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The Impact of University Rankings on Higher Education Policy in Europe: a Challenge to Perceived Wisdom and a Stimulus for Change

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The Impact of University Rankings on Higher Education Policy in Europe: A Challenge to Perceived Wisdom and a Stimulus for Change

Ellen Hazelkorn and Martin Ryan

Abstract

The arrival of global rankings in 2003 was a clarion call for urgent reform of European higher education. The results of the Shanghai Academic Ranking of World Universities and the Times Higher Education QS World University Ranking, first published in 2003 and 2004 respectively, challenged the perceived wisdom about the reputation and excellence of European universities. Since then, the EU and its Member States have sought to reshape and modernise higher education in Europe. This paper argues that the emergence of global rankings was not only a challenge to perceived wisdom, but also a stimulus for change in European higher education policy. While it is too soon to evaluate whether new policies have made a direct impact on the performance of European countries in global rankings, it is now time for debate on the apparent influence of global rankings on higher education policy in Europe.

Key words: global rankings, European policy, higher education in France, higher education in Germany, higher education in UK

1. Introduction

Speaking on behalf of the European Council at the time of the first *Shanghai Academic Ranking of World Universities* (ARWU), the Irish Minister for Education and Science said "the news is not all that good"; too few European universities are featured among the world's top 500 (Dempsey, 2004). The arrival of the global rankings – the ARWU and the *Times Higher Education QS Top University Ranking* (THE-QS) in 2003 and 2004 respectively – was a game changer for higher education and research, intensifying cross-national comparisons. These rankings immediately attracted the attention of the academy and policymakers because they challenged the perceived wisdom about reputation and excellence; this was especially true for European universities when placed alongside the aim of the *Lisbon Agenda* to make Europe "the most dynamic and competitive knowledge-based economy in the world" (Lisbon European Council 2000).

Over the years, by presenting results annually as a league table (see Table 1), rankings have highlighted and tracked shifts in the competitive strengths and weaknesses of nations through the performance of their higher education institutions Rankings for 2004 show European higher education institutions lagging behind their counterparts in the United States (US), with the exception of the QS/THE-QS ranking, where the difference is negligible. By 2012, the pattern of European performance is largely the same, with the exception of the QS/THE-QS ranking, where European higher education institutions demonstrate a slight advantage compared to higher education institutions from the US. Overall, it appears that there has been no catch-up for European higher education institutions since the introduction of global rankings. And despite criticism of global university rankings (Hazelkorn 2011; Rauhvargers 2011), their influence is growing.

> Europe is no longer setting the pace in the global race for knowledge and talent, while emerging economies are rapidly increasing their investment in higher education.... too few European higher education institutions are recognised as world class in the current, research oriented global university rankings... And there has been no real improvement over the past years (Europa 2011, 2).

Table 1. Number of higher education institutions in the global top 100: World regions in selected rankings, 2004-2012

RANKING	YR.	NORTH AMERICA	EUROPE (w/RUSSIA)	AUSTRALIA & NEW Z.	ASIA (w/INDIA)	LATIN AMERICA	AFRICA	MIDDLE EAST
QS/ THE-QS	2012	35	38	7	20	0	0	0
	2011	35	40	7	18	0	0	0
	2008	42	35	8	13	0	0	1
	2004	38	36	12	13	0	0	1
THE-TR	2012	52	32	6	10	0	0	0
	2011	57	30	4	9	0	0	0
	2010	57	28	5	10	0	0	0
ARWU	2012	57	31	5	4	0	0	3
	2011	57	33	4	5	0	0	1
	2008	58	34	3	4	0	0	1
	2004	55	37	2	5	0	0	1
W-METRICS	2012	65	25	2	5	3	0	0
	2011	73	16	2	7	2	0	0
	2009	71	21	1	5	2	0	0
SCImago	2012	45	25	4	24	2	0	0
	2011	46	25	4	24	1	0	0
	2009	47	25	4	22	2	0	0

Key: THE-QS = Times Higher QS World Ranking; QS = Quacquarelli Symonds; ARWU = Academic Ranking of World Universities. W-Metrics = Webometrics.

