A Competitive Positioning Analysis of UK Universities

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Abstract

The new strategic reality for universities is one that is characterised by greater competition for financial and human resources, global student mobility and demands by resource providers for greater accountability and improved performance. Using a competitive positioning perspective, this paper presents a cluster analysis of UK universities based on performance on key output metrics. Some institutions are achieving positions of balanced excellence while others compensate by performing well on community engagement. A further cluster appears to be 'stuck in the middle', pursuing both teaching and research but doing neither particularly effectively. The implications of the analysis are discussed.

Background

In the UK, it is estimated that universities contribute £60bn annually to the economy and create 668,000 jobs either directly or indirectly. Revenue from third stream activities such as exploitation of intellectual property, consultancy and conference activity alone totalled over £23bn in 2007-08 (Guardian 2009). This has impacted on funding, quality initiatives, governance and other areas (De Boer, Enders & Leisyte 2007; McDonald & Stratta 2001; Wood & Meek 2002). Changes in funding arrangements in particular, have had a knock on impact on competition for students, faculty and research funding across a global marketplace (Luchilo & Albornoz 2008).

The senior management teams at HEIs must increasingly think in competitive terms and manage their organisations as 'businesses' (Pidcock 2001). Much of this does not come naturally to individuals often promoted for their academic contributions rather than their managerial and leadership skills. However, in order to behave 'as a business', universities increasingly need to be conscious of the extent to which they are successfully differentiating themselves in the marketplace through the adoption of competitive positioning strategies (Mazzoral & Soutar 1999). For example in the US, higher education has been described as 'an extremely competitive industry' and that institutions that 'fail to secure a strong competitive position will lose funding'. They must target distinct niches and differentiate themselves in order to survive (Firstenberg 1991).

Other research has focused on the nature of competitive positioning and strategy in HEIs. A study of the strategies of Australian institutions found that 70 percent of responding organisations used one or a combination of Porter's generic strategies of low cost, differentiation or focus, and that these institutions outperformed the remaining 30 percent who had adopted none of the aforementioned approaches (Mazzoral & Soutar 2008). Several potential resource-based advantages that HEIs possess which might form the basis of competitive positioning strategies include knowledge-based, reputational, innovative and architectural related advantages (Lynch & Baines 2004).

Objectives, Methodology & Findings

This is the first phase of a major project examining the competitive positions achieved by universities and the underlying dynamic capabilities used to achieve those positions. The key objectives of this phase are as follows,

1. To explore the competitive positions occupied by UK universities based on three key output/performance dimensions; research, teaching and community engagement.
2. To identify any competitive clusters or distinct groups of UK universities based on their positions.

3. To establish the validity of the clusters in the international market for higher education.

The sample selected for this research was the 113 UK universities listed in the Complete University Guide 2010. Though the various rankings that are published have been criticised extensively (Alder & Harzing 2009), they have had the effect of normalising competition in the higher education sector (Marginson 2007). A cluster analysis was performed on the sample using three key performance variables, teaching, research and community engagement. The teaching variable (T) was measured through three indicators, namely student satisfaction scores from the National Student Survey (NSS) 2008, continuation rates 2007/08 (percent successfully progressing to the next year of study), and staff-student ratios 2007/08. The research variable (R) was also measured through three variables, namely, RAE (Research Assessment Exercise) scores for 2008 (a measure of research quality), percentage of full-time staff submitted to the RAE 2008 (a measure of research intensity) and doctoral student completions per number of staff 2006/07 (a measure of the vitality of the research environment). Public metrics to measure community engagement (CE) are less complete and employability 2006/07, as measured by the number of graduates taking up employment or further study divided by the total number of graduates, was used as a proxy for this variable. The indices for teaching and research were calculated as the factor score resulting from a principal component analysis of the three indicators.

The next stage involved establishing the number of clusters to extract from the analysis. As a first step a Dendogram graph using the Ward method was produced. It provides an indication of the optimal number of clusters when the distance among them stabilizes. The graph produced pointed to a 2 or a 4 cluster solution. A two cluster solution identifies two blocks of universities which differ significantly on their research and teaching performance, but not for employability. Thus, a four cluster solution is adopted. For this solution, all three variables discriminate among clusters ($p<.001$). The results of the 4-cluster solution are reported in Table 1 and the membership of each cluster is outlined in Table 2.

Table 1: Cluster Analysis Results

Final Cluster Centres

	Cluster			
	1	2	3	4
EMPLOYABILITY	.60272	-.79467	-.65747	.61755
TEACHING INDEX	1.11771	-.61693	.65810	-.82850
RESEARCH INDEX	.90102	-.89424	.97137	-.78667

ANOVA

	Cluster		Error			
	Mean Square	df	Mean Square	df	F	Sig.
EMPLOYABILITY	16.076	3	.199	103	80.626	.000
TEACHING INDEX	23.659	3	.320	103	73.917	.000
RESEARCH INDEX	28.500	3	.199	103	143.197	.000

