

## Successful strategies to be learnt from world-class universities

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**Abstract.** *Throughout the present paper we want to argue the idea that higher education is strongly linked with research, innovation, and competitive advantage and thus plays a crucial role not only for the individual and societal development but also in the process of delivering the National and European Strategy, to drive forward growth. Universities are the main actors responsible to provide the highly skilled human capital that Europe needs in order to create jobs, successful businesses, and prosperity. The ambitious aim to become a world-class university has its roots not just in rational (financial) considerations, but also in the symbolic role of such universities. The rankings made the competition between the states very visible and thus, are most commonly recognized as an indicator of success due to excellence-driven policies. Within this work we bring arguments and examples about which are the most efficient strategies of world-class universities. The first section of the paper we argue the roles of universities within nowadays economic and social world. The second section of the paper highlights the conceptual issue of world-class universities, the motivation and the determinants of such a goal. Within sections three of the paper we benchmark the key factors of two main international ranking (the THES and SJTU) and we analyse the successful strategies of famous world-class universities. According to the research conclusions and to our considerations we suggest that a valid option would be for universities to follow the international trend towards becoming a world-class university. Also an opportunity would be to develop themselves into learning organizations.*

**Keywords:** higher education system, strategies, world-class universities, knowledge based strategies, learning organization.

### Introduction

Within the future unpredictable business environment and the accelerated knowledge economy development, the universities need to increase their knowledge generation and knowledge transfer toward the society. Universities should strive to become learning organizations, in the sense, explained by Peter Senge (1990).

During their struggle for adaptation universities acknowledged that they must enlarge their focus also on research and not only on their traditional mission of teaching and learning. Nowadays the society's expectations regarding the universities are more complex in terms of their contribution. Universities have to continuously monitor the needs of different categories of stakeholders, like the students and their families; private firms and public institutions; the national and local governments; and not least, the community. At this stage it is worth considering the new paradigm according to which universities should switch from creating adaptation knowledge to produce generative knowledge, and to become learning organizations. That means for governance to become a strategic driving force (Bolisani and Bratianu, 2017) of the university and a powerful integrator able to transform efficiently the potential intellectual capital into operational intellectual capital (Bratianu et al., 2016; Prelipcean and Bejinaru, 2016).

Since its beginning *the university* has always been a cultural and moral symbol for social communities. The perspectives, the preoccupations, the activities and the goals of universities have greatly changed in time and thus have their roles and strategies. Nowadays universities are viewed as knowledge providers, as innovation facilitators, as promoters of entrepreneurial talent, as economic and civic leaders and mostly as knowledge pioneers (Creative Commons, 2015).

The fundamental change of universities' role was timely stated and approached throughout the World Bank's policy which in the 2002 Report, identified four essential functions of higher education in supporting knowledge-driven economic growth: -the capacity to train a qualified and adaptable labor force – including high level scientists, professionals, technicians, teachers for basic and secondary education, as well as future government; -the capacity to generate new knowledge; -the capacity to access existing stores of global knowledge and adapt it to local use; -the transmission of norms, values, attitudes and ethics as the foundation of the social capital necessary to construct healthy civil societies and cohesive cultures, which are essentials for better government and political democracy (Brennan et al., 2004).

Universities play an important part in responding to transforming students' skills according to the shape of the workforce requirements. Mostly technical and soft expertise of students is perhaps the most intensive means of knowledge transfer for universities. Also, they play an essential role in developing adequate thinking patterns for students and a deep understanding of complexity of knowledge and intellectual capital (Bratianu, 2007, 2009, 2015). Nowadays the creation and commercialization of innovative ideas generates economic advantage for the universities. In this sense they have to take up a proactive role in the marketing of their research through investment in academic and graduate spinoffs, and backing ventures that can add value and complementary expertise to their internal R&D facilities. A different revenue strategy could be to facilitate innovation indirectly, by providing space for innovative firms to interact closely and assisting the development of networks. One more possibility to grow profits is by promoting entrepreneurial talent through education and entrepreneurship support services. This helps graduates and local residents gain the confidence, skills and tools needed to start their own business (Creative Commons, 2015).

