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The impact of accreditation on the reform of study programmes in Germany

by

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University of Osnabrück, Central Evaluation and Accreditation Agency, Hanovre, Germany

The Bologna Process put in motion a series of reforms for higher education. In Germany, the “Bologna reform” focused national standards and guidelines which served as criteria for obligatory programme accreditation by external bodies. This article reports on the results of an empirical study that examined the effects and limitations of accreditation as a means of monitoring the reform of study programmes. An analysis of 1 380 accreditation decisions taken in the Federal State of Lower Saxony between July 2004 and December 2009 and a series of interviews of key actors in the state’s 36 higher education institutions gave rise to a better understanding of whether accreditation does in fact support HEIs’ quality assurance goals.
L’impact de la certification des diplômes sur la réforme des programmes d’études en Allemagne

par

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Le Processus de Bologne a entraîné une série de réformes dans l’enseignement supérieur. En Allemagne, la « réforme de Bologne » a ciblé les normes et directives nationales qui ont servi de critères pour la certification obligatoire des programmes par des organismes externes. Cet article fait le point sur les résultats d’une étude empirique portant sur les effets et les limites de la certification des diplômes comme moyens de mise en œuvre de la réforme des programmes d’études. L’analyse de l’adoption de 1 380 décisions sur la certification des diplômes dans l’État fédéral de Basse-Saxe entre juillet 2004 et décembre 2009 ainsi qu’une série d’interviews effectués auprès d’acteurs clés dans 36 établissements de l’enseignement supérieur de cet État ont permis de mieux comprendre si la certification des diplômes permet en effet de soutenir les objectifs d’assurance qualité des EES.
The aims of the study project

The Bologna Process, which was launched in 1999, led to an in-depth reform of the higher education system in Germany. However, after ten years of assuring quality through programme accreditation, it is clear that while the reform has had positive effects in many ways, there are also a number of problem areas. This has led the Central Evaluation and Accreditation Agency (ZEvA), Hanover, to carry out an empirical investigation destined to provide higher education institutions (HEIs) with the information and advice they need in order to make internal adjustments and to lay the foundations for advancing and/or refining the process of external quality assurance and control.

This study provides an evaluation of the accreditation decisions concerning study programmes made between July 2004 and December 2009 in 25 HEIs and 11 vocational academies in the Federal State of Lower Saxony. In addition, managers in the HEIs responsible for the structural reform of study programmes, as well as student representatives, were asked to give their opinion on the reform process and its results.

During the course of our investigations, we sought to answer the following questions:

- Have the reform goals and quality criteria been accepted by the HEIs?
- To what extent do the new study programmes live up to the structural reform criteria imposed by Ministers of Education and the Accreditation Council?
- Has the state been able to successfully assess and control the reform process through accreditation?
- What, according to reform managers and students, are the obstacles that have hampered the reform?
- Are there other forms of quality control that might be more appropriate?

The structural reform of the German higher education system: quality control through accreditation

The Bologna reforms aimed, notably, to:

- introduce a system of easily understandable and compatible degrees;
- introduce a credit point system (ECTS);
- promote mobility;
strengthen the European dimension of higher education; and

cultivate international co-operation in quality assurance.

In Germany, these goals were complemented by the following objectives:

- shorten the effective duration of studies;
- reduce attrition rates;
- limit funding requirements despite a growing number of students; and
- focus on labour market requirements at the expense of general academic education (Künzel, 2009).

The national accreditation system has some particularly striking features, such as elaborate external control mechanisms based on detailed criteria and guidelines. These do not, however, take explicit account of all aspects of the extended catalogue of reform goals. Another characteristic of the accreditation process is the specific organisation of the accreditation system itself (Kohler, 2011) (Figure 1).

Figure 1. The German accreditation system

The system has a three-tier structure: first, the Standing Conference of State Ministers of Education and Cultural Affairs (KMK) issues general prescriptions for the reform in terms of accreditation criteria as well as rules and regulations for the process of programme accreditation (Kultusministerkonferenz, 2010). Second, the Accreditation Council (AC) transcribes these prescriptions into concrete rules and regulations and transmits them to the accreditation agencies (Akkreditierungsrat, 2010a). Lastly, the accreditation procedures are carried out by accreditation agencies that have been licensed (accredited) by the AC (i.d., 2010b). Although these agencies do not make a profit from this exercise, they compete...
amongst each other for clients. This can lead to agency-specific interpretations of the guidelines and criteria, thus causing inconsistencies in study reform across the country (Künzel, 2011). In addition, specificities in individual states which deviate from the commonly agreed accreditation criteria issued by the KMK tend to increase such inconsistencies (i.d., 2009).

The design and methodology of the study

The process of structural reform of educational programmes involves three levels of authority – those of:

- control by the political system;
- external assessment and control by the accreditation system; and
- implementation and quality assurance by the management of the HEIs.

The issue of whether central or decentralised control bodies are involved and how they interact provides further variables. The central versus decentralised powers in question are the AC and the agencies (at the level of external control), on the one hand, and the central leadership of the HEIs versus the decentralised management of the departments, on the other. However, this study does not discuss the problems emanating from the interaction between the AC and the agencies; neither does it elaborate in detail on the differing views of central leadership and the HEI department managers.

Because of the complexity of the subject we explored, two complementary methodological approaches were adopted: first, 1 380 accreditation decisions taken between July 2004 and December 2009 concerning study programmes in Lower Saxony were scrutinised and the publicly available documentation relating to this process was carefully studied. Second, the results of this analysis were used to generate interview questions for those responsible for reform in the HEIs as well as student representatives. The study was conducted on the basis of a standardised questionnaire.

