

*Intellectual Capital and the University Third Mission:
an Evaluation Framework*

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Purpose – The purpose of this work is to understand the new role of universities in the development of the knowledge economy via an intellectual capital perspective. Indeed, from being entities for knowledge creation and dissemination, universities are now asked to play an increasingly entrepreneurial role, involving networking and collaboration, as well as sustainability and social engagement. This consideration is in line with the 4th stage intellectual capital perspective, which focuses on knowledge creation with an ecosystem focus.

Design/methodology/approach – The work is based on the following steps: first a literature review on the new role of universities and on the Third Mission approach; then, an analysis of the evaluation of Third Mission activities, by including several international ranking systems and research projects; finally, an analysis on the exploitation of IC as an assessment tool.

Findings – Despite the academic and institutional efforts, there is little agreement on a set of indicators to evaluate quality in Third Missions activities. Several models have been implemented in order to identify IC in universities, but they need further applications and evaluations.

Originality/Value – Through this methodology, we will try to systematise the theoretical contributions, which are currently fragmented and lack a systemic vision.

Keywords – Evaluation, Intellectual Capital, Third Mission, University-Business-Government Relations, sustainability, Non-Financial Statement Declaration, Financial Statements, IT Developments, Accounting Standards, medium-sized enterprises, Integrated reporting, Integrated report, Case-study, Integrated Reporting; Intellectual Capital; Stakeholder Engagement; Performative Approach; Case Studies Method.

Paper type – Extended Abstract.

1. *Introduction*

European Commission and OECD (2012) stated that «higher education is facing unprecedented challenges in the definition of its purpose, role, organization and scope in society and the economy», by becoming progressively aware of its crucial role for the economic and social development.

Public research institutions not only generate and disseminate knowledge, but are also called to transfer their findings to science related communities, such as industries and commerce. This evolutionary process, resulting in the Third Mission theory, is consistent with the fourth stage perspective in intellectual capital (IC) theory, that advocates for knowledge creation with an ecosystem focus (Dumay & Garanina, 2013). In fact, the creation of knowledge by ecosystems (be they national or local ones), and not by individual organizations, is aligned with the Third Mission approach, where universities build ties and relationships with their local communities to enhance their development and create shared knowledge.

In order to meet Third Mission challenges, several attempts have been made to find commonly agreed indicators and methodologies to evaluate and compare the activities of this new approach in different institutions and countries.

For this work, the definition of IC to be employed is the one by Stewart (1997), adapted by Secundo *et al.* (2016). IC is «intellectual material, knowledge, experience, intellectual property, information that can be put to use to create value». As the authors explain, the concept of value is broader than mere monetary wealth creation, and goes to include social value, which is one of the outputs of the university's activities, as well as one of the pillars of the Third Mission theory.

2. *The new role of universities: a literature review*

Today's socio-economic reality is based on the concept of 'knowledge', the element at the core of the currently dominating model of the knowledge-based economy and society (Powell & Snellman, 2004; Leydesdorff *et al.*, 2006; Leydesdorff, 2010).

The strong push toward the knowledge-based economy led to exploring the way through which know-how is exchanged from producer to user, known as 'technology transfer's.

The initial and best-known theories on technology transfer were developed by Gibbons *et al.* (1994), focused on the transition from 'Mode 1'

to 'Mode 2'.

Then, the Triple Helix Model, built by Etzkowitz and Leydesdorff in 1995, completely changes the equilibria between actors in the technology transfer, giving a primary and innovative role to universities.

The role that they have, in this modern perspective, refers to the concept of 'Third Mission' (Etzkowitz, 2003; Hessels & Van Lente, 2008; Ranga & Etzkowitz, 2013), a symbol of their involvement in socio-economic progress.

2.1 Evaluating university Third Mission: a state of the art at international level

The growing importance of Third Mission in universities has led institutions and researchers to look for indicators to assess this dimension.

Despite several initiatives in this direction, the collection of data and the development of indicators on Third Mission activities still keep many limitations (E3M, 2012).

University rankings have become important worldwide, representing a significant factor impacting on higher education institutions, policy makers, public opinion and media (E3M, 2012; Hazelkorn *et al.*, 2014).