Many universities act as economic and civic leaders in their local area. They are in an ideal position to take the lead on significant socio-economic issues at a local level by: - helping to shape local economic strategies, -linking research and teaching priorities to local economic and social needs; -promoting public engagement, community well-being and active citizenship skills. The global rankings made the competition between the states very visible and thus are most commonly recognized as an indicator of success, of excellence-driven policies (Sadlak and Cai, 2007). Stating their strong engagement towards becoming world-class universities is also a trend nowadays. The strategies presented in the previous paragraphs are meant to emphasize the impact of knowledge generated by universities, meaning the economic and social roles of universities.

## **Defining the framework of a world-class university**

In the last decade, the international rankings of universities increased the competition in the domain due to the fact that these were highly promoted and commented. These actions generated effects regarding the image and profits of both public and private universities.

However, the ambitious aim to become a world-class university has its roots not just in financial considerations, but also in the symbolic role of such universities.

In time, universities have been classified according to different sets of indicators which referred to the number of graduates, the number of prizes won by professors and their prestige, the number of international grants and their budgets, and many others. Before the international ranking the process of qualification was, in part, considered subjective and based mostly on reputation. "For example, Ivy League universities in the United States, such as Harvard, Yale or Cornell, Oxford and Cambridge in the United Kingdom, and Tokyo University in Japan have traditionally been counted among the exclusive group of elite universities. But no direct and rigorous measure was available to substantiate their superior status in terms of training of graduates, research output, and technology transfer" (Salmi, 2009, p.15).

Today, the title of 'world-class universities' has gained the interest and focus of most universities and thus the detailed criteria evaluated for this purpose. As any other global trend, the orientation towards the idealistic world-class university can be observed not only in highly developed countries but also in developing ones (Wang et al., 2012). Conceptually speaking, according to the domain literature, world-class universities, are commonly referred to as the most prestigious research universities and considered as essential in developing a nation's competitiveness in the global knowledge economy. "These universities, at the pinnacle of the higher education hierarchy, play key roles in creating and disseminating knowledge, educating a highly skilled workforce for technological and intellectual leadership, and serving the needs of society" (Wang et al., 2012, p. 1).

A great range of definitions of the world-class university encompass mostly the same characteristics of these, like: highly qualified staff; excellence in research; quality teaching; high levels of government and nongovernment sources of funding; international and highly talented students; academic freedom; well-defined autonomous governance structures; and well-equipped facilities for teaching, research, administration (Altbach 2004; Khoon et al. 2005). As result of a collaborative research between U.K. and Chinese universities the list of specific features of world-class universities was enriched by indicators reflecting the international reputation or the contribution to society of the university (Alden and Lin 2004).

A strong statement was formulated by Salmi (2009) in The World Bank's Report, where he concluded his complex analysis upon the features of world-class universities with three complementary sets of factors which highly influence the top universities: "(a) *a high concentration of talent* (faculty and students), (b) *abundant resources* to offer a rich learning environment and to conduct advanced research, and (c) *favorable governance* features that encourage strategic vision, innovation, and flexibility and that enable institutions to make decisions and to manage resources without being encumbered by bureaucracy" (Salmi, 2009, p.20). The way the author envisions their reciprocal influence is represented below in Figure 1.

