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Intangible Resources in Financial Statements

Theses of Doctoral Dissertation

2016

UNIVERSITY OF SZEGED

Faculty of Economics and Business Administration

Doctoral School in Economics

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Szeged, 2016

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1. Introduction

The reason for choosing intangibles as the research area was that it is an actual topic, challenging standard-setters, preparers and users of financial statements all at once. We live in a so-called knowledge economy (Lengyel 2003) which is featured by the prominence of intangible resources, the rapid development of information technologies and the growing importance of networks between entities. Today, learning and constant seeking for knowledge has an outstanding role. Learning and the development of innovation capacity leads entities to possessing such unique resources that accumulate in certain regions and boost competitiveness (Bajmócy 2008, pp 26).

In our knowledge-economy, resources with no physical form play an underlying part in business processes. In accounting, these resources are classified as intangible assets and we can say that *today each and every product is based on knowledge – at least partly* (Szabó-Hámori 2006, pp 11). Accounting and financial reporting questions related to intangibles have created such severe debate that divides the profession. Resources like research and development, innovation, human resource, organizational and social capital have a fundamental role in today's knowledge-based economy and are key factors of innovation. Thus, efficient management is impossible without knowing these types of resources. It is the interest of the entities to inform their stakeholders – authorities, investors, creditors, analysts, managers, employees and the public – about their intangibles because this helps successful communication and the development of a favourable image. However, it is very difficult to incorporate intangible resources in the present financial reporting framework, which leads to a contradiction between the objective of the system and its underlying principles. For instance, regulation related to research and development results in the deficient reporting of these types of resources (Deák-Lukovics 2014).

Despite the changes in business environment, present accounting regulations seem to provide a narrow space for the new types of resources. The absence of information affects financial reporting: *current financial statements¹ provide very little information about these assets and the information that is provided is partial, inconsistent and confusing* (Lev 2003,

¹ Financial reports and financial statements are used as synonyms here.

p 1). Internally generated intangible assets are the most difficult to recognize in the balance sheet as generally problems occur during the identification and the measurement processes. When estimating the value of those items that are excluded from financial statements researchers usually examine the difference of the book value and market value of companies (Sveiby 2001). This difference is often referred to as the unity of the invisible assets of entities which incorporates many different resources which all have in common that they are not reported on balance sheets.

Based on the above mentioned facts we can state that accounting regulations and standard-setters are challenged by the development of business processes. Entities are also challenged if they intend to communicate with their stakeholders about their intangibles. Researchers have analysed intangible reporting practices in different regions and identified some country-specific features related to the quantity and quality of reported information in financial statements prepared for users. These differences are not only generated by diverse accounting regulations. Laws and standards only give a framework for the preparers of reports, the creation of firm-specific accounting policies and practices are in their own hands. Several international surveys have been organized to examine the reporting practices of firms that operate in different continents (Kang–Gray 2011; Kumar 2013; Ragini 2012).

Our research questions are the following:

1. How does knowledge economy challenge the accounting paradigm?
2. What is the reason for the limited incorporation of intangibles in the balance sheet?
3. What are the expected modifications in accounting regulation and what is the effect of these changes on the reporting of intangibles?
4. What do we know about the quantity and quality of intangible-related information in the financial statements of the largest Hungarian firms?

Finding the answers to the above questions lead the literature review and the empirical research presented in the thesis². There are six chapters in the thesis. The first three chapters present the literature related to the topic. First, we describe the place of intangible assets in financial reporting presenting international and Hungarian accounting regulations. In the second chapter we summarize the measures taken by standard-setters in order to adjust the reporting framework to the rapidly changing business environment. We also discuss the different views of the profession related to the underlying accounting principles. The third chapter deals with the questions of communication about intangible resources, presenting some empirical research results found in literature. At the end of the chapter we define the aims of the research and the hypothesis.

The fourth and fifth chapters demonstrate the related empirical research and its findings. The fourth chapter contains a detailed analysis of Hungarian accounting regulations and also discusses the applicability of the chosen method. In the following, we present the findings of the analysis of financial statements and the limitations of the research. The fifth chapter presents planned future research areas. We present our theses in the last chapter.

² The literature review and the empirical research were partially funded by „TÁMOP-4.1.1.C-12/1/KONV-2012-0005 – „Preparation of the concerned sectors for educational and R&D activities related to the Hungarian ELI project.” and by „TÁMOP-4.2.1.D-15/1/KONV-2015-0002– „Establishing higher education service satisfying the needs of knowledge industry in the Southern Great Plain region” is supported by the European Union and co-financed by the European Social Fund.