Table 2: Cluster Membership

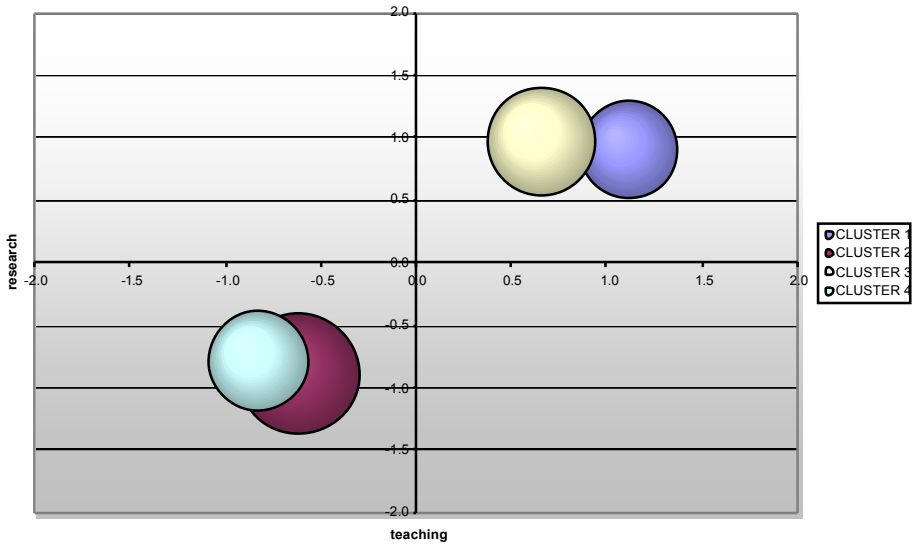
Cluster 1: high R, high T, high E	Cluster 2: low R, low T, low E	Cluster 3: High R, high T, low E	Cluster 3: High E, low R, low T
Aberdeen	Abertay, Dundee	Aberystwyth	Bournemouth
Aston	Bath Spa	Bangor	Central Lancashire
Bath	Bedfordshire	Bradford	City
Birmingham	Birmingham City	Brunel	Edge Hill
Bristol	Bolton; Brighton	East Anglia	Glamorgan
Cambridge	Canterbury Christ Church	Exeter	Greenwich
Cardiff	Chester; Chichester	Glasgow	Huddersfield
Dundee	Coventry; De Montfort	Goldsmiths College	Leeds Metropolitan
Durham	Derby; East London	Heriot-Watt	Lincoln
Edinburgh	Edinburgh Napier	King's College London	Liverpool John Moores
Essex	Glasgow Caledonian	Lampeter	London South Bank
Hull	Gloucestershire	Leeds	Middlesex
Imperial College London	Hertfordshire; Kingston	Leicester	Northampton
Keele	Manchester Metropolitan	Liverpool	Northumbria
Kent	Oxford Brookes	London School of Economics	Nottingham Trent
Lancaster	Plymouth; Portsmouth	Manchester	Queen Margaret
Loughborough	Robert Gordon	Newcastle	Roehampton
Nottingham	Staffordshire	Queens, Belfast	Salford
Oxford	Strathclyde	Royal Holloway, London	Sheffield Hallam
Queen Mary	Teesside Ulster	Sheffield	Southampton Solent
Reading	Univ of the Arts London	Southampton	Sunderland
SOAS	Univ of Wales, Newport	Surrey	West of England, Bristol
St Andrews	Westminster	Sussex	
Stirling	Winchester	Swansea	
Univ College London	Wolverhampton	Warwick	
York	Worcester		
	York St John		

26 cases were observed in Cluster 1 which comprises universities that perform high on all three indicators. Cluster 2, which are those universities performing poorly on all three indicators contained 34 universities. Cluster 3 universities performed high on research and teaching but low on employability (n = 25) while finally cluster 4 containing 22 universities were high performers on employability but low on research and teaching. The remaining 15 universities were eliminated from the analysis due to missing data.

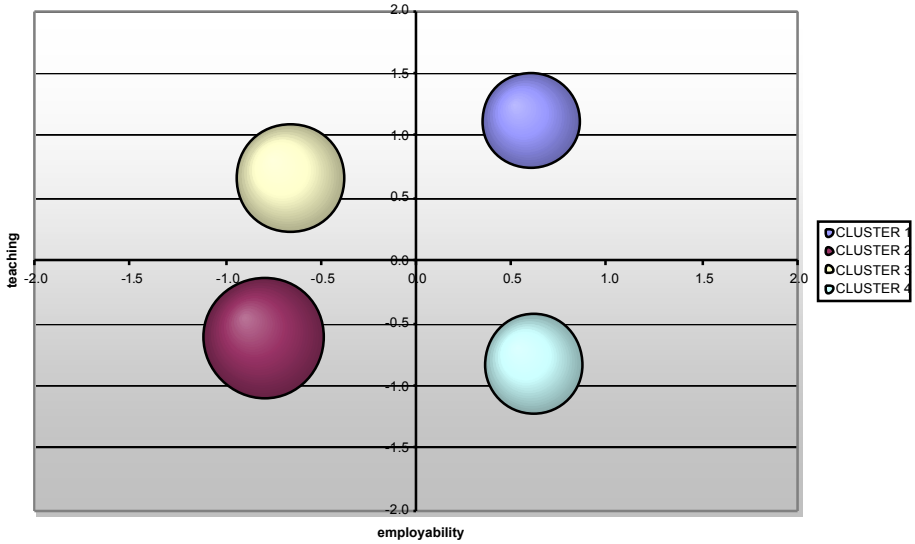
The foregoing description of the clusters and their relative competitive positions is summarised in the positioning maps presented in Figure 1. Each map considers a combination between teaching, research and engagement scores. Since indicators are standardised, the 0 point in each of the axes indicates the average score in the sample. The size of each sphere represents the size of the cluster. The final stage of the analysis involved the validation of clusters using information about UK universities from leading international rankings. Two international league tables – the QS Top 600 2009 and the Jiao Tong Top 500 2008 were analysed. This analysis provided a qualitative assessment of the external validity of the cluster derived from the UK national data as well as the identification of potential gaps between universities as captured by national and international comparisons. Consistent results were found. For example, only cluster 1 universities from the analysis of the UK data appeared in the Top 10 in either the QS or the Jiao Tong rankings. Clusters 2 and 4 were mostly excluded from the international rankings as expected. However, in addition several universities belonging to clusters 1 and 3 appear at the bottom of the international rankings and are sometimes excluded. This indicates that there is variance within the clusters in terms

