

Measuring the internationalization of higher education institutions - the intellectual capital perspective

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Abstract

The purpose of this paper is to provide a framework for the measurement and evaluation of internationalization processes in higher education institutions. In this study the author conducted a literature review on internationalization and identified some gaps which need to be filled with more research in this area. The intellectual capital measurement framework was applied as a scorecard for evaluation of key areas of internationalization in HEIs. This paper aims to provide a set of indicators to help universities on the path to integrating the measurement of IC with internationalization strategies.

Keywords: intellectual capital, higher education institutions, tertiary education

Introduction

This paper aims to review the current literature on internationalization of Higher Education Institutions (HEIs) and on intellectual capital management in order to combine the two lines of research into one conceptual model. The processes of internationalization were initially analysed from purely statistical perspective of international trade in goods. Later microeconomic perspectives were introduced to the research which took under consideration the internal conditions within an enterprise which were conducive for internationalization processes. One of the most prominent examples is the so-called Upsala Model of internationalization (see for example: Johanson&Vahlne, 1977; Gorynia&Jankowska, 2008). It was only recently that the concept of internationalization of Higher Education Institutions (HEIs) gained in popularity. Many research papers on internationalization of HEIs focus on the issues related to attracting international students. In fact, the issue of internationalization is multifaceted. G. Hawawini titled: "The Internationalization of Higher Education Institutions: A Critical Review and a Radical Proposal" deserves special attention as the author proposes a thorough review of current literature on the internationalization of HEIs (Hawawini, 2011). This paper aims to contribute to the body of knowledge on internationalization of

higher education institutions by means of introducing the perspective of intellectual capital measurement.

Internationalization of HEIs

Numerous reports, articles and books (Stearns, 2008; Spring, 2009; Wildavsky, 2010; AACSB, 2011) have been published on the subject of internationalization of HEIs. Internationalization of HEIs has become the strategic priority in the agendas of governments around the world. With the introduction of rankings such as the The Times, Shanghai or U-Rank rankings the issue of international competition in the field of tertiary education became a popular subject of media releases and political debates. Before the internationalization of higher education institutions became a topic of interest, the concept of internationalization was mainly focused on internationalization processes in business organizations. The most popular definition of the internationalization of higher education is that it is *'the process of integrating an international/intercultural dimension into the teaching, research and service functions of the institution.* (Knight, 1994; Knight & de Wit, 1997). According to G. Hawawini this definition describes the process too narrowly by emphasizing the ability of an institution to introduce an international dimension into an existing structure and mode of operation, be it the student body, the curriculum, or faculty teaching and research activities (Hawawini, 2011) and proposes the following, broader definition: *The internationalization of higher education institutions is the process of integrating the institution and its key stakeholders – its students, faculty, and staff – into a globalizing world.* This definition goes beyond the particular dimensions of teaching, research and service. It calls for a change in existing structures, operating modes, and mindsets. Intellectual capital relates to all intangible and valuable aspects of running an HEI which are important for the success of internationalization process. Therefore, the measurement of IC offers a perfect match with the concept of internationalization of HEIs. It can be used as a measurement scorecard which describes the intangible resources, results and outcomes of the internationalization process in a HEI.

