



# Intangibles in universities: current challenges for measuring and reporting

Intangibles  
in universities

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## Abstract

**Purpose** – The purpose of this paper is to discuss whether the mechanisms used to measure and manage intangibles in companies can be applied to universities and other research institutions.

**Design/methodology/approach** – The characteristics of the issues is addressed by companies in relation to their intellectual capital (IC) and how they manage them are reviewed to discuss whether universities can apply the same framework. External pressures for change and barriers universities encounter, particularly due to the current governance system, are discussed. The experience of some universities are briefly described.

**Findings** – The companies' framework is possible to be used by universities, with some specificity.

**Research limitations/implications** – The number of universities actually applying this framework is small and therefore the results cannot be generalized.

**Practical implications** – Policy measures are needed to encourage research institutions and universities to measure and manage their IC. In a knowledge-based society, the main knowledge producers should be more accountable for their activities.

**Originality/value** – The use of IC concepts to analyze universities' performance is still scarce. This is an attempt to fill such lacuna.

**Keywords** Intangible assets, Intellectual capital, Universities, Knowledge management, Governance

**Paper type** General review

## 1. Introduction

Universities, and higher education institutions in general, have undergone in-depth transformations in recent decades, using new theoretical insights and affecting and being affected by policy changes. The new theories refer mainly to mode 2 of knowledge production (Gibbons *et al.*, 1994) and the triple helix model (Etzkowitz and Leydesdorff, 1996), which highlight, on the one hand, a new paradigm of such knowledge production defined by transdisciplinarity and solution-oriented research, and on the other, much more dynamic university-industry-government relationships (Sánchez *et al.*, 2009). At the same

This paper is a contribution in honor of the memory of Jan-Erik Gröjer. It has benefited from some of the key concepts he developed through many of his writings and is in particular debt to the importance he gave to the strategic role of intangibles in organizations, the role of human capital in the value chain, and the need for the concept of performance (Catasús and Johanson, 2008). The authors had the opportunity of getting to know Jan-Erik during our common research Project measuring intangibles to understand and improve innovation management (MERITUM). The many meetings and debates they had during that project allowed us to appreciate both his in-depth knowledge, his scientific prowess and his humanity. The authors would like to point out that Jan-Erik Gröjer was known in Spain long before that project as he had published one of his pioneer works in social accounting in a Spanish Journal (Gröjer and Stark, 1978).



time, some policy actions undertaken by the European Commission, such as the Bologna process and the Lisbon agenda to encourage both a European higher education and a European research area (European Commission, 2007) have driven national discussions and collective reflection within different European institutions, such as the European University Association (EUA, 2005, 2007), the European Association of Research Managers and Administrators and some expert groups conveyed by the European Commission (2006a).

Some important consequences of such transformations are the increasing number of functions universities fulfil. Not only are they supposed to provide training and research, but also long life learning. Among other functions they are also expected to help companies improve their innovative capacities and take into account various social problems. Universities are thus becoming multi-faceted institutions with multiple functions (Laredo, 2007) and multiple missions (Bonaccorsi and Daraio, 2007). In order to fulfil these new roles policy makers are asserting that universities should be given more autonomy to define their strategies, enough financial resources to accomplish these ends and, as a corollary, be more accountable to a multiple number of stakeholders and society at large.

This new environment calls for more detailed information from universities to nurture an increasingly complex management process which is to be disclosed to allow the many stakeholders (governments, funding agencies, researchers, students, eventual partners, etc.) to improve their decision-making processes. However, this information, in particular the disclosure part, must be balanced carefully. On the one hand, it should be homogeneous enough to allow benchmarking and assess evolution; on the other, it should reflect the uniqueness of the institutions and their particular aims and objectives. Consensus on how this information should be presented is still a long way off.

The main aims of this paper are to show some similarities between the current concerns of universities and firms in relation to measuring and reporting on their knowledge management activities, to reflect upon some of the pressures for change that the above environment places on universities, and the institutional barriers they are facing to implement them. On the basis of such reflections we will claim that the intellectual capital (IC) framework may provide both the conceptual bases and the necessary tools to produce and disclose the new information needed.