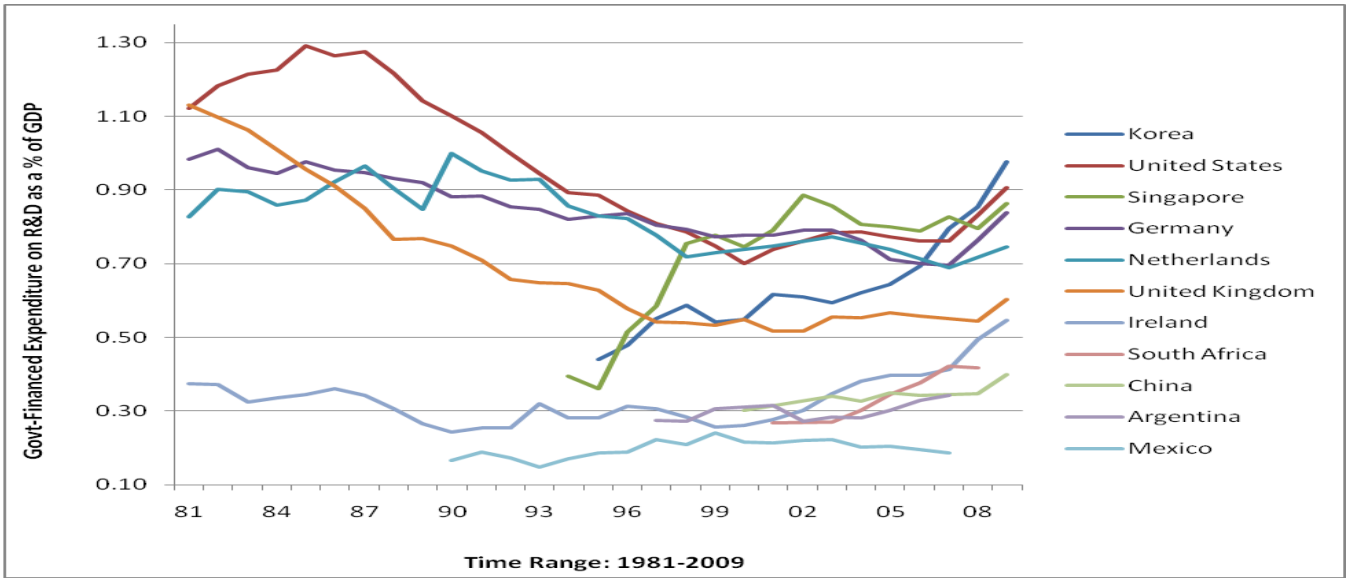
Note: THE-QS (pre-2011) is combined with QS for 2011 and 2012 as the methodology is broadly similar. THE-TR was only established in 2010; and only provides data on 200 institutions. For 2011 and 2012, THE-TR provides information on 400 institutions.

THE-QS for 2008 only sums to 99 due to tying institutions.

Ritzen (2010, 53, 66) argues that European universities probably surpassed the US at the beginning of the 20th century, but failure to invest and expand after WW2 has turned the tables. In 2007, worldwide R&D expenditures totalled an estimated $1.107 trillion; the US accounted for about 33% of this. Japan, the second-largest performer, accounted for about 13%, while China was third, at about 9%. As a bloc, the EU-27 accounted for 24% of global R&D in 2007 (NSF, 2010). While R&D expenditures in the EU-27 are ahead of those in Japan and China, they are trailing the level of investment in the US. OECD data on R&D expenditures (see Figure 1) show China and South Africa spending much more as a percentage of GDP over the last 10 years. South Korea's trajectory starting ten years ago is also very impressive, and they are now spending more than any other country on R&D as a percentage of GDP (see Figure 1). The EU has predicted that Brazil, Russia, India, and China will dominate future R&D growth, overwhelming Europe and Japan and eventually matching the level of investment in the US. At current levels of trend-expenditure, China will

match EU-27 spending on R&D by 2018, and will match US spending on R&D by 2022 (Ritzen 2010, 37-70).