2. Aims and methodology

One of our *research aims* is to examine international³ and Hungarian reporting regulations to evaluate if these standards support the incorporation of intangibles in financial statements. The need for the analysis of international regulations is supported by the fact that a regulation (1606/2002/EC) of the European Regulation requires the use of IFRS standards for the consolidated financial statements of listed entities. A recent decision of the Hungarian government expands the use of IFRS for other applicants. We also examine the measures taken by standard-setters to *update the current financial reporting paradigm*.

Another research area is the financial reporting culture of Hungarian firms: we examine the intangible-related information content of financial reports of sample entities. We have processed the financial statements of the largest Hungarian corporations for the years 2005 and 2012 based on a methodology found in related literature. The primary focus of the research is the recognition of intangibles on the balance sheet and other possibilities of reporting (i.e. in the supplementary notes, see Deák 2006), other aspects are not investigated (i.e. tax or legal issues). The method of the research is document analysis: reading and examination of the content of each section of the financial statements and the Hungarian Accounting Act. The most important variable is the disclosure activity of the sample entities, which is defined by the number of intangible-related items in the documents.

Measurement is carried out using the methodology introduced by Ragini (2012). We chose this methodology because the author presents the list of the target 180 intangible items which makes it possible to reproduce the research on a Hungarian sample. Ragini examines and compares various disclosure practices of the top one hundred Indian, U.S. and Japanese firms over the period 2001-2005. The sample includes the most valuable companies of India (100), the United States (100), and Japan (60). Actual calculations involved fewer entities because financial statements were not available in every case.

³ International Financial Reporting Standards – IFRS

The author creates a disclosure index of 180 intangible items classified into the following groups:

- a) research and development (20 items),
- b) strategy and competition (30 items),
- c) market and customer (36),
- d) human resource (26 items),
- e) intellectual property rights & goodwill, and other intangible assets (25 items),
- f) corporate and shareholder information (18 items),
- g) environment and others (25 items).

Each annual report in the sample is searched by the authors and the number of intangible assets that appear in those documents provide scores that characterize reports. The study reveals that all countries show a significant improvement in their overall disclosure scores over the five year period and the U.S. is typically ranked first of the three countries. The second average was that of the Indian sample except for 2005 when Japan was second. The author also analyses group-wise disclosure and finds that Indian companies disclosed more information on ‘research & development’ and ‘human resource’ while U.S. companies disclosed more information on ‘strategy and competition’, ‘market and customer’, and ‘IPRs and goodwill’. Japanese companies disclosed more on ‘corporate and shareholder’ and ‘environment and others’ (Ragini 2012, p.57). The study also discusses the association between selected company attributes and overall disclosure scores. Results show that the disclosure score of the Indian entities are more associated with organizational size and profitability, while those of the U.S. companies are more associated with industry type. In case of the Japanese companies, disclosure scores are associated with organizational size (Ragini 2012, p.61).

3. Hypotheses

Since the research is based on a methodology found in literature, it was necessary to examine whether it can be applied on Hungarian samples. The first hypothesis was tested with the analysis of 29 financial statements of the largest Hungarian enterprises based on sales revenue of 2012.

H1: The methodology introduced by Ragini (2012) is applicable for Hungarian samples.

Theories related to intellectual capital management appeared from the 1980's in the United States and Japan and reached to Hungary much later. Even though measurement of intellectual capital has become more frequent locally (Juhász 2012), it is expected that entities are followers and disclose less intangible information. Based on the above facts we expect that the disclosure points of the Hungarian sample will be lower than that of the other countries.

H2: Hungarian sample entities present less intangible-related information in their financial statements than the companies operating in the countries examined in the original research (United States, India, Japan).

According to the literature, the disclosure of intangible resources in Hungarian financial statements is limited to the compulsory content determined by the accounting regulations. Consequently, local disclosure scores may not rise with a similar rate to that of the entities in the United States, India, and Japan. However, sample entities are the largest corporations in the country and they are owned by foreign mother companies in many cases, which means that the presented reporting culture is probably more sophisticated than the average. These entities are also more likely to adjust their reporting framework to international trends.

H3: Disclosure scores of the sample entities – calculated using Ragini's methodology – rise at a similar rate to that experienced in the original research.

If disclosure is indeed determined by the regulations set in the Accounting Act, then this must be reflected by the content of financial statements. If we examined the data presented in financial statements, we would come to the conclusion that topics favoured by the regulations will be addressed more frequently than others. This hypothesis means that the presentation of intangible-related information is highly motivated by compliance to the rule of law.

H4: The intangible-related reporting culture of the largest Hungarian entities is determined by the law: those topics are addressed most frequently which contain the data requested by the Accounting Act.

4. The results of the research

We applied Ragini's methodology to analyse Hungarian accounting regulations and also to explore the intangible reporting culture of the largest Hungarian firms. The 180 items cover a wide range of intangible resources which appear on the balance sheet and also of those other resources which do not have a physical form and play a significant role in the success of entities. Among the items there are metric (45) and qualitative type of data (135).