The rest of the paper is structured as follows: Section 2 will show how the concerns of both universities and companies tend to converge in this new environment. Section 3 will discuss some of the external pressures for change universities face. Section 4 will deal with an opposite force, the barriers for change they are confronted with, most of them internal to the institution or to the educational system they are immersed in. Section 5 describes some of the existing experiences and literature which suggest the usefulness of the IC framework for universities. Finally, in Section 6 we will come to some conclusions.

## **2. Universities and companies addressing similar issues**

As we have argued elsewhere (Cañibano and Sánchez, 2008) universities are currently experiencing some of the concerns companies have. The two types of institutions are playing in global markets, facing competition and being obliged to innovate in order to be competitive. Although their respective “markets” are different they both struggle for funds, good employees (teachers and researchers in the case of universities), customers (students), partners, etc.

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As the concerns are similar, we argue that universities can mirror the management and government processes followed by companies, learn from their experiences and benefit from the IC framework to cope with the external pressures for change they are facing.

Some relevant similarities are the following.

### *2.1 The need to create value*

Although public universities do not make profits and there is no market value in the same sense as for companies, there is an increasing need for them to show that the public and private money they receive is used to produce new knowledge and knowledge useful to society. Firms and universities alike face similar problems, since knowledge production and diffusion – a main intangible universities deal with – is very difficult to measure because of the specific characteristics of knowledge (Foray, 2004). Apart from that, this value is created when knowledge and other intangibles interact adequately with other assets (tangible or intangible; Marr and Roos, 2005, p. 36). Just as it is difficult to relate intangibles and IC to performance in companies (Cañibano and Sánchez, 2004, 2008) it is likewise in universities.

The advantages of managing intangibles and disclosing information for companies such as asymmetries reduction, more transparency and decreasing the cost of capital have been duly documented. A summary of these advantages is shown in (Cañibano and Sánchez, 2004). The European Commission (2006a) in the RICARDIS report envisages similar effects for universities which, although not competing on capital markets, compete for funding, students, researchers, and partners.

### *2.2 Corporate social responsibility*

Both companies and universities have to provide responses to new social demands. Although, in recent years, there has been a growing concern that business reporting is inadequate and many ideas have been put forward on possible reforms, there is no agreement on what should be done (Institute of Chartered Accountants in England and Wales, 2004). The corporate social responsibility (CSR) is defined by AECA (2004) as a new company dimension concerned with a firm's sustainability and its impact on the economic, social, and environmental arena. It is a commitment made by a group of people to interact with society and to contribute to its amelioration.

Different national and international organizations have issued guidelines such as the global reporting initiative, either compulsory or voluntary, for social and environmental reporting. The European Commission (2006b) issued a communication to the European Parliament, the Council and the Economic and Social Committee on the implementation of CSR with the intention of making Europe a pole of excellence in CSR. The United Nations launched its "Global Compact" programme in order to voluntarily align companies and other entities, universities among them, with a set of principles on human rights, labour, the environment, and corruption (Williams, 2004).

Another hot topic in the business environment nowadays is corporate governance which is related to the way in which companies are organized, managed, and controlled, while taking into consideration different stakeholders' interests: shareholders, board, managers, employees, and other third parties involved in the workings of the company. CSR and corporate governance are interrelated, with an on-going academic debate about

which of the two concepts should prevail. As we will insist later on, governance issues in universities are becoming an important concern as well.

Social responsibility is in ever greater demand, not only from large and multinational companies, but other organizations such as governmental agencies, universities and research centres. Spain is an example of these demands (Congreso de los Diputados, 2007). For that reason, the previous comments on CSR reporting can be applied not only to companies but to universities too. As a part of the third mission activities, previously mentioned, universities have to prove to be socially responsible, and show that they are responding to societal demands.

An important rationale behind these actions is the need to provide information which is user-oriented, that is to say, information that contributes to the users' decision-making process. In the financial accounting literature this is known as the "decision usefulness paradigm" (Riahi-Belkaoui, 2000), and it is starting to be applied to universities as well. For example, a current expert group of the European Commission working on assessment of university-based research is also analysing as a point of departure, the needs of the different users of information provided by universities, so as to develop the methodology that best permits them to meet these needs.