Analysing the documentation

An attempt to analyse the accreditation documents by means of statistical methods proved to be difficult because the conditional accreditation decisions which revealed the violation of AC quality standards were formulated in extremely diverse and inconsistent ways. A second major problem resulted from the differing levels of abstraction on which the accreditation criteria were defined, as well as the fact that they were partly overlapping. The documents were therefore examined from three different angles:

- AC standards;
- the AC criteria which implicitly define these standards; and
- violations of these criteria as stated in the conditional accreditation decisions.
Therefore, the caveats linked to conditional accreditation decisions had to be translated into clear, standardised statements that defined the respective deviations from individual AC standards. In order to do that, each standard had to be transcribed into all conceivable ways of violating it. Subsequently, all conditional accreditation decisions were translated into standardised statements that were then codified for the purpose of statistical analysis (see Appendix A1). These transcriptions had to be done in an intersubjectively consistent manner so that it did not matter which one of the research assistants had worked on them. The process of codification was therefore tested extensively until a high standard of intercoder reliability (87%) was reached.

In addition to the conditional accreditation decisions, the following information was encoded: the characteristics of the HEIs that were offering new study programmes, the study programmes themselves, and the number and kind of violations of AC standards. The conditions on which the accreditation decisions were contingent were then interpreted as indicators of implementation problems; this in turn implied that either the reform process was not being well administered by means of programme accreditation or that the HEIs were not able, or not willing, to meet certain AC standards.

The analysis of the accreditation or reaccreditation documents comprised all the Bachelor, Master and PhD programmes that had been introduced by the HEIs and vocational academies in Lower Saxony during the period in question. For 93% of the programmes, all the required data were available.

**Online survey and interviews**

The kind and number of violations of AC standards detailed in the conditional accreditation decisions were viewed as indications of problems hindering the implementation of the reform process. In order to gather subjective information about these objective empirical data, the drivers of reform in the HEIs, as well as student representatives, were asked to give their opinion on three topics:

- the validity of the reform goals and the quality criteria set by KMK and AC;
- the subjective and objective obstacles impeding the reform; and
- how effectively and efficiently the reform had been managed and the effectiveness and efficiency of quality control through programme accreditation.

Online questionnaires were sent to vice-presidents of HEIs, Bologna commissioners, quality managers, deans of study and programme managers. The respondents were also given the opportunity to make suggestions on where and how external conditions could be improved in order to make the reform
successful. They were asked to give their opinion about more effective methods of quality assurance and institutional management in general. Consequently, the questionnaires were composed of a mixture of open and closed questions.

In addition to this survey, 24 interviews with selected student representatives from 10 HEIs were conducted in order to collect more detailed information about the mechanisms related to the reform process, the conditions in which it took place and any problems experienced. The students were selected so as to represent major study areas in the higher education system.

Results of the study

Analysis of the accreditation documents

Of the 1,380 accreditation decisions analysed, 1,036 pertained to university programmes, 329 to study programmes at universities of applied sciences (Fachhochschulen) and 15 to programmes at vocational academies (Berufsakademien). Of the accredited programmes, 644 were Bachelors and 710 were Masters. In relation to the decisions themselves, 365 (i.e. 26.5%) were unconditional accreditations and 1,015 (i.e. 73.5%) were conditional; there were a maximum of 14 conditions per programme, but only 2 on average.

“Conditional accreditation” signifies that the HEI in question has to demonstrate to the agency within a certain period of time (defined by the rules of the AC) that it has met the specified caveats. If it fails to do so, the accreditation is revoked by the agency. The data show that the percentage of conditional accreditations has gone up from 60% in 2004 to almost 90% in 2009 (the relative frequency of conditional accreditations depends on the year of decision [Cramér’s V = 0.15; p < 0.001]). This trend is paralleled by a rise in the number of reports of violated criteria per programme, but there is no difference between accreditation and re-accreditation decisions in this respect.

The number of caveats in conditional accreditation decisions was especially marked between 2008 and 2009. This poses the question whether control through accreditation had increased over time. It is not clear, however, if this was indeed the case because the number of available data is too small and the time series does not extend beyond 2009. What can be safely assumed, however, is that over the course of a decade, the professionalism of the panels of experts employed by the agencies and – even more so – of the agencies’ standing accreditation commissions grew significantly, thus leading to a more critical perception of the quality of programmes.

A further guiding question concerned possible differences in the reform process according to study areas (Figure 2). These were aggregated into 12 major subject areas according to similarities of academic culture and
research methodology. While, on average, 73.6% of all accreditation decisions were conditional, an even higher percentage of conditional accreditations were documented for 6 of the 12 main study areas \[\chi^2(11) = 42.6; p < 0.001\].

Study programmes in the natural sciences (Chemistry, Physics and Geosciences) showed the largest percentage of violations of quality criteria (83.2%), followed by Engineering, Pedagogics and Social Sciences.

The average number of violations per study programme is 2.72. The programmes that showed the most violations of accreditation criteria were Engineering Sciences, followed by Language/Media Studies, Cultural Studies/History and Mathematics [Kruskal-Wallis-Test; \(\chi^2(11) = 27.1; p < 0.01\)] (Figure 3).

These results imply that the obstacles hindering the reform process differed widely across the major study areas. Especially resistant to change seem to be the “MINT” subjects (Mathematics, Informatics, Natural and Technological Sciences), with the exception of Mathematics. A closer look at the kind of conditions imposed by the accreditation agencies reveals that the reform managers in these study areas resisted, in particular, the standards relating to modularisation.

It is also interesting to note that the size of institutions matters. Study programmes in large universities were accredited unconditionally more often than those in medium-size or small institutions \(\chi^2(2) = 23.7; p < 0.001\). On the other hand, small universities of applied sciences had to deal with an above-average number of accreditation conditions [Kruskal-Wallis-Test; \(\chi^2(2) = 27.4; p < 0.001\)]. It seems plausible to assume that the third variable (“Effective
quality management") can explain this result: large universities can afford qualified support at central and department level.

Finally, it is worth mentioning that the number of conditions (or violations of standards for that matter) does not depend on the kind of degree programme (Bachelor, Master or Doctorate) or on the status of the HEI (university, university of applied sciences or vocational academy). The ownership of the institution (public/private) does not matter, either.

One of the goals of the study was to try to identify specific problem areas in the reform process. In other words, was the reform equally successful with respect to each and every quality standard?

In order to answer this question, the statistical analysis of the accreditation documents was based on two different indicators:

1. The distribution of violations (as measured by the number of accreditation conditions in their encoded form) across the eight AC quality standards.

