PHD COURSE IN
MANAGEMENT AND INFORMATION TECHNOLOGY
XVI ciclo nuova serie – Curriculum in Economia e Direzione delle Aziende Pubbliche

PhD Thesis in
The rise of Intellectual Capital reporting. The relevance of IC disclosure in Italian Universities

Tutor:
Prof. Paolo Tartaglia Polcini – University of Salerno - Italy

PhD student
Giuseppe Nicolò

Matr: 8800800001

Coordinator:
Prof. Andrea De Lucia – University of Salerno - Italy

EXTENDED ABSTRACT

This thesis is the result of the research work carried out during the three years of PhD in Public Sector Accounting at the University of Salerno under the supervision of prof. Tartaglia Polcini, and during the four months, at the University of Ghent under the supervision of prof. Johan Christiaens.

The thesis represents a structured compendium of the results obtained from three empirical researches. However, it does not intend to offer a mere summary of these works, but to describe in detail, from a theoretical point of view, the phenomenon investigated, arriving in a consequential manner to the presentation of the results of the research conducted which represent its empirical developments.

The PhD research activity has been mainly focused on Intellectual Capital (IC) which in recent years has gained momentum first in the private sector and, then, more vigorously, in the public sector as critical success factor.

Intellectual Capital can be defined as "the collection of intangibles which allows an organization to transfer a collection of material, financial and human resources into a system capable of creating value for the stakeholders" European Commission (2006, p. 4).

Due to its intangible nature, the IC has progressively acquired more relevance in public sector and in particular in University sector which, among public sector entities, have the highest degree of intangibility. In particular, Universities are basically knowledge-based institutions in which IC plays a crucial role as it is both the result of the research and development activities and the driver that leads to the creation of greater value from those activities.

More specifically, universities fundamentally create knowledge through their three missions: *teaching* (students trained and relationships with their stakeholders); *scientific and technical research* (the results of investigation, publications, patents, trademarks, scientific discoveries) and *entrepreneurial activities* (technology transfer, licensing, spin-off). Therefore, Universities' inputs and outputs are largely intangible assets and thus IC components.

Thus, when declined in the University context, the IC "Is a term used to cover all the institution's non-tangible or non-physical assets, including processes, capacity for innovation, patents, the tacit knowledge of its members and their abilities, talents and skills, the recognition of society, its network of collaborators and contacts, etc." (Ramirez et al., 2011; Ramirez, 2013; Ramirez and Gordillo, 2014; Ramirez and Lizano, 2015; Ramirez et al., 2016).

The IC Universities' components are usually grouped into three main categories (Leitner, 2004; Ramirez et al., 2011; Silvestri and Veltri, 2011; Ramirez, 2013; Ramirez and Gordillo, 2014; Low et al., 2015; Ramirez and Lizano, 2015; Secundo et al., 2015; Ramirez et al., 2016; Secundo et al., 2016):

• *Human capital* is composed by both the explicit and tacit knowledge of the university staff (teachers, researchers, PhD students, managers, administration and service staff), developed through formal and non-formal education and learning processes embedded in their activities. It is also identifiable in the knowledge contained in the competencies which individuals take with them when they leave the institution, such as the expertise, knowledge and experiences of researchers, professors, technical and administrative staff, PhD and students' competencies.

• *Structural capital* is referred to the explicit knowledge related to the internal processes of diffusion, production, communication and management of knowledge and research at the university. It embeds the databases, procedures, research projects, research infrastructures, research and education processes and routines, university culture, image, reputation and governance principles. It is also recognizable in the knowledge that remains within the institution at the end of the working day.

• *Relational Capital* is represented by the complex bundle of economic, political and institutional relations developed and consolidated to create value between the university and its wide range of partners: companies, non-profit organisations, local and regional government, research centers, citizens community and society in general. It also includes the perception that others have of the university: its image, appeal, reliability, and so on.

In the last few decades, universities have been affected by several economic, political and social changes (NPM, Bologna process, Lisbon strategy, emerging of third mission) that have contributed to change their role, structure, mission and organizational models by revolutionizing the whole higher education system.

These changes, aiming fundamentally at increasing the autonomy, comparability, competitiveness, efficiency and effectiveness of Universities, have definitively contributed to emphasize not only the overall importance of IC in this sector, but, above all, the need for new management and reporting systems including IC components which, as argued above, represent the "beating heart" of this type of public organisations, in order to enhance institutional accountability and transparency towards stakeholders such as citizens, taxpayers, students, research centres, governments and others as well as to improve their decision-making process.