### *2.3 Alliances and networks*

Universities as well as companies are relying increasingly on alliances and networks (part of the so-called relational capital) with other institutions. This relational capital is particularly important. However, to identify suitable indicators for them and to link their existence to performance is a very difficult issue for both types of institutions.

The OECD has also echoed the importance of paying special attention to relationships and networks and the positive effect they might have on innovative capacity (OECD, 2005). This importance is stressed both for companies and universities.

Apart from the need to compete that encourages change in universities and the global initiatives to foster social responsibility in different institutions, there are other external pressures for change that affect universities in particular, which merit being highlighted.

## **3. External pressures for change**

Most of the above mentioned concerns which affect universities and companies operate, at least in the case of universities, as external pressures. This means that cases where the need for change in management and governance is raised within the university because of internal requirements or necessities is very rare. In most cases it is the environment which obliges them to move and respond to new situations.

This is a clear result of a case study project on four European institutions. An in-depth analysis has been made applying grounded theory (Glasser and Strauss, 1967) and has found several elements in common, in relation to those external pressures that, with all caution, could be applied to many European higher education institutions (Elena, 2007; Sánchez and Elena, 2008).

### *3.1 National and supranational reforms*

There are national reforms under way in many European countries calling for more institutional autonomy to be given to universities asking, at the same time, for greater accountability (EUA, 2005, 2007; European Commission, 2007; OECD, 2007). This process

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is encouraging the application of business-like management procedures. However, it has to be pointed out that the term “autonomy” raises some conflicts when trying to apply it. For example, in practical terms financial autonomy has to be understood in the sense that universities have to look for money from sources other than governmental since these are decreasing. At the same time, the real capacity to make decisions and allocate resources in universities is actually smaller than the legal one, because the governance system is a constraint in the decision-making process. We will go back to this issue later.

### *3.2 Increasing number of funding institutions*

The pressure to manage universities in a more managerial way and to adequately report is partly due to the increasing number of funding institutions. On the one hand, there are different governmental funding providers (national, regional, or local), and on the other, given the state’s decreasing role in relative terms, other suppliers are to be found, such as the European Commission, foundations, other private bodies, NGOs, etc. The increase in accountability is clearly a result of external pressures (Huisman and Currie, 2004) coming from all these money providers.

### *3.3 A management strategic perspective*

A strategic perspective is being introduced in university management. There is an observed tendency to use managerial tools to improve the process of defining priorities and objectives, as companies usually do. However, it is also perceived that except in some cases the strategic planning has more to do with intentions than with implementation (Dearlove, 2002). Again the governing structures seem to jeopardize the possibilities to implement real strategic plans.

### *3.4 Performance agreements*

As mentioned before, both national and regional governments are developing new performance agreements to link funding with scientific results. In this sense the funding is not only a necessary input to develop better research but also an indicator of excellence. This type of agreement obviously fosters new measurement and reporting systems.

## **4. Barriers and constraints for changes**

The above mentioned case study analysis also shows some very relevant barriers to applying managerial systems to universities. The main ones are the following.

### *4.1 Governance system*

Such a system is based on a collegial style. This implies that the governing bodies are plural decision-making committees where all groups (teachers, administrative staff, and students) are represented, avoiding power concentration (Mora, 2001). The heads of those bodies are usually democratically elected from among candidates with recognised prestige in their discipline and an active role in academic life. Such a model, although enjoying clear benefits, has two unintended consequences in relation to the issue we are dealing with:

- (1) It constrains the definition and implementation of internal policies and hinders the introduction of significant changes. This constraint is partly due to the election system because researchers-managers are still part of their disciplinary groups and will return to their posts once their mandate is over. Hence, their

involvement in resource allocation is controversial because they, or the groups they belong to, are directly affected by their own decisions. This jeopardizes the likely radical decision-making the new environment is calling for.

