

Technical University of Liberec  
Faculty of Economics

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# Liberec Economic Forum 2021



13<sup>th</sup> – 14<sup>th</sup> September 2021  
Liberec, Czech Republic, EU





TECHNICAL UNIVERSITY OF LIBEREC  
Faculty of Economics



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# **Liberec Economic Forum 2021**

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## The International Competitiveness of Universities: How do We Measure It?

### Abstract

The competitiveness of Universities is important in both a domestic and an international context. There is no agreed measure of competitiveness, but rankings (league tables) are used as proxies for it – rightly or wrongly. The international league tables which have been developed during the last 15 years reflect both the increasing internationalisation of universities and growing international competition for mobile students and research funding. These league tables include measures of internationalisation, but they mainly focus on the numbers of international students and the numbers of international staff. The international element of the rankings is also a small proportion of the total. This paper proposes an alternative measure of internationalisation. It includes three elements – range, profile, and institutionalisation. Range measures the types of international activities which universities engage with. Profile identifies the most senior person who is responsible for a university's international strategy and their portfolio of responsibilities. Institutionalisation is a measure of the degree to which internationalisation is embedded in a university's overall strategy. For example, does it have an identifiable international strategy? Six UK universities are examined to assess the usefulness of the range, profile, and institutionalisation typology. It is concluded that the use of range, profile, and institutionalisation, as measures of internationalisation, provides a more nuanced picture of a complex and multi-faceted phenomenon which has hitherto been measured in relatively simplistic ways.

**Keywords:** competitiveness, universities, internationalisation, rankings

**JEL Classification:** I23

### Introduction

Universities operate in different domestic contexts. In some countries, they are publicly funded ie by taxation. In Germany, for example, all 16 states (or Länder) prohibit tuition fees, although some Länder charge an administration fee for registration or a contribution for the use of the institution's social facilities. In other countries, universities are funded partly or wholly by private sources, especially the tuition fees of students. Although there are only four private universities (out of 106) in England, the public universities operate in a semi marketized environment and charge high tuition fees. In the Czech Republic, the 26 public universities are not allowed to charge tuition fees for programmes which are taught in the Czech language, although they may do so for

programmes which are taught in English (mainly to international students). The private universities in the country may however charge fees for all their programmes.

Despite these important differences in their domestic funding systems, universities all operate in a competitive international environment. They compete for both internationally mobile students and for international research funding. The outcomes of that competition reflect the international competitiveness of universities, which is reflected in the international rankings or league tables which have been developed during the last 15 years. These are in turn a reflection of the increasing internationalisation of universities. However, the league tables are not only an outcome of a competitive process. They are also a key input to international competition in higher education because a university's current ranking influences its ability to recruit international students and to be awarded international research funding.

The academic literature lacks an organised effort by researchers and policy makers to investigate how the internationalisation of universities can be measured. To a considerable extent, the measurement of internationalisation has been left to the commercial providers of the major international league tables. This poses ethical problems - the consultancy activities of the major ranking organisations may lead to conflicts of interest which in turn distort the global university rankings (Chirikov, 2021; Jacqmin, 2021). The league tables also have methodological limitations, as indicated below. Hence, this study aims to develop criteria that can be used to measure internationalisation in higher education institutions.

## **1. Methods of Research**

There are three main international league tables or rankings of universities. The Academic Ranking of World Universities (ARWU), also known as the Shanghai Jiao Tong Index, uses six indicators to rank world universities (Shanghai Ranking, 2020). However, these are all indicators of research prowess. ARWU does not measure teaching or internationalisation per se, although it can be argued that certain research measures are proxies for internationalisation. Therefore, the focus of this paper will be on the other two measures: the Times Higher Education (THE) World University Ranking and the QS World University Ranking.

The THE World University Ranking provides a comparison between universities against thirteen key performance indicators and ranks universities worldwide (THE, 2020). The QS World University Ranking provides a comparison between universities against six key performance indicators and ranks universities worldwide (QS Top Universities, 2020b). The universities identified by THE's World University Ranking and the QS World University Ranking are predominantly research-intensive universities. This suggests that the rankings, particularly THE, are a better measure of research power than internationalisation per se. In mitigation, however, there is a correlation between research power and internationalisation.

Both rankings consist of several weighted key performance indicator areas for each university (Table 1). One drawback of these criteria is that the 'international' element accounts for a small percentage of the overall assessment 7.5% for THE and 10% for QS. This does not allow sufficient space to assess the extent to which universities are internationalised.

**Table 1: Composition of THE and QS world university rankings**

THE World University Rankings	QS World University Ranking
Teaching 30%	Academic reputation 40%
Research 30%	Employer reputation 10%
Citations 30%	Faculty/Student ratio 20%
International outlook 7.5%	Citation per faculty 20%
Industry income 2.5%	International faculty ratio 5%
	International student ratio 5%

Source: The rankings

Table 2 provides a summary of the key performance indicators (KPIs) employed to assess the ‘international’ element of each ranking. Both the THE and QS rankings rely heavily on data concerning numbers of international students and staff.