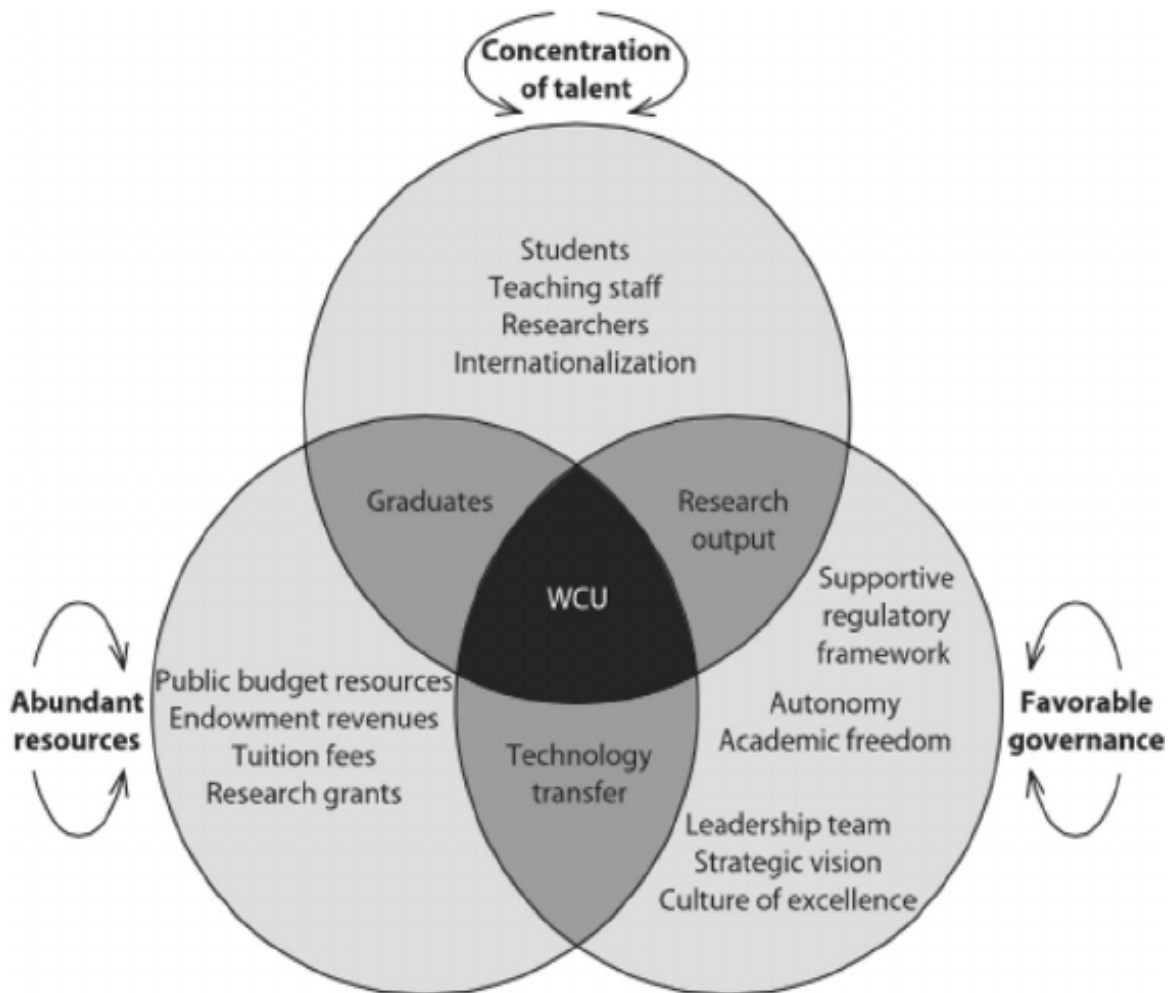


Figure 1. Characteristics of a world-class university: Alignment of key factors

Source: Salmi, 2009

Certainly the most important determinant of excellence is the presence of a mass of students and teachers of the best and world-class universities which are able to apply this kind of rigorous selection. It is well-known that Harvard University, the California Institute of Technology, MIT and Yale University are 'the most selective universities in the United States as measured by the average SAT scores of their incoming undergraduate students.' In world-class universities activate both students and faculty that are not exclusively residents of the state where the institution operates. Due to the successful mobilization of diverse national and international staff there are greater changes of increasing the university's capacity of knowledge networking (Salmi, 2009).