- (2) Management activities require different skills and other capacities than research. The collegial system focuses more on assuring the intellectual leadership of the candidates than on their management abilities which are far from guaranteed in this system. Thus, although the election system assures democracy and participation of all the different staff, it is perceived as a major constraint for the implementation of change.

An alternative is the so-called “leadership” model, a hierarchical decision-making model, where most unit heads are not elected but nominated by different authorities. It is not at all free from conflicts (Huisman *et al.*, 2006; Allen, 2003); however, there is growing consensus that those, sometimes, radical decisions that have to be taken to encourage the necessary changes may be easier to achieve (Jacobs and Ploeg, 2006, p. 555).

#### *4.2 Internal tensions*

Some internal tensions jeopardize change. This is the case, for example of interrelations between teaching and research. In most HEIs it is difficult to separate the implications of certain policies or organizational decisions on both activities and the institution has little control on the personal allocation of time. However, while teaching is sometimes the main criteria for recruitment processes, research results are one of the most relevant performance measurements, which, as mentioned before, determine an increasing part of the funding.

This tension is more evident in some disciplines where multidisciplinary approaches and cooperation on networks are essential features. Tensions also appear in very different disciplines, such as experimental sciences, social sciences, or humanities. In all these cases the evaluation systems of research performance and the indicators reflecting outputs and outcomes are necessarily different. Measuring and reporting systems may therefore vary within the institution which, on the other hand, raises problems for data gathering and makes decision-making for resource allocation or research assessment more problematic.

#### *4.3 History matters*

As in many other issues and institutions, history matters (Musselin, 2005) and the country’s history and culture explain many differences in trends in universities (Yokoyama, 2006). It is interesting to note that, for example, both Portugal (Santiago *et al.*, 2006, p. 228) and Spain have evolved from dictatorships over approximately the same period. These countries have moved from a model where academic authorities were appointed by political authorities to one which the academic community has had a long struggle for the democratic election of their head of units. Given this background, it will probably be more difficult for them to accept the leadership model without conflicts and tensions.

### **5. The intellectual capital framework. Some international experiences related to universities**

The basis for suggesting that public institutions modify their management process and increase their accountability duties may be found in the new public management

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(NPM) principles (Santiago *et al.*, 2006; Boer *et al.*, 2007). Governments have used them since the 1980s to enhance public sector efficiency and the quality of its services, by decentralizing, applying competition and treating the beneficiaries of public services as customers. However, the literature review on this issue made in Sánchez *et al.* (2009) shows that an increasing number of authors (Guthrie *et al.*, 2004; Almqvist and Skoog, 2007; Mouritsen *et al.*, 2005; Leitner *et al.*, 2005; Altenburger and Schaffhauser-Linzatti, 2006) support the use of the IC framework as more suitable than NPM for meeting the new demands to universities because, among other things, it can help to identify strengths and weaknesses, reveal the current state of the different university missions and be used as a controlling and monitoring instrument.

We are witnessing an increasing number of case studies and policy actions which show that this framework is used as such an instrument. Well-known cases are the experience of ARC systems research (Leitner, 2004; Leitner and Warden, 2004), and the Austrian law that obliges universities to provide an IC Report from 2006 onwards (analyzed in Sánchez and Elena (2006), Elena (2007), and Leitner *et al.* (2005). Needless to say, there are risks and unintended consequences of this exercise (Altenburger and Schaffhauser-Linzatti, 2006), such as the production of a meaningless list of indicators. However, we support the idea that the IC framework is a good communication tool to encourage discussion on what has to be measured and how to provide third parties with the information they need, because the indicators disclosed are put into context.

We are also witnessing different assessment exercises around the world that without using the IC terminology are in fact using intangibles to provide university funding, such as Madrid (Comunidad de Madrid, 2005) and other Spanish Regional Governments; the Austrian Government (Altenburger and Schaffhauser-Linzatti, 2008), the Australian Government (Australian Government, 2007). Furthermore, the European Commission has just conveyed an expert group on assessment of university-based research where different indicators on intangibles are being suggested.