2. The distribution of violations (as measured by the number of accreditation conditions in their encoded form) across the AC criteria which operationalise the AC standards.

Ad (1): Since the AC has operationalised each standard by a different number of criteria and each AC criterion can be violated in a number of ways (as defined by the encoded criteria), merely counting the number of violations of AC standards mentioned in the conditional accreditations would have distorted the picture. The number of violations of each standard was therefore weighted (divided) by the number of encoded criteria attached to it.
Figure 4 shows the weighted distribution of reported violations against the AC’s eight quality standards. Clearly, Standard 6 (System of Examinations) has been violated the most. The other frequently mentioned caveats in conditional accreditations pertained to Standard 7 (Transparency and Documentation), Standard 5 (Operating the Study Programme) and Standard 8 (Quality Assurance). Only very few violations were noted with regard to Standards 2 (Qualification Goals of the Concept of Studies) and 3 (Conceptual Position of the Programme in the Study System). Standard 1 (System Control of the Institution) has not been subject to any caveats.

This result does not necessarily permit us to conclude that it was not possible to meet the standards in an equal manner. It is just as plausible to argue that not all the standards can be regulated equally well by accreditation criteria. For instance, the findings for Standard 1 (System Control) and Standard 8 (Quality Assurance) may have been distorted because they cannot be adequately assessed at the programme level.

Ad (2): On account of the complexity of its standards, the AC had to define operational criteria that not only spelled out the different dimensions of these standards but could also be used to assess the quality of programmes through accreditation. Since the conditional accreditations refer to AC criteria, the distribution of violations as measured by the encoded (standardised) criteria not met by HEIs was plotted against these criteria (Figure 5).

This figure shows that modularisation apparently posed a major problem since 436 (i.e. 15.2%) of all caveats prescribed by agencies pertained to the fact that study modules were insufficiently constructed and described (Code 3.11). The second most frequent critique (395 violations, or 13.8%) refers to a lack of...
adequate human and material resources (Code 5.1) followed by a failure to
attune examinations with the programme’s qualification goals and its modules
and to design them to be knowledge- as well as competence-oriented (Code 6.1;
291 violations or 10.2 %).

The main findings of the document analysis can be resumed as follows:

- The number of violations of AC criteria varies across the main study
  areas. There is a high incidence of certain problems (especially inadequate
  modularisation) in the MINT programmes.
- Implementation problems are especially frequent in the following areas of
  study reform:
  - modularisation;
  - examinations;

Note: For the legend to the codes, see the Appendix A1.
feasibility of study requirements;
human and material resources;
transparency and documentation.

**The results of the online surveys**

We had hypothesised that in order for the reform process to be successful, its goals had to be widely accepted.

Figure 6 ranks the average score attributed to the reform goals by reform managers in HEIs. The higher the average grade, the more the goal is accepted. Clearly, most of the reform goals are (on average) considered to make sense, although there are wide discrepancies between levels of appreciation. The most popular ones are fostering student mobility (this goal is also linked to comparable degree structures and the recognition of competences acquired externally), followed by employability and reducing attrition rates. More instrumental goals, such as introducing a credit point system, quality assurance measures, a two-tier study system and shortening the duration of study time to graduation, are significantly less valued.

**Figure 6. An appraisal of reform goals**

Note: This figure shows respondents’ appraisal of the reform goals; averages are on a scale of 1 (not suitable) to 4 (suitable).

Figure 7 shows how AC criteria were ranked with respect to how suitable they are for guiding the reform process toward its goals. Overall, the criteria seem to be considered suitable. Some of them, however, are scarcely appreciated, notably those relating to module-specific exams, consecutive degree programmes, standardised study duration and the definition of qualification levels for Bachelor’s and Master’s degrees by accumulated ECTS points.
The open questions in the questionnaire furnish additional insights into the views of actors within HEIs. They are especially critical of the standardised quality criteria that, in their opinion, neglect subject-specific circumstances and entail too much inflexibility. The top-down approach of the reform process is perceived as another weakness. They also consider that the reform process is impeded by some of the quality goals and criteria that are difficult to operationalise.

It is obvious, however, that there is also quite significant resistance against change as such (“I look upon every system change with horror”). In addition, the individuals responsible for advancing the reform process in HEIs are not necessarily familiar with the various interpretations of the criteria, and on occasion they feel outmanoeuvred by the frequent modifications to the criteria.

One of the objectives of analysing the accreditation documents was to identify problem areas in the study reform. In order to find out whether these same areas were considered problematic by actors within HEIs, reform managers were also asked to identify problem areas within their own study programmes. Figure 8 shows how these were ranked by managers driving the reform process in HEIs.

![Figure 7. The suitability of AC quality criteria with respect to the reform goals](image)

Note: This figure shows respondents’ average ratings on a scale of 1 (not suitable) to 4 (suitable).
These results are in line with the opinions voiced on the suitability of the accreditation criteria. Interestingly, the quality criteria that were considered not to be supporting the reform goals well are the same as those that had not been easy to fulfil.

Difficulties had been encountered when HEIs had attempted to:

- provide “windows of mobility” in the study programmes;
- make effective use of the results of class evaluations by students; and
- realistically estimate the workload generated by study programmes.
Additional problem areas were considered to stem from the need to:

- carry out empirical studies on graduates’ success in the workplace;
- orient exams in function of competence goals;
- keep the pressure of examinations within acceptable boundaries; and
- introduce effective measures of quality assurance.

However, in general, reform managers in HEIs seem to accept a majority of the quality criteria. They view only about one-third of them as problematic, despite the fact that in 2009 about 90% of all accreditation decisions were conditional.

The opinions expressed on the issue of modularisation are somewhat surprising. While the document analysis revealed that this reform criterion had been identified as frequently causing implementation problems, thus leading to conditional accreditations, the reform managers did not think it was difficult to define adequate module sizes (as measured in ECTS points), to minimise overlap between compulsory courses, to determine a competence goal for each module and to realise examinations suited to module goals.