### World-class strategies and rankings

The most popular and comprehensive international rankings, which offer a broad benchmark comparisons of institutions across national borders, are those prepared by (a) the Times Higher Education Supplement (THES), produced by QS Quacquarelli Symonds Ltd., and (b) Shanghai Jiao Tong University (SJTU). These league tables or ranking compile and compare objective and subjective data gathered from the public domain or from the universities' reports. The ranking issued first in 2004 by THES presents the top 200

universities in the world. This ranking mostly includes evidence of international reputation, combining subjective inputs (such as peer reviews and employer recruiting surveys), quantitative data (including the numbers of international students and faculty), and the influence of the faculty (as represented by research citations). The methodology of the other ranking- SJTU, first elaborated in 2003 bases on seemingly more objective indicators, such as the academic and research performance of faculty, alumni, and staff. A series of evaluated measures include publications, citations, and exclusive international awards (such as Nobel Prizes and Fields Medals), (Salmi, 2009).

During his speech at the Times Higher Education's (THE) World Academic Summit at the University of California, Berkeley, the President of National University of Singapore (NUS), Professor Tan Chorh Chuan referred to Salmi's paper on "The Challenge of Establishing World Class Universities" and reminded that "Category fundamentals for world class universities include having a critical mass of top talent, ample resources and good governance. But there is need to go beyond these, to think about how you can further differentiate yourself as a university" (Tan, 2016).

A special case is represented by Oxford University and Cambridge University as they continue to battle year by year their position in the rankings. They have a long tradition being in top 10 and we should bear in mind that the differences at this level are minor and they both (Oxford and Cambridge) represent the elite among the world's higher education.

A more analytical perspective is offered by Hazelkorn (2013) who notes that rankings use information from four main sources: independent third party, such as government databases; bibliometric and citation data gathered through proprietary, electronic or web-based sources; institutional data; and student, peer, employer or other stakeholder surveys. The absence of internationally meaningful and available data continues to present a considerable problem for any reliable comparisons. (Hazelkorn, 2013). In Table 1 we present the key factors considered in realizing a ranking system for universities.

**Table 1.** *Factors considered in the ranking systems*

Rankings measure	Rankings do not measure
<ul style="list-style-type: none"> <li>• Bio- and medical sciences research</li> <li>• Publications in <i>Nature</i> and <i>Science</i></li> <li>• Student and Faculty Characteristics (e.g. productivity, entry criteria, faculty/student ratio)</li> <li>• Internationalization</li> <li>• Reputation – amongst peers, employers, students</li> </ul>	<ul style="list-style-type: none"> <li>• Teaching and Learning, incl. "added value", impact of research on teaching</li> <li>• Arts, Humanities and Social Science Research</li> <li>• Technology/Knowledge Transfer or Impact and Benefit of Research</li> <li>• Regional or Civic Engagement</li> <li>• Student Experience</li> </ul>

*Source: adaptation after Hazelkorn, 2013, p.7*

We present top 20 universities in THES and SJTU rankings for the year 2016. Further we shall analyse some strategies applied by these universities in order to understand what mostly contributed to their success but always referring to the three key sets of factors: (1) a high concentration of talent; (2) abundant resources; (3) favourable governance.

Presently Harvard is the most prestigious university in the world, being actually number one in SJTU World Ranking and on the highest scale in THES reputation survey.

Rosovsky (2014), the Harvard dean emeritus and scholar, sets out six elements for a top research university: Shared governance with a collegial administrative style; Academic freedom; Merit selection of students and faculty; Significant human contact - "real as opposed to virtual encounters between student and teachers"; Preservation and transmission of culture as one of its missions; and Non-profit status. Even if the Dean doesn't mention about infrastructure and technical resources this doesn't exclude them but their omission states actually that they are present and abundant across the institution. Stanford University is famous for its fruitful business collaborations and upraise of Silicon Valley which implies that it is best known for its huge impact on the development of technology and innovative business.

Since the start of ranking, Princeton is constantly in top 10, being thus one of the most illustrious higher education institutions. "Though modern universities are complex enterprises composed of multiple schools and subparts with varying goals and characteristics, Princeton is an exception to this pattern; it is a cohesive institution with a shared and intensely felt sense of mission." A distinctive feature of Princeton is the deep commitment to undergraduate teaching and student life quality. "Princeton certainly takes pride in combining the best aspects of a great research university and an outstanding liberal arts college, but its singular mission is both broader—encompassing a graduate program of rare quality—and deeper than that description would suggest." It is popular with visitors, with about 800,000 people visiting its open campus each year, generating about \$2 billion in revenue. (Princeton University Strategic Framework, 2016, p.1)