The methodology can be used to measure the intangible disclosure level and also to examine how supportive accounting regulations are when it comes to incorporating these types of resources into financial statements. The latter is inevitable because prevailing accounting standards strongly influence the disclosure scores of financial statements.

4.1 Analysis of Hungarian Accounting Regulations

We applied Ragini's methodology first to determine the intangible-related data that Hungarian accounting regulations require to be incorporated in financial statements. We examined the text of the Accounting Act and counted the number of items that must be presented in financial reports. Based on the analysis, Hungarian firms who compose the Annual Statement (the most common form) will demonstrate 26 of Ragini's list of the 180 intangible items.

In Hungary, managers must compose a so called business report along with preparing the financial statement. Considering the ones in the business report, 11 further intangible items appear in Hungarian financial statements (13 in case of listed companies). The distribution of the compulsory items between different sections of the financial statements indicate that the Balance Sheet contains a relatively small part of this data (4 items), but Supplementary Notes (22 items) and the Business Report (11 items) will present a more significant amount of information.

4.2. Testing the methodology

The next application for Ragini's methodology was the analysis of the financial reports of Hungarian sample entities, based on which we tested our hypotheses. The aim for the research was to examine the 30 largest Hungarian firms based on sales revenue of the financial year 2012 as listed in the TOP 200 issue of Figyelő (Lambert–Zsubori 2013). In one case financial statements were not available, so the final sample covers 29 published financial statements, all of them 'Annual Statement' type (financial institutions and insurance companies have been excluded from the list as these operate in different reporting regulation environment and do not present comparable data with the other part of the sample).

First, we explored if the methodology is applicable for Hungarian samples, and also discovered the advantages and disadvantages of application. During the document analysis we counted the number of items presented in financial statements (either because it is required or on a voluntary basis). The items were arranged in the same seven categories Ragini used and we used no weighting.

Raginis presents the list of those items which were included in more than 25 percent but less than 50 percent of the financial statements and also the list of those which appeared in at least the half of the reports. Consequently, it is possible to calculate the number of the elements of the group which were presented in less than 25 percent. After reproducing the same data for the Hungarian sample, we concluded that the numbers are similar to those of the original research and the methodology is applicable for Hungarian samples. This could have become questionable if for example the number of items in the 0-24 percent group was much higher than for the United States, India and Japan, meaning that many of the items were are redundant for the sample.

One advantage of the methodology is that it covers a very wide range of intangible resources, it is almost an extensive list – from the point of view of resources (assets). We do not get such a detailed picture of the equity and liabilities, but we do not consider this as a shortcoming but rather a consequence of the rare presentation of this data in financial statements. During the analysis of the Hungarian sample we did not find any intangible-related data in financial reports that was impossible to match with any item. Since the authors of the original research have tested the methodology in the United States, India and Japan, it is probably applicable in any country in the future.

The disadvantage of the methodology originates from the same fact as the advantage: the list covers many items which makes application highly demanding. Software-based automatized solution could be a remedy when searching for items in the documents but we consider this as a half-solution because in many cases it is not satisfactory to search for a specific phrase in financial statements. Sometimes information is hidden or circumscribed and the key words of the items do not appear at all. We found in literature that researchers of similar topics had come to the same conclusion: when translating or interpreting firm-specific terminology human resource is better than computers (Bellora-Guenther 2013, pp 260). Based on the above findings the first hypothesis (H1) was approved.

Thesis 1.: Ragini's methodology is applicable for Hungarian samples.

4.3. Intangible resources in financial statements

After examining the applicability of the method, we extended the sample with the financial statements of the same entities for the year 2005 (when available). The final sample covers 29 financial reports for 2012 and 25 for 2005. Business reports were enclosed to the documents – in a way that it was available on internet – in seven cases for 2005 and in six cases for 2012.

Disclosure points were determined by the number of intangible items which appeared in the financial statements. This was also calculated in percentages:

$$\text{Score} = \frac{\text{number of intangibles appearing in a given report}}{\text{maximum number of items (180)}} \times 100$$

In the following part of the text when we mention disclosure scores, we mean the figure calculated by the above method. These scores are always between 0 and 100. Ragini's sample and our sample both contained the year 2005: the Hungarian average disclosure score was 19,4, which is lower than that of all of the other three countries. The Hungarian average in 2012 is 22,6, which is similar to Ragini's countries for 2005. The highest scores in the

sample were those of the financial statements that included a business report section in case of both financial years. Ragini experienced a continuous significant rising trend for all of the countries for the examined period. If we presume that this trend continued ever since, then the score for the United States, India and Japan could be significantly higher for 2012 meaning that our lag has probably remained. Consequently, the second hypothesis (H2) was accepted.