Definition of Intellectual capital

Intellectual capital is usually referred to all intangible resources of an organization. It includes the knowledge of employees, including the knowledge and leadership skills of its leaders. It should not, however, be limited to human capital (or individual competences) or employees. There are also other elements of IC, namely the structural capital (including new business development processes, organizational structure and processes, organizational culture, quality assurance systems etc.) and customer capital (also referred to as 'external structure') (see for example: Sveiby, 1997; Sveiby, 2001). Intellectual capital can be looked upon as a collection of 'stocks of knowledge', and 'flows of knowledge'. 'Stocks' refer to static resources such as databases, skills of employees, signed contracts etc. 'Flows' refer to processes where the stocks are utilized and put into action, e.g. training activities for employees, investments into brand awareness, advertising campaigns, research projects etc. Intellectual capital is also described as Invisible assets (Itami, 1991), immaterial values (Sveiby, 1997) or intangibles (Lev, 2001). In the last 15 years, a large number of IC measurement initiatives were undertaken. In the early 2000s, the most frequently quoted IC reports originated from the Nordic countries, namely Sweden (Skandia report; developed by Leif Edvinsson, the former vice president for Intellectual Capital at Skandia, a Swedish global financial services company. The model measures the tangible and the intangible assets of the organization/country/region) and Denmark (see: Intellectual Capital Statements – The New Guideline, the Danish Ministry of Science, Copenhagen 2003). A prominent contribution to the development of IC measurement theory was the Meritum Project. In 1998, Israel was the second country in the world, after Sweden, to produce a national Intellectual Capital Balance Sheet. Since then, many countries have measured their core competencies and competitiveness in the global economy using the measurement approaches originating from Scandinavia. Nick Bontis and his associates prepared a report on IC in Arab Nations in 2002. According to Bontis, 'the intellectual capital of a nation (or a region of nations as is the case for this paper) requires the articulation of a system of variables that helps to un-

cover and manage the invisible wealth of a country. Most importantly, an emphasis on human capital allows for a better understanding of the hidden values, individuals, enterprises, institutions, and communities that are both current and potential future sources of intellectual wealth” (Bontis, 2002). Austria is one of the countries leading the world in terms of IC measurement, especially in the public sector. It was the first country in the world to introduce an obligatory IC reporting procedures to its universities. A report on Austria’s IC was issued in 2007 (Schneider 2007). The Polish government sponsored the creation of the report “Intellectual Capital of Poland” which was published in 2008. Today, the number of IC reports is systematically growing in terms of number of countries where the concept is practiced and the number of sectors of economy. To illustrate this, one can quote the following report published in Portugal by the Training Evaluation Center for Public Policy and Administration Studies on the IC in Portuguese Hotel Industry (see: Proceedings of the 3rd European Conference on Intellectual Capital: Ecic 011, ed.: Geoff Turner). The report combines the value of tangible and intangible assets and Training Valuation in the Portuguese Hotel Sector. Probably, the only research similar to the one described herein is the initiative undertaken in Germany by the Ortenau County in the Baden-Württemberg region. It is a pilot project conducted within a framework of a larger initiative for creating an intellectual capital report for Germany („Wissensbilanz – Made in Germany”). Currently, new approaches occur that try to adapt these methodologies to regional or national levels. For regional use, generally accepted methodologies are not yet developed, even though they are crucial for determining a region’s position and decisions on future initiatives. The project will offer new insights into the measurement methodologies, especially in the public sector.

The role of Intellectual capital in today’s economy

Most organizations have realized that relying purely on financial measurement can encourage short-term thinking (Johnson and Kaplan, 1987; Kaplan and Norton, 1992). Financial measures have been criticized for being too historical and backward-look-

ing, for encouraging dysfunctional behaviors, and for giving inadequate consideration to the development of intangible assets such as employee capabilities and customer satisfaction (Ittner and Larcker, 1998). The inadequacy of financial information for the purpose of strategic management in business organizations was first discussed in the early 1990s. Many companies worldwide started to publish their IC reports or carry out knowledge management programs. The interest in IC measurement among decision makers in the public sector has been moderate compared to that in the business sector. Taiwan initiated a Research Center on Intellectual Capital (TICRC) in 2003. Its most important task is promoting industrial intellectual capital research and development, and assisting to progress intellectual capital in this country. The main mission of TICRC is to implement the projects to enhance industrial intellectual capital and accelerate the upgrading of industry. In the early 2000s, there was a consensus among academics that knowledge-based economy is the stage of development after post-industrial/service economy. Many competing terms were coined to express the specificity of the new reality for example ‘weightless economy’ (Cairncross, 1997), ‘creative economy (Florida, 2004)) or ‘experience economy’ (Pine and Gilmore, 1999) to name just a few. Now, the leading world economies such as the USA or Germany are recognizing and appreciating the importance of the industrial sector. Global corporations are bringing their industrial operations back to their home countries. This trend, to some extent, may be a proof that the concept of ‘knowledge economy’ or knowledge-driven economic growth may have been a misconception. Nevertheless, the importance of knowledge for economic success cannot be underestimated. For example, it is impossible to maintain competitive advantage in the high-tech industries without the proper intellectual property management. Therefore, the measurement of intellectual capital and intangible assets today seems just as important as it seemed 10 years ago.