Figure 1. Government-financed expenditure on R&D as % of GDP



Source: OECD *Science and Technology Indicators* 2012

Lambert and Butler (2006), Aghion et al. (2007), and Ritzen (2010), amongst others, have warned that Europe's universities stand at a crossroads. In recent years, the EU, along with its Member States, have adopted a series of policies and strategies which represent much greater government steerage of the higher education and research system (Maassen and Stensaker 2010). The next section will review recent developments in EU higher education policy. The third section looks at selective national responses in Europe, with particular focus on France, Germany and the UK – the three largest economies in the European Union. The fourth section concludes, arguing that the emergence of global rankings was not only a challenge to perceived wisdom, but also a substantial driver for change in European higher education policy.

2. Overview of EU higher education policy

Higher education has been a key component of European policymaking since the early days of the European Coal and Steel Community and the decision to establish the European University in Florence in 1955 (Corbett, 2003). In the early 1990s, the benefits of the "information society" began to dominate policy discourse across Europe (Bangemann, 1994) and force a new direction. Then, in the lead up to the Lisbon Strategy (Lisbon European Council, 2000), European policy moved decidedly to embrace the "knowledge economy", placing greater prominence on the production of new knowledge and knowledge management as core to economic growth rather than simply envisaging access to technological tools. Since then, and in response to growing interest in global rankings, higher education and university-based research have become central to EU policymaking in a dramatic and significant way.

The Sorbonne Declaration, 1998, with its focus on the "harmonisation of the architecture of the European higher education system", was an initiative of four education ministers who proclaimed that "the Europe we are building is not only that of the Euro, the banks and the economy, it must be a Europe of knowledge as well" (Witte, 2006, 124). That viewpoint was formalised one year later with the Bologna Declaration, 1999. While Sorbonne represented a "quantum leap" in European higher education policy, the Bologna Process was and has remained largely voluntary, albeit international competitive pressures have effectively made it compulsory and set an international standard (Adelman, 2009; ATN, n.d.). Bologna anticipated the need for enhanced convergence across national systems to create a coherent system of higher education able to compete internationally (van Damme, 2009, 40-41). It was predicated on the free movement of students, faculty and workers across national boundaries facilitated by "trustworthy information and with the assurance that their performance will be recognised in other parts of Europe" (Reichert, 2009, 107). The process was designed to ensure comparability in the standards and quality of higher education qualifications across member states through curriculum and quality assurance changes (Europa, 2010b; Sursock and Smidt, 2010). While focused on enhancing co-operation, Bologna also recognised the "equal position of all institutions and systems". The vision was outward-looking, on the basis that to encourage and facilitate mobility within Europe required a system easily understood, harmonious and not constrained by parochialism – characteristics also crucial for attracting talent and investment from around the world to Europe. It set the goal of establishing the EHEA by 2010, which was officially launched by the *Vienna Declaration* (2010).

The Lisbon Strategy marked a significant change in policy direction, with its focus on European competitiveness, research investment and improving excellence (Dale, 2010). The original statement made it clear that:

> Given the significant role played by research and development in generating economic growth, employment and social cohesion... Research activities at national and Union level must be better integrated and coordinated to make them as efficient and innovative as possible, and to ensure that Europe offers attractive prospects to its best brains.

To ensure that the desired outcomes were achieved, existing voluntary arrangements needed to "be fully exploited". This was a clear reference to the role to be played by the "open method of co-ordination", a non-binding tool which seeks to progress change without infringing national rights (Gornitzka 2005). Over the intervening years, several high-level communications have been issued stressing the importance of higher education and university-based research, with ever increasing stridency and directness (see Box 1). Broadly speaking, three main concerns have come to dominate European policy on higher education and research:

1. Too few European higher education institutions are recognised as world class in the current environment of research-oriented global university rankings. This is because "higher education institutions too often seek to compete in too many areas, while comparatively few have the capacity to excel cross the board" (Europa 2011, 2; Butler 2007). Compared with the US which has only about 200 research-intensive universities, Europe has about 4,000 universities which claim or want to be research-intensive (Europa 2011, 2).
2. European universities suffer from poor governance, insufficient autonomy and often perverse incentives. This is due to a combination of factors including the

predominance of traditional de-centralised organisational structures and civil service-type governance arrangements and academic contracts.

