounting harmonization*. The clear distinction made by the two authors mentioned above between formal (*de jure*) accounting harmonization and material (*de facto*) accounting harmonization can be found in other research papers too (Van der Tas 1992: 470; Parker 1996: 317; Canibano and Mora 2000: 351-353). According to the literature references mentioned above, the concept of *formal accounting harmonization* refers to the degree of comparability between regulations and accounting standards, whereas *material accounting harmonization* takes the meaning of the degree to which accounting rules and methods provided in the regulations and/ or standards are observed and enforced by companies in their financial reporting practices. In general, in the research literature the material accounting harmonization is seen as a process that occurs as a consequence of formal

accounting harmonization. This fact can be considered a proof that in an accounting system the rules and standards are the first to be harmonized, followed by the accounting practice.

III. Research methodology

The central theme of this article is restricted in our study to the existing de jure accounting harmonization within the European Union regarding the EC Regulation No. 1606/2002 adopted by the European Parliament and the European Council on the 19th of July 2002. This regulation deals with the application of IAS/IFRS in the consolidated financial statements of European companies that are listed on the stock market.

This paper is an empirical research that addresses from a comparative perspective the degree of de jure accounting harmonization between Romania and other EU Member Countries, taking into account how the EC Regulation No. 1606/2002 was adopted in their legislation. The research methodology of this paper includes both qualitative and quantitative research methods, which are based on computing the degree of similarity and dissimilarity between Romania and other EU Member Countries using correlation and/or association coefficients. Among the research methods used both at theoretical and empirical perspective level we can distinguish the analysis of documents, the comparative method, the interpretative method and last but not least the mathematical and statistical research methods, whose instruments, the correlation and/or association coefficients, will be described in detail in the case study.

IV. Case study: Quantifying the degree of formal accounting harmonization at a European level

The case study is based on an empirical analysis of the degree of comparability, or more precisely of the degree of formal (de jure) accounting harmonization, that exists between the accounting system of Romania and the accounting system of each EU Member Country. In other words, the empirical analysis regards the way in which the above mentioned accounting systems adopted the EC Regulation No. 1606/2002. This regulation deals with the compulsory application of IAS/IFRS in consolidated financial statements of European companies listed on the stock market, starting no later than 2005. The analysis of the level of comparability was made from two main viewpoints, the first referring to the similarity that exists between the analyzed accounting systems and the second referring to the dissimilarity between the analyzed accounting systems related to the adoption of EC Regulation No. 1606/2002. (Deloitte 2010; IAS Plus 2010)

The starting point of the empirical analysis consisted in establishing two hypotheses which were tested by applying correlation and/or association coefficients.

Hypothesis 1: The first hypothesis refers to the degree of similarity supposed to be higher among the Romanian accounting system and the accounting systems of the countries which are traditionally representatives of the continental accounting system: France, Germany, Austria, Belgium, Italy, Spain, Portugal and Sweden. Also, the degree of similarity is assumed to be lower between the Romanian accounting system and the Anglo-Saxon accounting systems belonging to Great Britain, Ireland and Holland. This hypothesis was established taking into consideration the fact that during 1994-1999, Romania adopted a dualist accounting model inspired by the French continental accounting system. (Matiş and Pop 2007: 20-40).

Hypothesis 2: The second hypothesis makes reference to the degree of similarity supposed to be very high among the Romanian accounting system and the accounting systems of the Central and Eastern European countries that adhered to EU in 2004: Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia, Hungary and in 2007, respectively: Bulgaria. This hypothesis is based on the economical characteristics of these countries, considered to be very similar, (all the countries are rated as being developing economies, all these countries adopted a series of reforms aimed at improving the economic growth and development), characteristics that are also reflected in their accounting systems. (EU 2012)

In order to quantify the level of similarity and dissimilarity between the Romanian accounting system and the accounting systems of the other EU Member States regarding the adoption of EC Regulation No. 1606/2002, a series of items was identified: 1. The adoption of IAS/IFRS; 2. The permission/compulsoriness of using IAS/IFRS for individual financial statements of companies listed in 2010; 3. The permission/compulsoriness of using IAS/IFRS for consolidated financial statements of companies not listed in 2010; 4. The permission/compulsoriness of using IAS/IFRS for individual financial statements of companies not listed in 2010. For each element identified in these items, by using the comparative method, an analysis of the fulfillment of the condition of existence of each element in the accounting systems taken into consideration was done in order to allocate the value 1 or 0.