Why and how do HEIs go global?

According to Hawawini (2011) the following academic motives for internationalization are the driving forces motivating HEIs to inter-

nationalize their operations (Hawawini, 2011):

- Internationalizing to fulfill the institution's educational mission.
- Internationalizing to remain academically relevant in an interconnected world that is becoming increasingly global.
- Internationalizing to attract the best students and faculty worldwide.
- Internationalizing to grow revenues.
- Internationalizing to reduce operating risk via geographical diversification.
- Internationalizing to fund activities in the home campus.
- Internationalizing to learn from the world.

Hawawini (2011) also identified the following models of internationalization:

- **Importers** - Importers aim at bringing the world to their campus. Exporters send their students abroad via student-exchange agreements with foreign HEIs, deliver programs abroad, and encourage their faculty to visit foreign universities to teach and do research
- **Academic joint ventures** - a path to internationalization that has been chosen by many HEIs is the international joint venture (JV) model. These international JVs often start as student-exchange programs, offering students in undergraduate or graduate programs the possibility of spending some time in the foreign institution,
- **Academic partnerships, alliances and consortia**-Two or more HEIs can also form broader international partnerships, committing to collaborate on several initiatives (student and faculty exchanges, joint programs, faculty research, etc.). They would agree to open their respective courses and programs to students enrolled in the partner's institution.
- **Campuses abroad** - some HEIs have gone one step beyond being importers, exporters, or joint venture and alliance partners to extend their international reach through a physical presence abroad, not unlike the direct foreign investment of firms (Kim & Zhu, 2009), by establishing full-fledged campuses abroad in which temporary or permanent faculty and staff are posted and where local or international students attend a variety of courses throughout the year.

Each of the above-mentioned motives and models of internationalization may require different resources or, at least, different combinations in the bundle of intangible resources employed to achieve the strategic goals of internationalization by a HEI. One of the potential pitfalls in the internationalization strategy the decision-makers may fall into is the inappropriate match of resources and strategic goals. For example, the physical presence abroad ('campuses abroad' model) requires the knowledge on the local legal framework for running a HEI, including the potential barriers for free labor flow between countries.

G. Hawawini (Hawawini, 2011) warns HEIs against the premature internationalization, or rather 'globalization' of their activities. Instead, he suggests that those HEIs which do not have sufficient resources or motivation for going global should choose a more moderate model of internationalization which he calls 'an import-export model of internationalization'. This model implies the internationalization of the curriculum, the creation of student-exchange programs and the participation in international JVs and partnerships. According to Hawawini, any attempt to transform themselves into truly global institutions is unlikely to succeed and may just divert them from their fundamental mission to educate their home-based students and help them become effective global citizens.

The measurement of Intellectual capital in HEIs

The measurement of intellectual capital should, in principle, support the internationalization process. The design of the measurement framework should be subordinate to the strategic goals of an HEI. It is important to note that Intellectual Capital is more than simply the sum of the human, structural and relational resources of an HEI. It is about how to let the knowledge, intellect and creativity of its professors, administrative staff, students, alumni and other stakeholders create the learning environment which supports creativity, intellectual and emotional development, relationship building and innovation. This can be achieved by creating the right connectivity between those resources through the appropriate intangible activities. It is important to note, however, that the output of educational institutions such as universities

is ‘education’, not ‘educated students’. Intellectual capital measurement should not take a reductionist view and perceive an HEI as a factory. In the same vein, P. Hill describes the concept of services by stating that “the output of garages consists of repairs, not repaired vehicles” (Hill, 1999). According to Peter Hill (Hill, 1999), “the distinction between goods and services has been traditionally interpreted by economists as if it were equivalent to a distinction between physical commodities, or tangible material products, on the one hand and immaterial or intangible products on the other. Economics literature, some of which is quoted below, is full of statements to the effect that goods are material, or tangible, whereas services are immaterial, or intangible. Such statements are casual and conventional rather than scientific, as

the nature of an immaterial product is not explained and is by no means intuitively obvious. In practice, intangible products deserve more serious attention because they play a major role in the ‘information economy’. They are quite different from services.