Figure 1: Positioning Maps for UK Universities

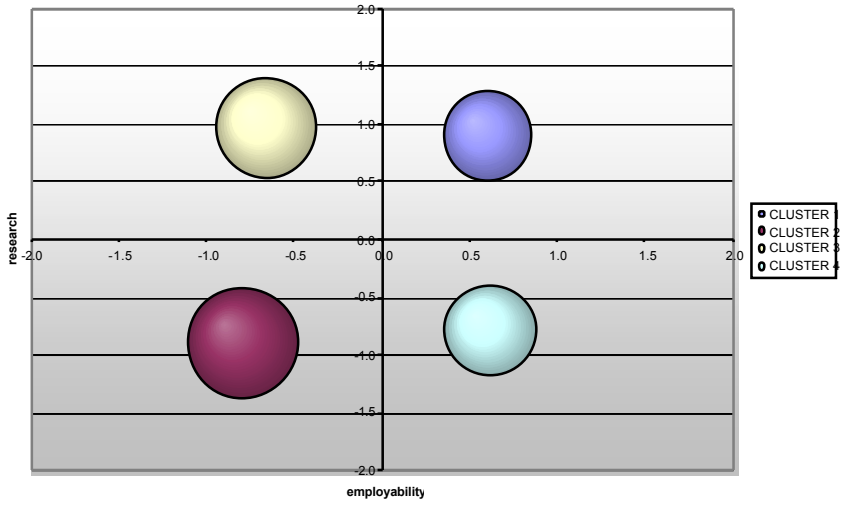
Map 1: Research and Teaching



Map 2: Teaching and employability



Map 3: Research and employability



of international standing and that it is a necessary but not sufficient condition to be strong in teaching and research to perform highly in the international rankings.

3. Discussion and Implications

The primary implication of the research is that, irrespective of whether strategy is deliberate or simply emergent, some UK higher education institutions are developing distinctive competitive positions in the marketplace. These positions are likely to impact on key variables like student decision making and access to financial or human resources with significant implications for performance outcomes. An interesting related issue is the long running debate regarding whether competitive positioning is perceptual or real. In the case of HEIs, real and comparable metrics are publically available which enable stakeholders to evaluate the different institutions. Organisations may wish to create particular positions in the market but stakeholders will evaluate the metrics and make up their own minds. The findings presented in Table 2 have significant managerial implications for the Vice-Chancellors of UK universities in either confirming that their strategies to date have been effective or alternatively, in demonstrating that they have not successfully achieved the distinctive competitive positions that they may have been seeking.

A further interesting aspect of the findings is that while some universities have demonstrated a clear competence in community engagement, there is no cluster emerging that seeks to develop a positioning strategy based solely on teaching quality (bottom right-hand quadrant of Map 1 in Figure 1). This contrasts, for example, with the US where some institutions clearly mark themselves out as being strong on teaching and while research is not irrelevant, it is not a high priority. Similarly, no cluster emerged of research-only universities, where teaching quality is not pursued (upper left quadrant). At the present time, it would appear that all institutions view both research and teaching as a good thing. Some manage to excel at both (cluster 3), but others appear to be falling into the positioning trap of being 'stuck in the middle' (Porter 1980).

The next phase of this study building on existing literature (e.g., Lynch & Baines 2004) is to examine the resource and capability profiles of the members of each cluster. Key variables to be examined include the following. What are the institutional heritage and the path dependencies of universities in the different clusters? What strategic resource and capability initiatives have been undertaken? How do the resource profiles of institutions in the different clusters vary and what investments need to be undertaken in order for universities to alter their competitive positioning? Extending the study beyond national borders would allow for an examination of how resource and capability development in universities is contingent on the unique environmental circumstances that institutions face. This phase of the research aims to make a significant contribution to the literature on dynamic capabilities and to that on the interface between resources and institutional environments.

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