The empirical analysis was developed and finalized by using a series of correlation and/ or association coefficients. Among these coefficients the most known and used (Fontes et al. 2005: 415-436; Strouhal et al. 2008: 101-122) are Jaccard's Association Coefficients. This type of correlation/ association coefficients have the advantage of making possible the quantification of both the degree of similarity and dissimilarity between two accounting systems that are analyzed from a formal (de jure) harmonization point of view. The results obtained through the analysis based on the Jaccard's Association Coefficients were corroborated with the results obtained by applying over the same data other correlation and/ or association coefficients, respectively: Rogers and Tanimoto Coefficient (in the case of the results regarding the degree of similarity); Lance and Williams Coefficient and Binary Euclidian Distance Coefficient (in the case of the results obtained regarding the degree of dissimilarity).

V. Conclusions

As mentioned previously, this study establishes two hypotheses, which will be discussed through empirical results, while addressing the two quantified issues: the degree of similarity and the degree of dissimilarity.

Regarding the first hypothesis, it is noted that Jaccard's Similarity Coefficient values calculated between the Romanian accounting system and the accounting systems of the countries that are classified as having a continental (European) accounting system, namely: Austria, Germany, France, Belgium Spain, Portugal, Italy, Sweden is high, recording the following values: 0.824, 0.824, 0.822, 0.833, 0.822, 0.882, 0.700, 0.619 and 0.882 respectively. We can notice that the highest values are found in the case of Spain and Sweden, and the lowest values are found in the case of Portugal and Italy. The values computed with the use of Rogers and Tanimoto Coefficient verify the results obtained through Jaccard's Similarity Coefficient. Unlike these values, the results obtained by comparing the Romanian accounting system and the accounting systems of the states classified as Anglo-Saxon (Holland, Ireland and UK) are generally lower for both coefficients used to check the similarity. Therefore, for Jaccard's Similarity Coefficient these values are: 0,684; 0,667; 0,632. However, we can see that the values exceed the results obtained through Jaccard's and Lance-Williams Dissimilarity Coefficients. As the results obtained so far cannot be considered conclusive enough, we will analyze and interpret the values of Binary Euclidian Distance Coefficient, which in the case of the comparison between the Romanian accounting system and the accounting systems classified as Anglo-Saxon are higher (2.449; 2.449; 2.646) than the values obtained in the majority of the cases of countries with continental accounting system. The exceptions are represented by Italy and Portugal, in which case the registered values are 2.828 and 2.449.

With the exception of these two cases, we can conclude that hypothesis 1 is verified, the degree of similarity is higher between the Romanian accounting system and the accounting systems of the countries that are by tradition representatives of the continental accounting system: France, Germany, Austria, Belgium, Italy, Spain, Portugal and Sweden. In the same time, the degree of

similarity extant between the Romanian accounting system and the Anglo-Saxon accounting systems belonging to Great Britain, Ireland and Holland is lower.

In the case of hypothesis 2, we notice the fact that the Jaccard's Similarity Coefficient values computed between the Romanian accounting system and the accounting systems of Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia, Hungary and Bulgaria are the following: 0.722; 0.550; 0.579; 0.550; 0.579; 0.478; 0.550; 0.882; 0.550. We can notice that generally the values are quite low, being almost equal to those obtained through Jaccard's Dissimilarity Coefficient. The highest values are registered in the case of Czech Republic and Hungary, and the lowest values are registered in the case of Slovakia and Estonia, Lithuania, Slovenia and Bulgaria (representing the same value). The values computed through Rogers and Tanimoto Coefficient verify the results obtained through Jaccard's Similarity Coefficient. Unlike these values, the results obtained after comparing the Romanian accounting system and the above mentioned accounting systems through Lance-Williams Dissimilarity Coefficient are quite low. So, we consider that a valid conclusion can be drawn only after analyzing and interpreting the Binary Euclidian Distance Coefficient. The conclusion drawn after checking the values obtained through the Binary Euclidian Distance Coefficient (2.236; 3; 2.828; 3; 2.828; 3.464; 3; 1.414; 3) is obviously that the hypothesis 2 is not verified, the degree of similarity is not very high between the Romanian accounting system and the accounting systems of the Central and Eastern European countries that adhered to EU in 2004: Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia, Hungary and in 2007 respectively: Bulgaria.

The general conclusion drawn following our empirical study is that despite the results obtained after analyzing the degree of formal accounting harmonization existing between Romania and the other countries, some relevant results regarding the degree of harmonization between these accounting systems could be obtained only through an analysis of the material accounting harmonization, more precisely by analyzing the way the companies are applying into their financial disclosures the requirements imposed through EC Regulation No. 1606/2002.

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