According to G. Marzo, there are different ways of categorization and different lists of intangibles are offered, with various schemes of presentation, some of them having more commercial or consulting flavor. A three-categorization model is often presented where IC is identified at the level of individuals, the organizational level, and finally the level of the relationships the firm has especially with suppliers and customers and other stakeholders in general (Marzo, 2014). Here is presented a conceptual framework for the measurement of internationalization of HEI

Table 1. The Intellectual capital perspective in the measurement of internationalization of Higher Education Institutions.

| | Human capital | Organizational | Customer capital |
|---------------------|--|---|---|
| Knowledge resources | <ul style="list-style-type: none"> • % of Academic staff publishing in international journals • % of academic staff able to lecture in English • % of Academic staff with experience in international projects • % of Academic staff with international experience (to be defined) • % of foreign professors on staff • % of publication co-written with foreign authors | <ul style="list-style-type: none"> • % of administrative staff speaking English • % of administrative staff devoted to supporting international operations • % of revenues from international operations | <ul style="list-style-type: none"> • university’s brand recognition abroad (to be defined) • international students’ satisfaction survey • % of student applications from abroad |
| Processes | <ul style="list-style-type: none"> • expenditure on international activities of academic staff • share of salaries of international professors in total salary budget | <ul style="list-style-type: none"> • % of international conferences in which academic staff participated (compared with total no. of conferences) • no. of campuses abroad | <ul style="list-style-type: none"> • Number of countries from which foreign students are originating |
| Results | <ul style="list-style-type: none"> • % of international students on campus • % of international | <ul style="list-style-type: none"> • % of administrative staff with good command of English • Number of international certificates and positive evaluations of quality | <ul style="list-style-type: none"> • no. of strategic alliances |

Note: some of the concepts used in the definitions of indicators must be first defined e.g. “international experience” can be defined as “the academic teacher has taught at least 3 courses to international students abroad in the last 5 years” etc.

Source: author’s own elaboration.

[**Table 1**]. It should be noted that for the purpose of this paper only those activities, processes, stocks of knowledge and results which relate to internationalizations were considered. Therefore, the framework should not be viewed as a model for the measurement of intellectual capital in an HEI per se. Its purpose is simply to offer the ‘intellectual capital perspective’ to the academic disputes related to internationalization of tertiary education. The framework presented in [**Table 1**] is inspired by the conceptual model presented in the MERITUM project (2001).

The indicators described in Table 1 are expressed mainly in the form of percentage points [%]. This allows for benchmarking and international comparisons. Using natural numbers [no.] may be deceiving, for example no. of international students on campus varies depending on the local situation: 1,000 international students in a Chinese HEI should be interpreted differently than the same number in a European Country or Australia.

Conclusions

The Internationalization of HEIs is making progress around the globe. In the past, only a handful of UK and US HEIs could be defined as fully internationalized. Today, internationalization is becoming the hot topic of many political debates on tertiary education. IC approaches have become of prime importance in institutions of higher education, because knowledge is their main output and input. Universities produce knowledge, either through scientific and technical research (the results of investigation, publications, etc.) or through teaching (students trained and productive relationships with their stakeholders) (Ramírez, 2014). This paper’s aim was to help universities on the path to presenting the management information on IC which can be useful to increase the strategic capabilities needed for the process of internationalization. The main contribution of this paper is the introduction of the intellectual capital measurement perspectives into the internationalization process of HEIs.

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