3. Public policy has favoured higher education as public good, supporting social/cultural objectives rather than economic ones in the belief that all universities should be similar in quality rather than some being more excellent than others. As a result, public funding is spread too thinly across too many universities.

Box 1. Selected pronouncements about European higher education competitiveness

> "It is the quality of European higher education institutions, measured (among other ways) through the volume and scope of institutions' scientific - in the widest sense of the word - and technological research activities, which is crucial." (Europa 2001)
>
> "The European university world is not trouble-free, and the European universities are not at present globally competitive with those of our major partners, even though they produce high quality scientific publications." (Europa 2003, 2)
>
> "Universities should be funded more for what they do than for what they are, by focusing funding on relevant outputs rather than inputs." (Europa 2006, 7)
>
> The "challenges posed by globalisation require that the European Higher Education Area and the European Research Area be fully open to the world and that Europe's universities aim to become worldwide competitive players." (Europa 2007, 2)
>
> The "performance of education systems must be enhanced, and the international attractiveness of Europe's higher education reinforced." (Europa 2010, 34)
>
> The "potential of European higher education institutions to fulfil their role in society and contribute to Europe's prosperity remains underexploited. Europe is no longer setting the pace in the global race for knowledge and talent, while emerging economies are rapidly increasing their investment in higher education." (Europa 2011)

In one of its first communications in 2001, following publication of the Lisbon Strategy, the European Commission stressed the necessity of reaching and maintaining "an assurance of quality that is widely understood in the world" in order to ensure that Europe could compete "as well as the other leading providers of education services" (Europa 2011). By 2006, the EU began to talk about higher education reform in terms of "modernisation" – a theme to which it returned in its communication accompanying the launch of *Europe 2020*. This communication, *Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation* (Europa 2006, 3) openly questioned the social contract that had underpinned public support for higher education over the last number of decades, claiming that the

> pressure for uniformity has led to generally good average performance, but has increased fragmentation of the sector into mostly small national systems and sub-systems. These render cooperation difficult at national,

> let alone European or international, level and impose conditions which prevent universities from diversifying and from focusing on quality.

By 2007, the influence and impact of global rankings was becoming more evident. Initially, the EU response was to highlight the diversity of European higher education, arguing this was a characteristic to be celebrated. Accordingly, a European classification system was initiated in 2005, and launched as U-Map in 2009 (van Vught 2009; van Vught et al 2010). However, as concerns about global competition have risen, the EU has taken an increasingly more interventionist position, less concerned with diversity and more with excellence. The 2007 resolution urged European higher education to respond to 'challenges posed by globalisation" (Europa 2007, 2). The EU acknowledged that both national and European standards were no longer sufficient; rather there was a need to enhance the international attractiveness and competitiveness of European higher education (Europa 2011). The decision to directly challenge the dominance of global rankings by developing *U-Multirank*, the pilot of which was launched in 2011 (van Vught and Ziegele 2012), was taken in this context.

In parallel, the EU Framework Programme has been switching from encouraging the growth of research to consolidating and concentrating research in centres of excellence. The sixth framework programme, FP6, sought to encourage the formation of virtual "networks of excellence"; FP7 improved upon the concept, establishing the European Institute for Innovation and Technology (EIT), operating through knowledge-innovation communities (KICs). The European Research Council (ERC) has taken this further, on the basis that "one of the reasons for the research advantage of US universities is the concentration of research funding on less than one-tenth of degree-giving institutions." With a budget equivalent to 15% of overall FP7 expenditure (€7.51bn of €50.5bn), the ERC is putting funding directly into the hands of "excellent" researchers and not institutions. The strategy is already helping to consolidate 50% of funding in just 50 universities (Myklebust 2012). FP8, due in 2014, is worth €80bn, and will see this process of consolidation and concentration strengthened (Maassen and Stensaker 2010).