Another guiding question in the survey related to issues that were hindering the implementation of the reform. Since the caveats in the conditional accreditation decisions were conceived of as indications of implementation problems, the survey concentrated on the three areas of study reform that, according to the document analysis, were responsible for most conditional accreditation decisions: the feasibility of programme requirements, modularisation and the examination system (Figure 9).

Almost half of the managers pointed to a lack of resources, and claimed that another significant factor that was hindering the reform was the inadequacy or incomprehensibility of some of the quality criteria. These findings were in line with the insights we gained from the document analysis, where encoding the criteria had proven to be difficult because they overlapped and were ambiguous.

The significance of reform obstacles varies across the different areas of implementation: while the incomprehensibility of quality criteria was thought to have caused inadequate modularisation, insufficient resources were considered to have impeded the feasibility of programme requirements.

The answers to the open questions provide further details on the factors causing implementation problems.
Within HEIs, problems tend to be generated by:

- the number of faculties and subject areas involved in a study programme;
- weaknesses in the internal management of quality issues;
- faculty members’ negative attitude towards the Bologna reform;
- a lack of human and material resources; and
- a lack of knowledge and competence among support staff working on the reform process.

External factors which are hindering the reform are perceived as:

- the control-oriented approach of accreditation which is thought to infringe upon HEIs’ autonomy;
- a lack of compliance on behalf of HEIs which is not detected by agencies;
- large discrepancies between agencies’ operational standards;
- the divergence between state-specific criteria and the common criteria of the 16 federal states as laid down by KMK and AC;
- the resource-intensive nature of programme accreditation;
- a lack of competence among personnel in agencies who administer the accreditation procedure; and
- a lack of counselling during the implementation phase.
Managing the reform process and future regulations

Two additional guiding questions put to respondents in HEIs related to the problem of managing the reform process:

- Is programme accreditation accepted by the relevant actors in HEIs?
- Are there other ways to manage the reform process that are considered to be more appropriate?

A large majority of respondents (64%) considered that the reform was “not successful” whereas only 36% thought it to be bearing fruit. The main stumbling block, according to them, is programme accreditation.

With respect to a possible future approach to driving and controlling the reform process, the most popular option (34.9%) was to leave these aspects in the hands of HEIs’ internal quality management bodies. The idea of accrediting the internal quality assurance system (“system accreditation”) is somewhat more popular (12.7%) than programme accreditation (6.9%). Institutional evaluations (7.4%) and quality audits (7.9%) are not considered to be desirable alternatives, but from some of the remarks it can be concluded that these approaches are not well known.

Interviews: what the student representatives had to say

Talking to students enrolled in the main study areas proved to be valuable because their views shed light on the complex conditions of the reform process within HEIs. These interviews revealed four pertinent insights:

- Some reform areas that are considered to be unproblematic by managers are highly criticised by students for lack of sufficient progress on reforms such as the recognition of external study results and the existence of module-oriented exams. This may be an indication of inadequate communication and co-operation between the two groups of actors during the course of the reform process and in quality assurance activities.

- The students were also critical of the fact that some of the most flagrant violations of quality criteria were not revealed through programme accreditation. These include:
  - unrealistic workloads;
  - unfeasible study requirements;
  - ineffective class evaluations;
  - unacceptable exam pressure;
  - a lack of competence-oriented exams.
It seems that these criteria were not sufficiently scrutinised during the accreditation process. (It should, however, be noted at this point that some reform managers had admitted they had deliberately camouflaged these problems when preparing their documentation for programme accreditation.)

- The students were under the impression that, in many cases, the study reform had been carried out in a rather formalistic way and that the key protagonists had no – or little – intention of substantially altering the process of teaching and learning. Modularisation is a prominent example of this:
  - Exams that are oriented towards module goals are an exception; course exams are the rule.
  - The module goals have little or no bearing on course exams.
  - Modules are constructed as a formal combination of study courses; instructors have not developed a common understanding of the aims, content and methodology of their teaching.

- A key problem stressed by many interviewees is the perceived change in conditions, styles and attitudes of learning in the new programmes which reminds them of their school years:
  - Instead of trying to develop an ability to understand and solve complex problems, many students are content to acquire factual knowledge through rote learning.
  - Overloaded compulsory courses leave little or no room for individual interests and preferences.
  - Presence in class is mandatory.
  - Registering for exams is perceived to be an act of bureaucratic control.

   It is worth noting that none of the standards or criteria governing accreditation explicitly addresses any of the features that characterise this ill-conceived study reform.

**Conclusions**

Programme accreditation is geared towards enforcing compliance with detailed, bureaucratic criteria that can easily be measured. The document analysis has shown, however, that some of the quality criteria cannot be assessed by programme accreditation. Furthermore, accreditation documents have not infrequently been produced solely for the purpose of accreditation, while teaching and learning have continued to adhere to the same procedure, year in, year out.

On the other hand, it is only possible to introduce an entirely new study system if compliance with certain structural standards is enforced. In that respect, programme accreditation has been successful to a large degree, even
though in many cases conditions were imposed and accreditation agencies had to ensure that they were met.

However, although programme accreditation obliges HEIs to comply with threshold standards, it does not support the continuous improvement of quality in teaching and learning essentially because this approach cannot eliminate the organisational differences between semantics and social structure. On the level of semantics, programme accreditation is governed by guidelines, rules, regulations and prescriptions that are laid down in various documents. However, on the level of social structure, the relevant processes and (even more so) the outcomes may differ substantially from what is described in the documents. Agencies lack the tools and expertise that they need in order to measure the impact of changes on the effectiveness of the teaching and learning process and on the quality of its outcomes; therefore, they cannot detect these differences during the course of the accreditation procedure.

Furthermore, HEIs only gain marginally from programme accreditation. Complex and detailed accreditation criteria lead to misunderstandings; varying interpretations create a need for counselling, this is alien to accreditation and thus cannot be met by the agencies. Furthermore, the additional resources necessary to underpin the reform were not granted; this situation was exacerbated by the enormous subjective opportunity cost perceived by the academics who were involved in preparing documentation for programme accreditation. Consequently, the benefit/cost ratio is estimated to be small by many of the reform managers.