**Table 2.** *Top 20 Universities in THES and SJTU World Rankings, 2016*

<b>THES Ranking</b>	<b>World Rank</b>	<b>SJTU Ranking</b>
California Institute of Technology	1	Harvard University
University of Oxford	2	Stanford University
Stanford University	3	University of California, Berkeley
University of Cambridge	4	University of Cambridge
Massachusetts Institute of Technology	5	Massachusetts Institute of Technology
Harvard University	6	Princeton University
Princeton University	7	University of Oxford
Imperial College London	8	California Institute of Technology
ETH Zurich – Swiss Federal Institute of Technology Zurich	9	Columbia University
University of Chicago	10	University of Chicago
Johns Hopkins University	11	Yale University
Yale University	12	University of California, Los Angeles
University of California, Berkeley	13	Cornell University
University College London	14	University of California, San Diego
Columbia University	15	University of Washington
University of California, Los Angeles	16	Johns Hopkins University
University of Pennsylvania	17	University College London
Cornell University	18	University of Pennsylvania
University of Toronto	19	ETH Zurich – Swiss Federal Institute of Technology Zurich
Duke University	20	University of Tokyo

*Source: adapted after Minsky, 2016*

In accordance with the criteria of world rankings the Japanese Higher Education

System is greatly struggling to raise its global profile. In the first instance this regards the case of University of Tokyo – which applies the following set of strategies in order to climb up the hierarchy, as now it rank on the 20<sup>th</sup> place. One of the oldest and still most important types of strategy is the globalization of students' competition. Since the 1970s, University of Tokyo has been striving to globalize its educational programs. For instance, its Department of Civil Engineering has been offering courses in English for international students since 1982. This strategy stays into the focus more than ever due to the fact that students and researchers are becoming increasingly mobile and thus universities around the world are competing fiercely to attract the top talent (Masako, 2014).

## Discussions and conclusions

During the implementation of strategic actions, universities confront themselves also with barriers, shortcomings and paradoxes as the leadership paradox. Bratianu explains that “the paradox of the strategic management in the universities consists in the fact that leadership positions are assigned to those professors who have the best research results and academic prestige and not to those who have managerial capabilities and experience” (Bejinaru and Hapenciuc, 2016, p.605). By benchmarking the model of the learning organization and the world-class universities, the latter seems to be more approachable and better understood by all stakeholders because it is very well adapted for today's global environment and integrates so well many critical issues of the knowledge society.

No matter what target league tables they choose to raise in, universities will certainly invest on the level of their learning resources (Bui and Baruch, 2013). Thus, “whether they are striking for external prestige or internal quest for knowledge, becoming a ‘learning organization’ should serve as a good aspiration of universities.” Arguing the idea that “becoming a learning organization is the ultimate choice for universities to survive and develop”, Bui and Baruch (2013, p.3) explain that this type of organization engages development in specific areas like research-led teaching, research-led enterprise activities and entrepreneurship-led teaching/work-based learning. As we consistently argued throughout the paper, we underline the idea of Bratianu (et al., 2016, p.2) that the role of the university changed by developing the third dimension of its mission. „Beyond the traditional mission of knowledge creation through research and knowledge transfer to the students by teaching, universities have to answer to the community call and to perform an extended knowledge and technology transfer towards society.” All these efforts are developing under a great pressure as these universities aim for the top of world-class rankings (Curaj et al., 2012). In the case of Romania, universities disclose „the emergent need for implementing academic leadership in the Romanian universities, which means a new organizational culture based on the awareness of the fact that in turbulent times academic leadership proves to be the best solution for the university governance.” (Bratianu et al., 2016, p.7).

The key role of universities resides in the fact that they are the main actors responsible for providing the highly skilled human capital that Europe needs in order to create jobs, economic growth, and prosperity. However, universities are bounded by various cultural, social and historical origins and conditions. This paper intends to provide an in-depth picture of different approaches in pursuit of the shared goal of developing world-class universities, and to reflect, with specific examples, the current developmental trends in this field.

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