While there are concerns about Europe's ability to harness the capacity and capability of its higher education system for economic recovery, other countries have been looking on favourably – and learning lessons – from how the EU is managing to corral and harness various national interests (see for example Grabert 2011; Adelman 2009; ATN n.d.). Nonetheless, the role of the EU is naturally constrained because of the principle of *subsidiarity*, but its influence has been strengthened considerably in line with massive increases to its research budget. While enhanced EU "leadership" has led to allegations of "creeping competence" (Corbett, 2012), the EU has been resolute in its purpose:

> The main responsibility for delivering reforms in higher education rests with member states and education institutions themselves**.** However, the Bologna Process, the EU Agenda for the modernisation of universities and the creation of the European Research Area show that the challenges and policy responses transcend national borders (sic).

3. Selective national responses

Given that the main responsibility for delivering reforms in European higher education rests with Member States and education institutions themselves, it is important to examine policy responses at the national level. This section looks at selective national responses in Europe, with particular focus on France, Germany and the UK – the three largest economies in the European Union. Of these three countries, the UK has always performed best in university rankings (see Table 2). In addition, the QS/THE-QS and ARWU rankings show Germany performing better than France. However, Germany has lost some ground in the ARWU rankings over time. Finally, the UK has gained ground in the QS/THE-QS ranking between 2004 and 2012. This is arguably more important than the ground lost in the THE-TR ranking between 2010 and 2012, due to the shorter duration of the THE-TR ranking. Overall, the UK began in the strongest position in the QS/THE-QS ranking in 2004, and has also made the most gains in that ranking.

France

Higher education in France is characterised by the coexistence of two systems: universities, public institutions that have an open admissions policy – and a non-university sector, including, *grandes écoles* which have a highly selective admissions policy open only to baccalauréat holders having attended two years of (selective) classes. The *grandes écoles* are generally focused on a single subject area, such as engineering or business; they are widely regarded as prestigious, and traditionally have produced most of the scientists and executives in France.

Beginning in 2007, the French government began to introduce a series of legislative changes promoting greater institutional autonomy to encourage stronger management and better planning in higher education (Higher Education Development Association 2007).

> Concern over the global positioning of French universities within rankings has been a strong catalyst for soul-searching and change following disappointment with the performance of French universities in the ARWU (Anon 2008).

In 2008, the government launched the €8bn *Operation Campus*, the objective of which was to establish ten regional centres of excellence by merging universities, research organisations and *grandes écoles* to enhance capacity and visibility (Landry 2010; Marshall 2010). In 2009, the government announced additional funding under the €35bn *Investments for the Future* programme (also known as the *Big Loan*, because the money was raised on the financial markets) which was launched as part of a wider stimulus package to shore up the economy after the global economic crisis.

Table 2. Number of higher education institutions in the global top 100: France, Germany and UK in selected rankings, 2004-2012

RANKING	YEAR	FRANCE	GERMANY	UK
QS/ THE-QS	**2012**	2	4	18
	2011	2	4	19
	2008	2	3	17
	2004	3	5	14
THE-TR	**2012**	4	4	10
	2011	3	4	12
	2010	3	3	14
ARWU	**2012**	3	4	9
	2011	3	6	9
	2008	3	6	11
	2004	2	7	10
WEBOMETRICS	**2012**	0	4	4
	2011	0	2	7
	2009	0	2	5
SCImago	**2012**	5	4	6
	2011	5	3	6
	2009	5	2	6

Key: THE-QS = Times Higher QS World Ranking; QS = Quacquarelli Symonds; ARWU = Academic Ranking of World Universities. W-Metrics = Webometrics.

Note: THE-QS (pre-2011) is combined with QS for 2011 and 2012 as the methodology is broadly similar. THE-TR was only established in 2010; and only provides data on 200 institutions. For 2011 and 2012, THE-TR provides information on 400 institutions.

THE-QS for 2008 only sums to 99 due to tying institutions.