Most importantly, however, the control-oriented approach of programme accreditation – and this is also true for system accreditation if it has to be repeated periodically – does not provide incentives for qualitative change. As long as time and energy expended on driving innovations and qualitative improvements in teaching and learning have no bearing on the success of either HEIs or their academic personnel, qualitative profiling of the educational activities will not become an integral part of institutional and individual strategy. An institutional quality culture can only develop if the quality assurance processes are owned by the institution and adopted by its members. This view is supported by 35% of reform managers who believe that a superior quality assurance system should leave HEIs’ internal quality management bodies in control.

On the other hand, if it is not complemented by a periodic external evaluation of the methods, tools and processes employed by HEIs in order to continuously enhance the quality of teaching and learning, the system of quality assurance is not convincing, either. Even though it is the institutions’ responsibility to ensure the quality of all its operations, it is indispensable that an external authority should periodically assess the quality of their management
practices. This would address the double need of counselling and accountability. Thus, the critical stance of HEI management bodies toward system accreditation is justified only in so far as the accreditation of quality management systems against threshold standards is repeated at regular intervals. Instead of being used periodically as a control tool, system accreditation should serve to establish the status of “self-accrediting institution”. Thereafter, quality audits should be carried out for the dual purpose of ensuring accountability and guidance in order to support HEIs in their endeavour to enhance their quality assurance methods.

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The authors are grateful for the provision of funding by ZEvA and the Ministry of Science and Cultural Affairs of the Federal State of Lower Saxony, Germany.

References


APPENDIX A1

The German Accreditation Council’s (AC) accreditation criteria

<p>| AC-Criterion 1.1: | The HEI has developed and documented quality standards for teaching and learning. |
| AC-Criterion 1.2: | The quality standards are implemented at programme level. |
| AC-Criterion 2.1: | The study programme is geared towards valid qualification goals. |
| AC-Criterion 2.2: | The qualification goals have been formulated in a complete and comprehensible way. |
| AC-Criterion 2.3: | The qualification goals have been completely specified. |
| AC-Criterion 2.4: | (Re-accreditation): Graduates’ success in the workplace has implications for the re-assessment of programme goals. |
| AC-Criterion 3.1: | The National Qualification Framework for Degree Programmes in German Higher Education has been observed. |
| AC-Criterion 3.2: | The standard study duration and the volume of studies comply with the pertinent regulations. |
| AC-Criterion 3.3: | A thesis is required which meets defined and prescribed standards. |
| AC-Criterion 3.4: | The admission requirements comply with the legal regulations. |
| AC-Criterion 3.5: | The possibility of changing between study programmes regulated by §§ 18 and 19 Higher Education Framework Law (HRG) is provided for. |
| AC-Criterion 3.6: | It is possible to recognise knowledge and competences acquired externally. |
| AC-Criterion 3.7: | The typological characterisation of the study programme complies with the pertinent regulations. |
| AC-Criterion 3.8: | A comprehensive “diploma supplement” is provided. |
| AC-Criterion 3.9: | An adequate credit point system is in place. |
| AC-Criterion 3.10: | The programme is completely modularised. |
| AC-Criterion 3.11: | The description of the modules complies with the pertinent regulations. |
| AC-Criterion 3.12: | The state-specific criteria of Lower Saxony have been observed. |
| AC-Criterion 4.1: | The study concept advances knowledge as well as competences. |
| AC-Criterion 4.2: | The study concept is adequately designed. |
| AC-Criterion 4.3: | The feasibility of the study programme is warranted. |
| AC-Criterion 4.4: | (Re-accreditation): Revisions of the study concept are based on empirical studies by the HEI. |
| AC-Criterion 5.1: | The human and material resources and facilities necessary to carry out the study programme are in sufficient supply. |
| AC-Criterion 5.2: | The organisation and supporting tools of the study programme are in line with the conditions of operation. |
| AC-Criterion 6.1: | The exams are attuned to the qualification goals of the programme and its modules and they are oriented toward assessing knowledge as well as competences. |
| AC-Criterion 6.2: | The system of examinations allows students to complete the programme in due time. |
| AC-Criterion 6.3: | Compensations are granted for disadvantages incurred by disabled students on account of time constraints or formal requirements of the study programme and/or of placement tests. |
| AC-Criterion 6.4: | The regulations on examinations have been checked to comply with the relevant laws. |
| AC-Criterion 7.1: | The stipulations governing the organisation and study requirements of the programme have been documented and publicised. |</p>
<table>
<thead>
<tr>
<th>AC-Criterion 7.2:</th>
<th>The exam requirements, including the regulations concerning compensations for disabled students, have been adequately documented and publicised.</th>
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</thead>
<tbody>
<tr>
<td>AC-Criterion 7.3:</td>
<td>Subject-specific and general provisions of counselling and advice have been publicised adequately.</td>
</tr>
<tr>
<td>AC-Criterion 7.4:</td>
<td>The labelling of the programme is correct.</td>
</tr>
<tr>
<td>AC-Criterion 8.1:</td>
<td>The HEI has installed an effective quality management.</td>
</tr>
<tr>
<td>AC-Criterion 8.2:</td>
<td>(Re-accreditation): The HEI makes use of the results of quality assessments.</td>
</tr>
</tbody>
</table>

