

DIVERSITY OF NATIONAL AND INTERNATIONAL ACCOUNTING PRACTICES: THE CASE OF INTANGIBLE ASSETS

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Although seven years have passed since the Norwalk Agreement has been signed, the global accounting standards continue to represent a goal for IASB and FASB, being far from the stage of practical implementation. More than that, the financial crisis made things worse, as it contributes to the unfavourable conditions for the development of convergence process. But despite all these negative elements, FASB and IASB continue to collaborate in obtaining a single set from the two distinct accounting regulations, which can serve for practical accounting purposes. The globalization phenomena imply the existence of a unique set of financial reporting standards. Thus, accounting diversity is to be reduced at international level, so that it would be in accordance with companies' interests. Therefore, one can state the importance of harmonizing both national and international accounting regulations.

Keywords: comparability, harmonization, similarity, diversity

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1. Introduction

The term of intangible assets may have different meanings, depending on the nature of accounting reference. If we consider the international standards (IAS 38), there are three conditions or criteria for intangibility: identification, non-monetary and non-physical substance forms. The Romanian accounting regulation (OMFP 3055/2009) extends this definition, by mentioning that intangible assets are to be used in the production process or goods and services supply, as well as for rent to third parties or for administrative purposes. Beside this difference, there are many others, including elements of recognition, valuation and depreciation. The aim of this paper is to identify and thus present the concept of intangibles through both national and international perspectives. In what concerns the practical approach, we study the similarity and differentiation with respect to IAS/IFRS and OMFP 3055/2009. In addition, we have chosen a sample of 50 companies listed at London Stock Exchange for which we measured the harmonization degree using Pearson Coefficient, as H Index and Taplin's Index or E(H).

2. Methodology of Research

When determining the harmonization degree, we use measurement systems for both formal and material levels. In what concerns formal harmonization, it can be established by computing Jaccard Coefficients that stand for the correlation and association between national and international accounting regulations. The other main part of the research consists of material harmonization. This results in using the option concentration analysis, and this means including H Index and E(H), in order to obtain a synthesis of the harmonization degree at practical accounting level. According to national and international accounting standards, intangible assets contain some peculiarities with respect to similarity as well as diversity degree, recognition methods, valuation and depreciation. Therefore, Jaccard Coefficients represent the most suited elements for illustrating the comparability of IFRS and RO GAAP regulations. Regarding the firm practices comparability, it evolves from statistics analysis. Thus, we determined H Index as well as Taplin's Index. In addition, our research is based on a sample of 50 companies with FTSE 100 stock index that stands for the relevance of analysed data.

3. Literature Overview

Many scientists have signalled an evolution in accounting standards, by underlying their relevance as well as professional judgment and future orientation. There is a need for a simplified accounting system, based on historical information and transactions (Rieger, 2006). Further on, we should adopt reconciliation at reporting level, by reducing diversity and thus increasing harmonization. Chand and White (2007) describe harmonization as being the process through which contradicting accounting rules are decreasing and finally it results a better comparability of financial reports. This paper underlines certain aspects regarding formal and material harmonization. When measuring the diversity between two elements we use Jaccard similarity coefficient, so as to obtain the compatibility degree of two accounting systems (Georgescu & Co, 2009).

The analysis of optional concentration implies the usage of H Index and E(H) or Taplin Index. Van der Tas (1992) has conducted some research in the field of material harmonization degree, demonstrating the importance of these indicators, that can be successfully used in determining firm practices comparability. For instance, H Index and E(H) can be determined for a group of companies, randomly selected, by computing the frequency of accounting methods usage, as well as the relative frequency. In addition, the indicators should have a value between 0 and 1, indicating the harmonization level. According to some researchers, it seems that H Index comes from an idea launched by Hirsch, who sustained the existence of H publications as a set of articles written at high performance standards. These “high performance publications”, are known in literature as “Hirsch Core” (Thompson, 2009:2). Nowadays, H Index continues to be a subject of interest for many scientists. Egghe L. (2010) mentions in his paper on information technology the influence of adding or eliminating sources belonging to H Index. Another recent study, this time conducted by Fiorenzo Franceschini (2010), explains some peculiarities and limits of this indicator, as well as the situations when it is not used in a proper manner.

Thus, we can estimate that H Index will become an objective measure of comparability of national and international accounting practices in the near future.