The flagship component of the *Big Loan* was a €7.7bn *Excellence Initiative* (Idex) with the emphasis on creating a group of 5-10 world-class research and higher education clusters that could rival those elsewhere in Europe and the United States (Davies, 2009). A year later, the French government announced plans to spend €4.4bn to build the Paris-Saclay super-campus – with the intention for this entity to achieve a place in the top ten in the world (Landry 2010). At the same time, eight research, teaching and management institutions announced plans to create the €500m "Giant", the Grenoble Innovation for Advanced New Technologies (Prest 2010): "Our aim is quite simple: we want the best universities in the world."

While most other ministries in France have experienced spending cuts in recent years, the allocation for the higher education sector has risen. For 2013, it is due to receive an additional 2.2% over the previous year, totalling nearly €23bn with priority going to student support and 1,000 new university posts (as the first stage of a five-year plan

for 5,000 new posts). Universities will also benefit from increased state financing for building and renovation projects under state-region contracts. Research funding will rise by €90m to €7.86bn, 1.2% over 2012, and there will be no reduction to the 68,449 public research posts. There will also be a "rebalancing" of research spending, with more funding allocated to research organisations and less to the Agence Nationale de Recherche, whose role of selecting projects from research bids will be limited to fewer themes (Marshal 2012).

The creation of a league of five to ten major universities that would be able to attract the best researchers and students in the world has long been a key target of the French government's science and higher education policy. However, the wave of new investments in French higher education has generated anxiety and criticism; smaller universities worry they may become lower-tier educational and research outposts. As the government has said: "funds will not be distributed evenly but instead will support the government's policy of creating bigger, more autonomous universities that focus on excellence, have modernised governance, and are highly productive" (Enserink 2009a, 2009b).

> We want the best universities in the world....How many universities do we have? 83? We're not going to divide the money by 83. (Nicolas Sarkozy, President, France, quoted in Enserink 2009b)

This strategy puts an end to the previous egalitarian tradition in higher education which has underpinned French higher education, with the exception of *grandes écoles*.

Germany

The results of the ARWU and THE-QS rankings, first published in 2003 and 2004 respectively, challenged the perceived wisdom that German universities were amongst the world's best. The Ministry of Education and Research put the situation in context:

> We have a lot of very good universities across the board in Germany, a high average standard, but what we lack are really top universities… The latest ranking table clearly shows why it is that Germany needs top universities (Dufner 2004).

A binary higher education system exists in Germany, with the main division between universities and Fachhochschulen. The former offer traditional academic or technological programmes of study while the latter, established in 1970, provide professionally-oriented programmes primarily at ISCED 5 level (UNESCO 2011). Recently, in response to competitive pressures associated with the Bologna process, many Fachhochschulen have adopted the nomenclature of University of Applied Sciences, and offer both BA and MA qualifications.

In 2005, the German government launched the *Exzellenzinitiative* (Initiative for Excellence), in response to the fact that German universities did not appear among the top 20 or 50 in the university rankings (DFG n.d.). The aim of the initiative is to create a German Ivy League, focusing on internationally renowned publications/research activities, in an effort to reclaim Germany's historic leadership position in research (Chambers 2007). In the first phase, €1.9bn was earmarked for three initiatives: graduate schools (maximum €1m annually), Excellence Clusters (maximum €6.5m annually), and Institutional Strategic Development funds

(maximum €13m annually). The second phase of the *Exzellenzinitiative* was rolled out in 2012 with €2.7bn to fund a total of 45 graduate schools, 43 clusters of excellence and 11 future development strategy, in 44 universities by 2017.

In 2006, the government launched its *High Technology Strategy* to: (i) focus on climate/energy, health/nutrition, mobility, security and communication, (ii) pursue concrete scientific and technological developments targeting a period of ten to 15 years, (iii) forge strong links with European research and innovation policy, (iv) improve the conditions for setting up a company and accessing venture capital, and (v) establish new platforms for dialogue on global and societal challenges (Federal Ministry 2006). This was renewed in 2010, with an emphasis on creating lead markets, to deepen cooperation between science and business, and improving conditions for innovation.