Nevertheless, despite the awareness of the pivotal role played by IC in universities and the consequential overwhelming need to develop specific IC reports, no country - with the exception of Austria - has an obligation to draw intellectual capital statement and, there are

very limited instruments to manage and report IC in universities (Canibano and Sanchez, 2004; Leitner, 2004; Sanchez and Elena, 2006; Bezhani, 2010; Ramirez et al., 2011; Sangiorgi and Siboni, 2017).

As a consequence, regulators, accounting profession bodies, observatories and accounting scholars have developed suitable guidelines and frameworks in order to support the correct identification of IC components and stimulate the diffusion of common practices of managing and reporting IC within universities (Ramirez et al., 2011; Sangiorgi and Siboni, 2017). In this vein, in the absence of compulsory IC reporting, in recent years, different scholars (Bezhani, 2010; Siboni et al., 2013; Low et al., 2015; Sangiorgi and Siboni, 2017) have carried out empirical research in order to examine the type and amount of IC disclosure provided by universities through different accounting sources (annual reports, performance plans, social reports). Moreover, other authors (Ramirez et al., 2011; Ramirez and Gordillo, 2014; Ramirez et al., 2016), have directly investigated which IC elements university stakeholders demand most as well as the adequacy of current reporting tools in satisfying their information needs about IC.

Nevertheless, despite the claimed importance of the issue of management and IC reporting in the public sectors, "The public sector is one of the least addressed areas of intellectual capital (IC) research" (Secundo et al. (2015, p. 419). In particular, the empirical studies on intellectual capital – especially on its disclosure – are still limited and offer great room for future investigations.

Thus, moving on this literature background, the three empirical researches carried out over the three years of the PhD program and presented in this thesis, are focused on the analysis of the level of Intellectual Capital disclosure provided by Italian Public Universities in the absence of mandatory requirements.

In particular, the three studies have followed a specific logical thread.

Firstly, the level of IC disclosure provided by Italian public universities through the annual reports has been investigated together with the analysis of the potential determinants.

Secondly, the web universe has been explored by analysing the IC contents provided by Italian public universities through this innovative and more accessible to stakeholders tool. Also in this case, a set of possible explanatory factors of the level of IC disclosure provided by universities through their websites has been investigated.

Finally, a comparative research has been conducted by assessing the level of IC disclosure provided by a sample of Italian, Greek and Spanish Universities through their websites.

Grounded on this topic and the empirical research carried out, the thesis unfolds as follows.

The *first chapter* is devoted to general description of the IC phenomenon in the private sector in which the IC initially has found wide development. In this vein, the main IC

definitions are reported as well as the main measurement models and frameworks for its classification in private sector are discussed. The first section finally offers a discussion on the general relevance of IC disclosure and the emerging of new reporting tools which can represent new frontiers for IC disclosure.

The *second chapter* is focused on IC in the public sector by describing its theoretical foundations and the peculiar features assumed by this phenomenon in public sector organisations. Particular attention is devoted to the University context and the several political, economic and social changes which have prompted the IC development in this sector. This section ends with the illustration of the main European IC reporting experiences in Universities and the description of the most relevant empirical studies conducted on IC disclosure in Universities.

The *third chapter* gathers the presentation and the discussion of the three empirical researches carried out during the PhD on the IC disclosure in Universities research field. It offers a detailed overview on the sampling and research methodology employed as well as a structured discussion of the results obtained.

Finally, the forth section draws some conclusions, highlighting the contributions of the research, the limitations and the way forward.

The main conclusions, may be summarized as follows:

- Italian public universities provide a reasonable level of ICD through their annual reports with a particular focus on *internal capital* and *human capital*, while consideration of *external capital* is rather low. The *size* and the *board independence* positively influence the level of ICD in Italian public universities.

- Italian universities are exploiting the potentialities offered by websites by providing a good amount of IC information together with an adequate level of web accessibility to their users. This is the signal that, beyond the annual reports, these more dynamic and interactive tools represent a new frontier in order to disclose information. However, the lower consideration attributed to *external capital* deserves particular attention. Indeed, by considering the emerging of third mission and the progressive increase in the number of stakeholders, this category requires greater reporting efforts.

- From an international comparative point of view, in Europe Italy can be considered similar to Spain and Greece. In all of these countries the web is a suitable tool in order to provide IC information but, in the actual historical moment, Italian Universities outperform both Spanish and Greek universities in terms of IC disclosure.