Some European projects such as the observatory of European universities (OEU), within the PRIME network of excellence (OEU, 2006) or the RICARDIS Report (European Commission, 2006a) recommends the use of the IC framework for university reporting. The former has developed a guide for universities whose last chapter (Sánchez *et al.*, 2006) suggests an IC report on universities where there is a definition of a set of indicators and the way it should be made public homogeneously, in order to enhance transparency and answer the various stakeholders' needs. This IC report for universities (ICU report) follows the recommendations of the European Commission (2006a) in depicting the logical movement from management and internal strategy (design of the institution's vision and goals) to the disclosure of indicators, taking into account previous guidelines for companies, such as measuring intangibles to understand and improve innovation management (MERITUM)[1], Cañibano *et al.* (2002), Danish Ministry of Science, Technology and Innovation (2003), Society for Knowledge Economy (2005), and Japanese Ministry of Economy, Trade and Industry (2005), and for universities (Leitner and Warden, 2004).

The content of the ICU report follows the same structure as the IC report for companies. It is made up of three parts, all equally important, first, the vision of the institution, aiming to present the main general objectives and strategies and the key drivers to reach them; second, the summary of intangible resources and activities,

which describes the intangibles the institution can mobilize and the different activities undertaken or planned to improve them. It should reflect the priorities on which the institution will focus; and, third, the system of indicators, which should allow both internal and external bodies to assess the performance and estimate the future of the institution.

Indicators are needed to evaluate how well an organization is performing. They are also necessary to reflect how knowledge is constructed (Catasús and Gröjer, 2006). If we want our universities to perform better we need to be able to reflect in indicators what they are doing and how they evolve through time. The motto used for companies “What gets measured gets managed” (Catasús *et al.*, 2007) can be equally applied to universities.

With this in mind, the list of indicators suggested takes into account the experiences of the institutions included in the OEU exercise and focuses in particular on the feasibility of data gathering and the usefulness of the information provided. It recommends always checking the indicators which have been chosen against the list of characteristics they should have according to MERITUM (Cañibano *et al.*, 2002). Any variable might be measured by using different indicators and these could be interpreted differently by different readers. Because of this, any system of indicators is not self-explanatory so it is crucial to take into account the first two parts of the report to avoid ending up with meaningless or useless information.

## 6. Conclusions

There is general consensus in current literature and in the recommendations of supranational organizations about the close relationship that exists between good corporate governance and transparency in disclosing information. To adapt such information to the variety of stakeholders’ needs is a must for any responsible institution (Cañibano, 2004).

Financial information reported by companies has evolved in this direction, facilitating the users’ decision-making process. The International Financial Reporting Standards adopted in 2005 by the European Union for listed companies, are an important milestone in this evolving process. This orientation, as mentioned before, is known as the “decision usefulness paradigm” (Riahi-Belkaoui, 2000) and is inspiring more recent developments related to CSR or IC, both of which highlight the relevance of users other than investors.

It is obvious that declaring that a piece of information is useful for users is not enough. The empirical research related to financial information in recent years has tried to validate such a declaration and answer questions such as the following: how do accounting figures affect capital markets? or exactly what information is needed for better resource allocation? or, referring in particular to innovative companies (KPMG, 2008), Is CSR information producing positive effects on companies and their environments?

We have argued that universities (and higher education institutions in general) are increasingly confronted with similar concerns to those in companies. They are obliged to produce information to respond to external pressures for change and to satisfy the needs of more users while struggling with internal and some institutional barriers to these changes.

Based on the characteristics of the IC framework and on some international experiences which are applying this framework conceptually and practically to universities, we also argue that the ICU report may be a good mechanism for universities to satisfy users’ needs

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and comply with the new societal demands. However, as in the case of companies, there is still a long way to go. On the one hand, some standards for such a report at international level have to be established, while on the other, the benefits for both the academic community and stakeholders have still to be verified.

To conclude, we consider that transparency in disclosure and providing due consideration to the users' information needs are key principles to have in mind when defining such standards. These are main challenges to Europe on the long journey to a real European higher education area and a real European research area.

#### Note

1. Some of the MERITUM activities resulted in several important publications by Jan Erik Gröjer on intangibles and IC. They are analysed in Catusús and Johanson (2008).

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