At the same time, in 2007, the first phase of *Higher Education Pact* was launched, running until 2010. €565m of funds were released with the aim of creating larger numbers of highly qualified employees who could help to improve the nation's R&D quality. That policy is also in its second phase, scheduled to go on until 2020, with a further €1.7bn planned to roll out up to 2015.

Finally, figures for 2010 showed that the proportion of expenditure on research and development (R&D) in Germany was 2.8% of gross domestic product (GDP); a new record. Nonetheless, the Expertenkommission Forschung und Innovation (EFI, or *Commission of Experts Research and Development*) called for consistent development of science intensive industries in its 2012 annual report. In the face of increasing competition, including from developing countries, the EFO describes the target set by the government of 3% GDP by 2015 for R&D expenditure – equivalent to the Lisbon Strategy target – as "lacking ambition".

The initiatives described above mark a significant shift in Germany higher education policy, from a traditional emphasis on egalitarianism or "having good universities across Germany" towards competition and hierarchical stratification. Instead of the current binary system, the future system is likely to be hierarchically differentiated, with a small elite group, a larger middle group of "solid research universities … [with] a slight opportunity to move into the top group" and a larger group comprised of *Fachhochschulen* and some universities primarily providing undergraduate/BA qualifications and some amount of research in selected fields of expertise (Kehm 2006, 2009; Hazelkorn, 2011, 165-172).

United Kingdom

The United Kingdom has traditionally performed better in university rankings than France, Germany, or any other European country (see Table 2). Because of this, the emergence of global university rankings was less of a shock although there is a keen desire to perform better, particularly in comparison to the United States.

> UK universities do well. To my surprise, Cambridge and Oxford are in the top 10 in the world. Partly that high ranking stems too much for comfort from data far in the past, so we should not be sanguine. Nevertheless, our nation has 11 universities in the top 100, which puts us second behind the United States (Oswald 2004).

Higher education in the United Kingdom (UK) was significantly reformed and restructured in 1992, following the *Further and Higher Education Act* which enabled polytechnics to become universities, thereby transforming the former binary into a unified system. At the same time, changes in the governance and management of universities, frequently and pejoratively referred to as "new public management" have introduced business-type management styles including quantitative performance indicators, consumerist approaches, and market discipline (Randle and Brady 1997; Deem and Brehony 2005).

> The broad philosophical and ideological thrust has been accepted - that the state should not - unless exceptionally - fund universities directly for providing teaching, but that the market, as manifested through student choice, should be the determining driver (Higher Education Policy Institute, 2010).

The increasing influence of market thinking in UK higher education is observable in other ways, for example, in the way in university-based research funding has been allocated under successive research allocation exercises (RAE). The RAE has supported curiosity-driven research and responsive research; this will continue to be the case under the Research Excellence Framework (2014), with increasing emphasis on the recognition of research excellence combined with reward for the impact of past research. This competitive approach benefits those universities which effectively and strategically manage their research portfolio through targeted investment and recruitment over time.

Despite the highly competitive nature of the higher education system in the UK, there are concerns about maintaining the UK's position in the rankings, particularly in light of the recent gains made by Asian institutions (see Table 1). This disquiet is well illustrated by recent media reaction to, with headlines such as "Declining investment could trigger irreversible loss of British prestige" (Morgan 2012) or "Academic battle with the East looms for British universities" (Middleton 2012).

> We are slipping down the global league tables in terms of the quantity of higher level skills in the labour force and falling even faster on the measure of young people with higher level skills. The international competition will not let up – other countries will keep on capitalising on the benefits of higher education for their economies and citizens and raise the bar on participation and investment (Browne 2010).

The major policy change proposed by the report, *Securing a Sustainable Future for Higher Education* (Browne 2010), and accepted by the government, advocated that universities would no longer be funded directly

> except to a very limited extent – but that universities should instead be funded primarily through fees paid by students, with the Government providing loans to students in order to enable them to pay these fees (Thompson and Bekhradnia 2011, 1).