4. Study on Accounting Regulations Comparability: IAS 38 Intangible Assets and OMFP 3055/2009

4.1. Comparability for Regulations- Jaccard Coefficients

Figure no. 1: Accounting regulations analysis and coefficients computation

	IFRS	RO GAAP	S_u	S_v	D_u	D_v
A) Recognition						
-Set up costs	0	1				
-Development costs	1	1				
-Goodwill	1	1	0.67	0.67	0.33	0.33
-Brands	1	1				
-Licenses	1	1				
-Clients' lists	1	0				
B) Valuation						
<i>B1) Initial valuation</i>						
-Acquisition cost	1	1	1	0.75	0	0.25
-Production cost	1	1				
<i>B2) Revaluation</i>						
-Book value	1	1	0.5		0.5	
-Value after revaluation	1	0				
C) Impairment						
<i>C1) Determination models</i>						
-Impairment testing	1	0	0.5		0.5	
-Amortization	1	1		0.625		0.375
<i>C2) Amortization methods</i>						
-Linear	1	1	0.75		0.25	
-Digressive	1	1				
-Accelerated	0	1				
-Production units	1	1				
TOTAL				0.68		0.32

The above figure presents the accounting treatments according to international regulations or IFRS and Romanian regulation or RO GAAP. The notation system involves using the score “1”

and “0”. Thus, we give “1” point if the accounting standard allows the usage of a certain treatment, while denoting with “0” the case when the treatment does not occur. The formulas for the coefficients are: $S_{ij} = a / (a + b + c)$, $D_{ij} = (b + c) / (a + b + c)$, $S_{ij} + D_{ij} = 1$.

4.2. Interpretation of results

The results from the computations show a similarity degree (S_{ij}) of 50% for both *revaluation of intangibles* and *models of impairment determination*. On the other hand, in what concerns the *recognition stage methods* and *amortization methods*, the level of diversity (D_{ij}) is very low and common methods are predominant in 75% of the cases, respectively 67%. These phenomena could be explained by the frequency for recognition options or the one for amortization methods. If in the first situation there were four common elements (*development costs, goodwill and licenses*), the issue of *amortization* implies a single set of methods (*linear, digressive and production unit*), which is representative for IFRS as well as RO GAAP. In what concerns the *initial evaluation*, national and international accounting regulations contain the same methods. Thus, in this situation, the diversity degree is zero, while recording a maximum similarity. Therefore, through the previous analysis, we have delimited three main cases. The first refers to the one in which Jaccard Coefficients are different and includes intangible assets *recognition* issues as well as *amortization* methods, as part of impairment. In the second case we can observe a minimum diversity point for *initial evaluation*, while the last one corresponds to a medium similarity degree.

For each of the three main issues discussed in this paper (recognition, valuation and impairment), we find the average of diversity and similarity degrees. The values of 32%, respectively 68%, or total averages, corresponding to the last row of the table, were computed as sum of the previous mentioned averages, divided by three. When calculating the average for Jaccard Coefficients, by considering the importance and thus weight of the three issues as being equal, we obtain a value of 68% for similarity, which means that there is a harmonization tendency in what concerns intangibles.

5. Study on Accounting Practices Comparability for FTSE 100 companies

5.1. Analysis of financial reports for the chosen companies

Figure no. 2 was developed using the same notations as in the previous analysis of Jaccard Coefficients.

5.2. Interpretation of results⁴⁰⁹

The first element of our analysis consists of intangibles' *recognition*. In what regards *set up costs*, 49 companies do not use them. *Development costs* and *brands* are used by most of the firms (94%, respectively 98% usage degree). Further on, we can observe that all the 50 companies use goodwill and licenses as accounting treatments, generating a maximum level of harmonization of 100%. By calculating E(H), we obtain similar results, which leads us to the idea of harmonization tendency. Regarding *valuation at acquisition cost*, both indicators show 100% harmonization degree. In contrast, only 38% of the companies value their intangible assets at production cost, although when computing E(H) the level of harmonization overcomes the medium threshold. In case of *revaluation*, 90% of firms use *book value* and the accounting treatment of *value after revaluation* has an H Index of 0.5, which implies that there is a large group of companies not using it. Concerning *impairment of intangible assets*, most companies use the same treatment, the majority of them choosing *linear amortization*. For all the issues regarding impairment, the indicators values exceed 0.8, demonstrating the harmonization of accounting practices.

⁴⁰⁹ This section applies to results obtained in Figure no. 2: Indexes Computation.

Finally, if we compute the average for H Index and E(H) for every accounting treatment, we obtain 0.82, respectively 0.91. In addition, we consider them having equal weights. The values are very close to 1, so that we can state the image of harmonized accounting practices for the listed companies.

The results of our analysis show a high level of harmonization degree for intangible assets, and in some cases we can even find perfect similarity between international standards.

The formulas for indexes are: $H \text{ Index} = \frac{1}{n} \sum p_i^2$, $E(H) = \frac{1}{n} \sum p_i^2 + \frac{1}{n} \sum p_i * (1 - p_i)$, for $i = 1, n$.