### AC standards, AC criteria and examples of encoded criteria

<table>
<thead>
<tr>
<th>AC Standard 1: System control of the HEI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC Criterion 1.1:</strong> The HEI has developed and documented quality standards for teaching and learning.</td>
</tr>
<tr>
<td><strong>Encoded Criterion 1.1.1:</strong> The HEI has not developed and/or documented quality standards for teaching and learning.</td>
</tr>
<tr>
<td><strong>AC Criterion 1.2:</strong> The quality standards are implemented at programme level.</td>
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<table>
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<tr>
<th>AC Standard 2: Qualification goals of the study programme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC Criterion 2.1:</strong> The study programme is geared toward valid qualification goals.</td>
</tr>
<tr>
<td><strong>Encoded Criterion 2.1.1:</strong> The study concept is not geared toward (subject-specific and generic) qualification goals that are in line with the targeted level of qualification.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>AC Standard 3: Conceptual position of the programme in the study system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC Criterion 3.1:</strong> The National Qualification Framework for Degree Programmes in German Higher Education has been observed.</td>
</tr>
<tr>
<td><strong>Encoded Criterion 3.1.1:</strong> The Bachelor’s degree has not been designed as a first degree qualifying for employment.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>AC Standard 4: The study concept</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AC Criterion 4.1:</strong> The study concept focuses on knowledge as well as competence.</td>
</tr>
<tr>
<td><strong>Encoded Criterion 4.1.1:</strong> The study concept does not support the acquisition of valid subject-specific knowledge.</td>
</tr>
</tbody>
</table>

| AC Criterion 4.4: (Re-accreditation): Revisions of the study concept are based on empirical studies by the HEI. |

<table>
<thead>
<tr>
<th>AC Standard 5: Operating the study programme</th>
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</thead>
<tbody>
<tr>
<td><strong>AC Criterion 5.1:</strong> The human and material resources and facilities necessary to carry out the study programme are in sufficient supply.</td>
</tr>
<tr>
<td><strong>Encoded Criterion 5.1.1:</strong> Human resources are insufficient.</td>
</tr>
<tr>
<td><strong>AC Criterion 5.2:</strong> The organisation and supporting tools of the study programme are in line with the conditions of operation.</td>
</tr>
<tr>
<td><strong>AC Standard 6: System of examinations</strong></td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>AC Criterion 6.1:</strong> The exams are attuned to the programme’s qualification goals and modules and they are oriented toward assessing knowledge as well as competences.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>AC Criterion 6.4:</strong> The regulations on examinations have been checked to comply with the relevant laws.</td>
</tr>
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<td></td>
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<tr>
<td><strong>AC Standard 7: Transparency and documentation</strong></td>
</tr>
<tr>
<td><strong>AC Criterion 7.1:</strong> The stipulations governing the organisation and study requirements of the programme have been documented and publicised.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>AC Criterion 7.4:</strong> The labelling of the programme is correct.</td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>AC Standard 8: Quality assurance</strong></td>
</tr>
<tr>
<td><strong>AC Criterion 8.1:</strong> The HEI has installed an effective quality management.</td>
</tr>
<tr>
<td><strong>AC Criterion 8.2:</strong> (Re-accreditation): The HEI makes use of the results of quality assessments.</td>
</tr>
</tbody>
</table>
Emerging higher education strategy in Ireland: amalgamate or perish

by

Maria Hinfelaar

Limerick Institute of Technology, Ireland

In Ireland, policies destined to create a reconfigured binary higher education system are evolving; in the coming years institutes of technology may be redesignated as “technological universities” following a process of voluntary amalgamations and independent reviews against stringent criteria. This overhaul of the sector would satisfy institutions’ ambitions to have their status upgraded, and would underpin national policy to address fragmentation and sustainability issues. Drawing on international literature on mergers in higher education, this paper proposes a distinction between push and pull factors as the drivers for exploration and decision making. These two categories of drivers are reviewed in the context of Irish policy development and are applied to an example of a merger that was effected after the publication of the new National Strategy for Higher Education.
La nouvelle stratégie de l’enseignement supérieur en Irlande : fusionner ou périr

par

Maria Hinfelaar
Institut technologique de Limerick, Irlande

En Irlande, les politiques conçues pour engendrer une reconfiguration du système binaire de l’éducation supérieure sont en pleine évolution. Dans les prochaines années, les instituts de technologies seront peut-être rebaptisés « universités technologiques » suite à un processus de fusion volontaire et d’examens indépendants selon un ensemble de critères stricts. Cette refonte du secteur permettrait de satisfaire les ambitions des institutions concernant la mise à jour de leur statut, et renforcerait la politique nationale pour aborder les questions liées à la fragmentation et à la pérennité. S’appuyant sur la littérature internationale relative aux fusions dans l’enseignement supérieur, cet article propose une distinction entre les facteurs d’attraction et de rejet comme pilotes d’exploration et de prises de décisions. Ces deux catégories pilotes sont examinées dans le cadre du développement des politiques irlandaises et sont appliquées à un exemple de fusion entrepris après la publication de la nouvelle stratégie nationale de l’enseignement supérieur.
Introduction

Early in 2011, the Irish Department of Education and Skills (DES) published its National Strategy for Higher Education to 2030. The strategy is ambitious, but faces challenges due to severe public-sector resource constraints and the projected expansion of the sector due to demographic patterns and rising participation levels (DES, 2011, p. 44). It includes recommendations to strengthen the capacity and macro framework for higher education, which is characterised by a binary system with complementary and diverse missions for institutions.

In 2010/11 the publicly funded higher education sector in Ireland served over 188,000 full-time and part-time students; it comprises 7 universities, 14 institutes of technology (IOTs) and a small number of affiliated providers (Table 1). Policy objectives in the National Strategy to 2030 cover teaching and learning, research, engagement with the business sector and the wider community, internationalisation, funding, governance and management. To achieve these objectives adequately, intensified collaboration and some consolidation will be required. Formal mergers across the binary divide will not be considered, even though intensified regional collaboration is encouraged which may even stretch to programme rationalisation between universities and neighbouring IOTs. However, the IOTs themselves are singled out specifically as the sector which should commence a process of amalgamations in order to address immediate challenges of high cost and inefficiency in some cases (DES, 2011, p. 101 ff). A handful of amalgamated institutions of “appropriate scale and capacity” may eventually be redesignated as technological universities, subject to their meeting stringent criteria and enabling legislation being put in place. In June 2011 draft criteria for technological universities were published by the Higher Education Authority (HEA), the funding and policy agency acting under the aegis of the Department of Education and Skills (HEA, 2011a; Marginson, 2011). Since the publication of the strategy, policy makers have reinforced the need for a system of “directed diversity, ... [where institutes] should avoid playing catch-all – this is a formula for blandness and dissipation of energy and resources, and ultimately will not be funded” (Boland, 2011).