At the same time, the government has shifted core funding from arts, humanities and social sciences disciplines in favour of science, technology, engineering and mathematics (STEM). Universities are entitled to charge tuition fees up to a maximum of £9,000 per annum, depending upon what the market will bear, but the government will only provide core teaching support for STEM. The government has

also introduced incentives for institutions catering for widening participation students and for high achieving students (known as AAB students).

According to Barr (2012), the reforms

> include the good (a higher fees cap, a higher interest rate on student loans, better information and improved support for part-time study), the bad (abolishing most taxpayer support for teaching in the arts and humanities and the social sciences, and raising excessively the threshold at which loan repayments start) and the unspeakable (abolishing Education Maintenance Allowances and AimHigher).

The changes go further than previous policy decisions by using student-choice/demand to drive competition, transferring costs to students, and reinforcing "the social segregation between groups of institutions, as well as reducing the number of disadvantaged students at the most selective universities" (Thompson and Bekhradnia 2011, 11). This is likely to intensify hierarchical stratification between institutions (Brown 2012).

4. Conclusion

This paper argues that the emergence of global university rankings was not only a challenge to the perceived wisdom about the status and reputation of European higher education, but was stimulated significant changes in European higher education policy. While increasing amounts of competitive pressure between countries would probably have led to a "modernisation" agenda anyway, the onset of global rankings in 2003 accelerated and intensified the development of policy objectives to enhance the global competitiveness and performance of higher education institutions in Europe. Furthermore, given that the main responsibility for delivering reforms in European higher education rests with Member States and education institutions themselves, it is important that policy developments are examined at the national (and EU) level. This paper has followed such an approach, reviewing policy developments in the three largest economies in the European Union: France, Germany and the United Kingdom.

One finding is that the impact of rankings on national-level policy is more apparent in France and Germany, compared to the UK. This may be attributed to the fact that the UK has always been the highest-ranking country in European comparisons of higher education performance (see Table 2). Therefore, France and Germany have been under relatively more pressure to improve their performance in global rankings; and needed to be more explicit in pursuing their modernisation agendas. Notably, reforms in France have occurred relatively more recently, and were arguably more influenced by the global economic crisis (as well as university rankings) than reforms in Germany.

Reforms in the UK over the last decade have been relatively more focused on issues relating to finance and access, reflecting not only a competitive advantage in university-based research, but also the need to deal with higher levels of participation, compared to France and Germany. However, this is changing, and recent reforms in the United Kingdom – inspired by the Browne report – are a direct response to concerns about global positioning, with an emphasis on those disciplines and students most likely to impact positively on performance.

At both the EU and national level, there are many statements applauding the diversity of higher education missions; however, there is also mounting concern about mediocre universities being responsible for Europe's poor showing in global rankings. At a time of severe constraints on public budgets, and an accelerating global higher education "arms race", national governments are making policy choices which are arguably driven by their current and desired position in university rankings. Across all the countries examined, and particularly in France and Germany, there is a strong emphasis on university reform and "modernisation", and concentrating resources in a few "elite" universities.

By stressing the importance of measuring performance and competitiveness, the EU and its Member States are indicating that the future will be based upon demonstrated merit rather than assertion. Likely policy implications include greater system differentiation but also institutional stratification and targeted resource allocation, at both the national and European level. Given the uneven distribution of capability and capacity across and within the EU's 32 Member and Candidate countries, it is not clear that the full implications for individual institutions and Member States are understood. Overall, there is likely to be greater hierarchical differentiation, with increasing concentration of resources in a handful of institutions and countries.

Finally, it is important to appreciate that new higher education policies do not make an immediate impact on institutional performance in rankings. There will be a lag between the introduction of new policies and any improvement in performance that can be attributed to those policies. Therefore, it is too soon to evaluate whether recent national policy developments, as outlined in this paper, can make the desired impact on the performance of European countries in the global university rankings. While this will be an interesting issue to investigate in the coming years, now is the time for debate on the apparent influence of global rankings on higher education policy in Europe.

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