**Table 2: KPIs in the ‘International’ element of THE and QS world university rankings**

THE World University Rankings	QS World University Ranking
International-to-domestic-student ratio: 2.5%	International-to-domestic-faculty ratio: 5%
International-to-domestic-staff ratio: 2.5%	International-to-domestic-student ratio: 5%
International collaboration: 2.5%	

Source: The rankings

The drawbacks of both the THE and QS rankings mean that they cannot be relied on to assess the extent to which universities are internationalised. To overcome these limitations, Soliman, Anchor and Taylor's (2019) study of the trajectory of internationalisation in four English universities between 2000 and 2015 is developed for this purpose. They concluded that internationalisation has gone through three phases, as the approaches of universities to this phenomenon have matured and progressed from operational to strategic' (Soliman, Anchor and Taylor, 2019). The characteristics identified in the final, mature (or strategic) phase of internationalisation are developed to measure the phenomenon. These are the range, profile, and institutionalisation of internationalisation.

## **2. Results of Research**

### **2.1 Range of internationalisation**

Internationalisation in higher education includes the undertaking of a range of international activities, whether on the home campus or overseas. These include international student recruitment, international student mobility programmes, overseas delivery of programmes, international branch campuses, internationalised curricula, intercultural programmes, global employability measures, international research bids and projects, publications with an international co-author, percentage of research citations which are international, and joint supervisory arrangements for research students. Range is a measure of how many of these activities are being undertaken by a university. However, there are difficulties in operationalising this measure. First, the list of international activities is potentially a long one and the categorisation of an activity as "international" may vary from university to university. Secondly there is no "common currency" to measure the combined size of each of these activities. Money could be used to measure some, but not all, of them. However even those to which a monetary value can be allocated are not comparable. Therefore, a qualitative and "wholistic" approach to the measurement of range is best.

### **2.2 Profile of internationalisation**

This reflects the strategic priority of internationalisation within a university. Profile is measured by the seniority of the person responsible for the international strategy of a university. This indicates the priority which the institution gives to internationalisation. The content of that person's portfolio is also an indicator of the range of international activities undertaken by a university. However, it may be that not all activities which can be described as "international" are within the portfolio of the most senior person who is responsible for internationalisation. For example, the curriculum is usually the responsibility of the most senior person responsible for teaching and learning and citations are the responsibility of the most senior person responsible for research and knowledge exchange.

### **3) Institutionalisation of internationalisation**

This identifies the extent to which internationalisation is embedded within a university's strategy. A high level of embedding or institutionalisation means that the University has an identifiable section of its strategy which is devoted to internationalisation or has a separate international strategy. In this case, it can be described as "foregrounded". In some cases, internationalisation may be mentioned in a university's strategy document, but is not a key strategic priority. In other cases, it is not mentioned at all. So, we propose

a three-point scale to measure the level of institutionalisation: “foregrounded”, “mentioned” and “not at all”.

The QS Stars Rating provides an assessment of the performance of universities against a set standard in different categories (QS Top Universities, 2020a). The QS Stars rating was developed because it can be argued that “universities are different to one another and therefore need to be assessed on a range of categories that recognize distinct strengths” (QS Top Universities, 2021). The QS star rating system covers a wider range of variables than either the THE or the QS World University Rankings. The variables are teaching, research, employability, internationalisation, facilities, online/distance learning, social responsibility, innovation, arts and culture, and inclusiveness. Universities are awarded a star rating for each of these indicators of their performance on a scale of 1 to 5. The internationalisation rating is based on several indicators. These are proportion of international students; proportion of international staff; numbers of exchange students arriving and departing; number of nationalities represented in the student body; number and strength of international partnerships with other universities; presence of religious facilities.

### **3. Discussion**

The 23 UK universities that were identified by the QS Stars 5\* Internationalisation Rating in 2018 were assessed against these newly articulated criteria since they include a range of university types, as identified by history and mission. The data have been analysed according to our new measures of internationalisation.

Each of these universities has a “Vice Rector” (to use the Czech term) who is responsible for internationalisation. Their subsidiary title (in brackets) is International or International Development or Global Engagement. Broadly speaking, these all mean the same thing. However there does seem to be a trend in the UK sector towards the use of the term Global Engagement, which reflects the phenomenon known as globalisation.

In five of the six case study universities, an international strategy is foregrounded, either as a key element of an institutional strategy or as a separate document. In University B, internationalisation only gets a passing mention in the institutional strategy. It should be noted, however, that at the time of the data collection (summer 2018), a new institutional strategy was under development. Five years seems to be the standard period for a university strategy in the UK.

There is a considerable range of international activities in each of the universities. From the lists provided, it is difficult to identify a hierarchy of internationalisation and therefore to rank the universities in this context.

### **Conclusion**

The use of range, profile, and institutionalisation, as measures of internationalisation, provides a more nuanced picture of a complex and multi-faceted phenomenon which has hitherto been measured in relatively simplistic ways. The measurement of the internationalisation of universities has practical implications for both the Universities themselves and for policy makers who may wish to encourage – or in some cases discourage – the phenomenon. Internationalisation has become a hot topic in the study of higher education. Although the literature has included descriptive measures of



internationalisation from time to time, this has not been done on a systematic basis. The use of range, profile, and institutionalisation as “measures” of internationalisation is an original contribution to the literature on this important phenomenon.

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