A considerable body of international literature has been built up over the past couple of decades reviewing merger processes and outcomes in several jurisdictions. In many cases, these mergers arose from national policies and
were choreographed by government; in other cases, institutions themselves instigated them. In contrast with many other countries, Ireland has seen very little merger activity since the late 1980s and early 1990s when the regional technical colleges were formed, subsequently renamed the institutes of technology (Irish Government, 1992; id., 2006). Even though the Irish higher education institutions themselves have undergone significant development and expansion over the past 20 years, supported by substantial state investment, their configuration during that entire period can be described as

Table 1. **Full-time undergraduate and postgraduate enrolments in publicly funded higher education institutions in Ireland, 2010/2011**

<table>
<thead>
<tr>
<th>Name of institution</th>
<th>Full-time undergraduate students</th>
<th>Full-time postgraduate students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutes of Technology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athlone IT</td>
<td>3 541</td>
<td>154</td>
</tr>
<tr>
<td>Blanchardstown IT</td>
<td>1 894</td>
<td>27</td>
</tr>
<tr>
<td>Carlow IT</td>
<td>3 323</td>
<td>33</td>
</tr>
<tr>
<td>Cork IT</td>
<td>6 941</td>
<td>295</td>
</tr>
<tr>
<td>Dublin IT</td>
<td>10 625</td>
<td>1 108</td>
</tr>
<tr>
<td>Dun Loughaire Art and Design IT</td>
<td>1 965</td>
<td>92</td>
</tr>
<tr>
<td>Dundalk IT</td>
<td>4 256</td>
<td>97</td>
</tr>
<tr>
<td>Galway-Mayo IT</td>
<td>5 363</td>
<td>154</td>
</tr>
<tr>
<td>Letterkenny IT</td>
<td>2 479</td>
<td>89</td>
</tr>
<tr>
<td>Limerick IT</td>
<td>4 002</td>
<td>113</td>
</tr>
<tr>
<td>Sligo IT</td>
<td>3 770</td>
<td>85</td>
</tr>
<tr>
<td>Tallaght IT</td>
<td>2 745</td>
<td>64</td>
</tr>
<tr>
<td><strong>Tipperary Institute (not under IOT Act 2006)</strong></td>
<td>671</td>
<td>0</td>
</tr>
<tr>
<td>Tralee IT</td>
<td>2 369</td>
<td>30</td>
</tr>
<tr>
<td>Waterford Institute of Technology</td>
<td>6 155</td>
<td>425</td>
</tr>
<tr>
<td><strong>Universities and linked providers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dublin City University</td>
<td>6 673</td>
<td>1 538</td>
</tr>
<tr>
<td>Mary Immaculate College of Education</td>
<td>2 502</td>
<td>343</td>
</tr>
<tr>
<td>Mater Dei Institute</td>
<td>383</td>
<td>59</td>
</tr>
<tr>
<td>National College of Art and Design</td>
<td>761</td>
<td>105</td>
</tr>
<tr>
<td>NUI Galway</td>
<td>10 929</td>
<td>2 804</td>
</tr>
<tr>
<td>NUI Maynooth</td>
<td>5 866</td>
<td>1 274</td>
</tr>
<tr>
<td>Royal College of Surgeons Ireland</td>
<td>1 907</td>
<td>285</td>
</tr>
<tr>
<td>St Patrick’s College Drumcondra</td>
<td>1 838</td>
<td>143</td>
</tr>
<tr>
<td>St Angela’s College Sligo</td>
<td>436</td>
<td>0</td>
</tr>
<tr>
<td>Trinity College Dublin</td>
<td>11 231</td>
<td>3 331</td>
</tr>
<tr>
<td>University College Dublin</td>
<td>14 928</td>
<td>4 524</td>
</tr>
<tr>
<td>University College Cork</td>
<td>13 041</td>
<td>2 938</td>
</tr>
<tr>
<td>University of Limerick</td>
<td>8 480</td>
<td>1 718</td>
</tr>
</tbody>
</table>

static. The new government strategy proposes a highly ambitious programme of sector evolution supported, on the one hand, by mergers which should address a mixed agenda of rationalisation and efficiency gains and, on the other hand, the upgrading of the quality and status of institutions. Is it possible to mix these agendas? What can policy makers and individual institutions learn from international research on mergers in higher education? Will the Irish experience have the potential to contribute to the international body of knowledge?

The focus of this study will be on the forces which are driving mergers in the context of emerging Irish policy and institutional responses. We also propose a simple classification of push factors versus pull factors motivating organisational decision making in the initial manoeuvres towards possible amalgamation. Push factors are external, implying certain inevitabilities or even threats driving organisational change; pull factors can be internally driven or created by attractive options offered to institutions, aligned with strategy for organisational development. The case of the incorporation of Tipperary Institute into Limerick Institute of Technology in 2011 is reviewed against the push-pull framework.

**Push factors**

A merger can be defined as “the combination of two or more separate organisations, with overall management control coming under a single governing body and a chief executive ... all assets, liabilities and responsibilities of the former institutions are transferred either to a continuing institution or to a new institution” (Harman and Meek, 1988; Goedegebuure, 1992).

In the “push” category of drivers for amalgamations in higher education, Harman and Harman (2008, p. 103) describe how, in many countries, mergers have been initiated by national governments. This is particularly true in the framework of major restructuring efforts to address problems of institutional fragmentation, lack of financial viability and low efficiency and quality. In countries with a policy of maintaining a binary system, such efforts have been directed towards the non-university sector and had a minimum impact on the university sector (Harman and Harman, 2003, p. 36). This phenomenon seems to be mirrored in the Irish context. The most powerful push factor for merging may be the survival of participating institutions and this tends to be driven by government agencies (Pritchard, 1993, p. 85); some argue that in the absence of strong negative push factors – such as financial insolvency – merger proposals are unlikely to be followed through (Brown et al., 2004). In the United Kingdom, there is a long history of the Higher Education Funding Council for England (HEFCE) seeking merger partners among larger
institutions for small and vulnerable institutions (Oakleigh, 2010, p. 11). Similarly, in Finland the government decided to reduce the number of universities and polytechnics in order to make the system more competitive internationally and it directed mergers of specific institutions (Ursin et al., 2010, p. 328).