The three main rankings are (Altbach, 2012): the Academic Ranking of World Universities (ARWU), the QS (Quacquarelli Symonds Limited) World University Rankings and the Times Higher Education World University Rankings (THE). They have been strongly criticised, since they compare different types of higher education institutions using a single set of criteria (Hazelkorn *et al.*, 2014).

To overcome some of these limitations, in the last years several other rankings have been proposed; the most important is the U-Multirank (UMR), that only compares institutions with similar activity profiles.

Therefore, the weight of Third Mission activities in the main international rankings is marginal or non-existent, thus in the last decade many research projects have attempted to identify and test indicators for them.

The Russell Group of Universities identified 12 groups of Third Stream activities and for each of them they developed a set of indicators; the Observatory of European University (OEU) carried out the framework of the PRIME Network of Excellence; the Higher Education Funding Council for England (HEFCE) conducted an annual study, the Higher Education-Business and Community Interaction (HE-BCI) survey, which examines the exchange of knowledge between universities and the wider world.

Then, the E3M Project (European Indicators and Ranking Methodology for University Third Mission) was a three years project co-funded by the European Commission and developed by partners from eight European countries.

Finally, in 2012, the European Commission and the OECD provided a framework to help European higher education institutions managing and driving the institutional and cultural changes, with a focus on their entrepreneurial role.

But, in a context characterized by the decline of financial resources, intangible resources appear more stable, able to generate the competitive differential between universities and improve their social legitimacy (Leitner & Warden, 2004; Secundo *et al.*, 2010).

In this sense, skills and knowledge of human resources, the knowledge encoded within the organisation and processes and that deriving by external relations generate a system of strategic resources for higher education institutions, identified as ICU (Intellectual Capital within University) (Canibano & Sanchez, 2009; Leitner *et al.*, 2014). It could satisfy the needs of different subjects simultaneously, inspired by the principles of the collaboration and co-creation of value (4th stage IC perspective), but its consideration results currently sporadic and not institutionalised.

An exception is represented by Austrian universities, that, in 2006, adopted mandatory knowledge balance sheets (according to the 'Intellectual Capital Report 1999-2004').

In Italy, the evaluation of Third Mission activities is assigned to ANVUR, the Italian National Agency for the Evaluation of the University and Research System. Although the exploitation of ICU descriptive reports is still not formalised (Sanchez *et al.*, 2009; Elena-Pérez *et al.*, 2011), the evaluation of research quality (VRQ), especially in the second model adopted (2011-2014 VQR), tries to analyse the efficiency, the effectiveness, and the value of research activities and Third Mission through qualitative and quantitative indicators related to each component of IC.

According to Secundo *et al.* (2015), intellectual capital should be measured and managed in order to enhance the strategic management of universities. Since intellectual capital represents the largest proportion of universities' assets, its effective management is a key issue in university policy (Secundo *et al.*, 2015); it should be measured in terms of its direct or indirect social value (Secundo *et al.*, 2017; Castellanos and Rodrigues, 2004).

Moreover, given the complexity of measuring the performance of universities in terms of Third Mission activities, intellectual capital can provide help «to identify structural and personal strengths and weaknesses,

reveal the current state of the accomplishment of university third mission and can be used as an assessment instrument» (Secundo *et al.*, 2017).

3. *Conclusions*

For a long time, universities focused on what is called basic research: the 'pure' researcher, sitting in his ivory tower, without thinking of engaging in actual activities that could create economic value; over the last years, society and economy have challenged the university to use its knowledge in applied research.

Moreover, we saw how the Third Mission approach presents conceptual similarities and links with the 4th stage IC perspective. Based on this consideration, it is possible to expand the Third Mission framework to include, and merge with, IC elements. Authors like Secundo *et al.* (2016) did so, and built a model for assessing and evaluating Third Mission activities on the basis of considerations on IC. In fact, the intellectual capital of universities can become both an assessment tool for evaluating Third Mission performance (as suggested by Secundo *et al.*, 2017), and an empowering and facilitating tool for enhancing and encouraging Third Mission activities.

The practical implications of this paper concern the importance of building reliable evaluation frameworks. Limitations include the newness of studies providing evaluation frameworks, which need to be further applied and tested with the internal and external stakeholders.

Future research should be devoted to the role of universities in supporting growth and innovation within society.

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