Figure no. 4: Indexes Computation

Accounting Treatment	Accounting Option	No. of companies	Frequency	Pi	H Index	Adjusted Options	No. of companies	Adjusted Frequency	Adjusted Pi	E(H)
RECOGNITION										
Set up costs		50	100%	1			50	100%	1	
a) used		0	0%	0						
b) not used		49	98%	0.9800	0.961	a) + b)	49	98%	0.9800	0.980
c) not mentioned		1	2%	0.0200		c)	1	2%	0.0200	
Development costs		50	100%	1			50	100%	1	
a) used		47	94%	0.9400		a)	47	94%	0.9400	
b) not used		3	6%	0.0600	0.887	b) + c)	3	6%	0.0600	0.944
c) not mentioned		0	0%	0						
Goodwill		50	100%	1			50	100%	1	
a) used		50	100%	1	1	a) + b) + c)	50	100%	1	1
b) not used		0	0%	0						
c) not mentioned		0	0%	0						
Brands		50	100%	1			50	100%	1	
a) used		49	98%	0.9800	0.961	a)	49	98%	0.9800	0.980
b) not used		0	0%	0						
c) not mentioned		1	2%	0.0200		c) + b)	1	2%	0.0200	
Licenses		50	100%	1			50	100%	1	
a) used		50	100%	1	1	a) + b) + c)	50	100%	1	1
b) not used		0	0%	0						
c) not mentioned		0	0%	0						
Clients Lists		50	100%	1			50	100%	1	
a) used		40	80%	0.8000	0.661	a)	40	80%	0.8000	
b) not used		6	12%	0.1200		b) + c)	10	20%	0.2000	0.840
c) not mentioned		4	8%	0.0800						
IMPAIRMENT										
DETERMINATION MODELS										
Impairment testing		50	100%	1			50	100%	1	
a) used		50	100%	1	1	a)+b)+c)	50	100%	1	1
b) not used		0	0%	0						
c) not mentioned		0	0%	0						
Amortization		50	100%	1			50	100%	1	
a) used		45	90%	0.9	0.810	a)	45	90%	0.9	0.902
b) not used		2	4%	0.04		b)+c)	5	10%	0.1	
c) not mentioned		3	6%	0.06						
AMORTIZATION METHODS										
Linear		50	100%	1			50	100%	1	
a) used		45	90%	0.9	0.815	a)	45	90%	0.9	0.902
b) not used		2	4%	0.04		b)+c)	5	10%	0.1	
c) not mentioned		3	6%	0.06						
Digressive		50	100%	1			50	100%	1	
a) used		2	4%	0.04	0.815	a)+c)	5	10%	0.1	0.902
b) not used		45	90%	0.9		b)	45	90%	0.9	
c) not mentioned		3	6%	0.06						
Accelerated		50	100%	1			50	100%	1	
a) used		1	2%	0.02	0.850	a)+c)	4	8%	0.08	0.921
b) not used		46	92%	0.92		b)	46	92%	0.92	
c) not mentioned		3	6%	0.06						
Production units		50	100%	1			50	100%	1	
a) used		2	4%	0.04	0.815	a)+c)	5	10%	0.1	0.902
b) not used		45	90%	0.9		b)	45	90%	0.9	
c) not mentioned		3	6%	0.06						
VALUATION										
INITIAL VALUATION										
Acquisition cost		50	100%	1.0000			50	100%	1.0000	
a) used		50	100%	1.0000	1	a) + b) + c)	50	100%	1.0000	1
b) not used		0	0%	0						
c) not mentioned		0	0%	0						
Production cost		50	100%	1.0000			50	100%	1.0000	
a) used		19	38%	0.3800	0.442	a)	19	38%	0.3800	0.764
b) not used		27	54%	0.5400		b) + c)	31	62%	0.6200	
c) not mentioned		4	8%	0.0800						
REVALUATION										
Book value		50	100%	1			50	100%	1	
a) used		45	90%	0.9	0.815	a)	45	90%	0.9	0.902
b) not used		3	6%	0.06		b) + c)	5	10%	0.1	
c) not mentioned		2	4%	0.04						
Value after revaluation		50	100%	1			50	100%	1	
a) used		32	64%	0.64	0.503	a)	32	64%	0.64	0.717
b) not used		15	30%	0.3		b) + c)	18	36%	0.36	
c) not mentioned		3	6%	0.06						

6. Conclusions

On the basis of theoretical background and quantitative research, we can underline the tendencies of both convergence and harmonization processes in what concerns national and international regulations, as well as accounting practice of the analysed companies.

Through this study, we aimed to present the concept of intangibles from national and international perspectives. The practical approach involved a research in the similarity and differentiation with respect to IAS/IFRS and OMFP 3055/2009 as well as in accounting practices. The latest assumed a study on 50 listed companies for which we measured the harmonization degree.

In the first part of the research, we investigated the harmonization level corresponding to the national and international accounting standards. Thus, the findings imply three main aspects: different Jaccard Coefficients for *recognition* and *amortization methods*, minimum diversification level in case of *initial valuation* and the medium similarity degree of *revaluation* and *impairment determination models*.

The average for Jaccard Coefficients, calculated for the whole accounting treatments, show a harmonization tendency in what regards the intangible assets.

The second part of this paper relies on measuring the comparability degree of accounting practices corresponding to the companies from the analysed sample. Therefore, we determined H Index and Taplin Index or E (H) for the accounting treatments and options, and finally we computed an average of these indicators.

Further on, the obtain results suggest the following: a high level of harmonization for *recognition* of intangibles, a tendency to reconciliation for valuation of these assets, as well as common practices concerning impairment.

7. References

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