Thesis 2.: Hungarian sample entities' disclosure scores were lower, which means that these present less intangible-related information in their financial statements than the firms from Unites States, India and Japan.

The third hypothesis lies on the presumption that although Hungarian firms' intangible-related disclosure is usually limited to those items required by the law, sample entities are the largest in the country with probably more developed reporting culture than the average. Consequently, we expect Hungarian average disclosure scores to rise with a similar rate as the countries in the original research.

The average disclosure scores of the Hungarian sample rose with an average 2 percent between 2005 and 2012, which is not significant. Ragini found significant growth in the average scores for all of the countries during the period of 2001-2005. The average growth rate was 9 percent for the United States, 7 percent for India and 12 percent for Japan. Based on the above findings we do not accept the third hypothesis (H3).

Thesis 3.: The disclosure scores of the Hungarian sample increased at a much smaller rate during the research period than that of the entities in the United States, India and Japan in the original research.

The fourth hypothesis is about the nature of the intangible-related information in financial statements. We compared the average scores of the seven categories defined by Ragini with the requirements of Hungarian accounting regulations. We found that the topics

covered more frequently are the same as the ones favoured by the law. We came to the conclusion that the intangible reporting culture of the local sample entities is strongly influenced by the Accounting Act. However, firms present approximately 5-6 items from ‘corporate and shareholder information’ ‘strategy and competition’ and ‘market and customer’ topics even though there are 0 or 1 elements required by the law. Based on the above findings, the fourth hypothesis (H4) was partly accepted with the following conclusion:

Thesis 4.: the intangible reporting culture of the largest Hungarian entities is strongly influenced by the Accounting Act: those topics are addressed more often in financial statements, which contain more of those items required by the law. Hence reporting is strongly motivated by compliance to the regulations, although, firms report the items of certain topics (‘corporate and shareholder information’ ‘strategy and competition’ and ‘market and customer’) on a voluntary basis.

5. Summary

One of the aims of the dissertation was to explore the difficulties of integrating intangible resources into financial statements, to describe the regulatory environment and the most recent developments of this field. We reviewed Hungarian and international accounting regulations related to the topic. We identified those underlying assumptions of the reporting framework which lead to the fact that most of the intangible items are not recognised on the balance sheet. We also presented the Framework-related project of the IASB, which is aimed at reforming the document that sets the background of the standards and will probably have a significant impact on the profession. Finally, we summarized the findings of some international and Hungarian researchers of this field.

Based on our own empirical research, we conclude that the intangible reporting culture of Hungarian sample entities is basically determined by the requirements of the regulations which state what kind of information has to be included in the narrative parts of the statements. Listed companies – which enclose the business report to the financial statements – are exceptions: in their case voluntarily disclosed information is also significant. Consequently, financial reports of listed companies present significantly more intangible items than the compulsory minimum required by the law. The reason for this is probably that Hungarian capital markets are not as developed as in other cases (banks and loans from mother companies have key roles in corporate financing) and entities are not motivated to communicate about their intangible resources in financial statements. However, those entities, which intend to convince foreign investors will be forced to follow those tendencies which arise on the global capital markets (i.e. green investment funds). Although, some alternative reporting techniques have appeared in Hungary as well: reports on corporate social responsibility have contributed to informing the stakeholders about intangible factors. In case of certain firms the integration of the two forms of reporting has occurred: these publish such integrated reports which are capable of meeting the objective of financial statements and building the image of a socially responsible company as well.

Regarding Ragini's groups of intangible items, the Hungarian sample performs lower means than the overall average in case of the following categories: 'research and development', 'market and customer', 'strategy and competition' and 'human resource'. This can be explained by the fact that these categories contain the most competition-sensitive

information and also these items are the most difficult to integrate into traditional accounting frameworks. Further research (interviews) could be applied to confirm this fact and also discover any reasons why Hungarian firms tend to give less emphasis to these topics in their financial statements.

Some modifications in the regulations could also encourage Hungarian entities to devote greater attention to their intangibles and communicate about these with more consciousness (which could also have a positive impact on their management practices and competitiveness). The present publishing practice related to business reports is also a field to reconsider: these documents are not easily accessible to stakeholders. This is particularly problematic considering the fact that the content of the examined business reports indicate an enhanced role of this document in the communication about intangibles.

Increasing the number of intangible items required to be incorporated in financial statements would lead to stakeholders getting more information. However, this approach may not be expedient because it would be difficult to determine those items that carry information which is not only relevant in case of all entities but also not too costly to produce compared to the benefits. Communication with the stakeholders probably works best on a voluntary basis, first we need to discover the basic factors of it to be able to define successful best practices.

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