Patterson (2000) conducted a study on economies of scale actually achieved through mergers in higher education. Drawing on data from the United States, Canada and Australia, the study notes that “mergers and other forms of alliance are often proposed and initiated in the belief that small institutions have high unit costs, that large universities have lower unit costs, and that universities should have a broad rather than a limited range of course offerings” (ibid., p. 260). It was found that costs do decrease as a result of consolidation, but “at a decelerating rate up to a critical size and then diseconomies may set in over the upper size ranges”. The best results occurred when large players merged with smaller ones, involving some “economies of scope”; in other words, the elimination of duplicated programmes (ibid., pp. 265-267). The key question, then, would be what constitutes the optimum “critical size”. This is difficult to determine. One crucial variable is whether institutions are geographically dispersed, generating considerable additional cost and tensions as in the case of the merger that created the University of Ulster (Pritchard and Williamson, 2008, pp. 4-5). Another variable is whether a major rationalisation of course offerings is undertaken following the merger. This enables greater cost savings to be achieved than would have been the case with merely cutting some administrative overhead (Harman and Harman, 2003, p. 33).

A scenario is unfolding in the Netherlands which would support Patterson’s thesis that diseconomies of scale apply beyond a certain point in higher education mergers. A wave of mergers and consolidations took place in the non-university HEI sector over recent years resulting in a handful of multi-site institutions with 30 000 to 40 000 students clustered around major population centres. The pendulum is now swinging to the other direction amid serious concerns over quality and efficiency as revealed by government-led inquiries (Inspectie van het Onderwijs, 2011; NVAO, 2011). New policy has been implemented in the Netherlands as of October 2011, forbidding further mergers unless a government commission accepts comprehensive arguments that the proposed merger will not limit student choice regionally or nationally and is academically and financially sound (OCW, 2011). Uniquely, therefore, push factors directing institutions away from mergers have been introduced by a national government in this case.

Many authors point out that efficiencies generated by consolidation tend to be overestimated at the outset, whereas the initial cost, time and effort of merger processes can be underestimated and “few if any mergers are
painless... it can take up to ten years for the wounds to heal” (Harman and Meek, 2002, p. 4). A review commissioned by the HEFCE exhorts UK institutions to be more realistic about merger costs incurred by issues involving “people, property and technology” (Oakleigh, 2010, p. 17). In his study of cultural implications of mergers, Locke (2007) concludes: “Government policies that promote mergers ... may actually put HEIs at greater long-term risk. [...] The status and efficiency of the new HEI [following a merger] might be improved at the expense of its academic and scholarly development” (Locke 2007, pp. 97-100, italics added). Other publications, however, point towards overriding benefits such as an enhanced range and quality of programmes and an increased funding base, in spite of the major disruption and controversy often caused by mergers (Harman and Harman, 2008, p. 102).

In Ireland, projected cost reduction is the clearest push factor for mergers brought into play by the government. The HEA is introducing a unit cost system for the core recurrent grant to the IOTs as is already the case in the university sector. This involves addressing historical funding imbalances through increasing the proportion of state funding which is directly related to student numbers and cost benchmarks on a phased basis. In 2011, a transparent overview of budget allocations was circulated to all the IOTs which showed for the first time what the impact of the new funding mechanism would be if it was implemented immediately (HEA, 2011b). The data indicated that the biggest losers would have been those institutions at the extreme ends of the spectrum (> 20 000 students or < 3 000 students) which stand to lose up to 30% of their direct state grant over the four-year implementation period. The medium-sized or slightly larger institutions will fare better, with some gaining up to 20%.

IOTs which are the principal casualties of the new funding regime in Ireland are likely to experience pressure to merge with institutions that have a stronger financial position, thus following the pattern of “asymmetrical mergers” (Harman and Harman, 2003, pp. 30-31). An additional – but less powerful – push factor is the increasing compliance burden imposed by new codes of governance and frequent data requests from the authorities, which are difficult to manage for small organisations. Stronger institutions, however, may not have the appetite to join forces with weaker institutions unless there are compelling strategic reasons to do so and this reluctance has been reinforced by the circulation of the detailed league table of virtual winners and losers under the impending changes. For their part, the weaker institutions may wish to tackle their cost issues and retain their autonomy rather than contemplate a merger where they will be the minor partner and effectively be taken over by a stronger institution looking to expand. The emerging policy approach is for the HEA to wait for institutions to come together voluntarily,
whereas the literature shows that, internationally, mergers to address sustainability and viability issues have been driven by government.

A further complication would arise due to the issue of job security in the Irish public sector, ruling out redundancy schemes that are typically witnessed in other jurisdictions as part of the restructuring process. Collective agreements for the public sector, precluding forced redeployment of staff beyond a 45-kilometre radius (Irish Government, 2010), would hamper any rationalisation process undertaken by most of the IOTs since they are at least 100 kilometres apart, except for the Dublin-based institutions. Regardless of any collective agreements with unions, management would have to be sensitive to stress, fatigue and diminished productivity caused by forced moves or frequent inter-campus travel, as in the case of Ulster University where 84% of staff still cited this as an issue twenty years after the merger (Pritchard and Williamson, 2008, p. 15). Such constraints which impede potential long-term efficiencies will significantly lessen the push factors justifying any merger. Therefore, the question arises whether attractive pull factors exist to drive a voluntary amalgamation process in the Irish system.

**Pull factors**

Mergers have been undertaken to broaden the academic range of an HEI (Oakleigh, 2010, p. 14) or to cope with rapid increases in enrolments (Harman and Harman, 2003, p. 33). Such positive reasons for mergers can be part of national trends, even though they are initiated by the institutions themselves. The university status conferred on the polytechnic sector in the United Kingdom in the early 1990s was the sole driver for a number of voluntary mergers. Institutions had to meet straightforward criteria of awarding their own qualifications and enrolling at least 4 000 full-time equivalent (FTE) students, of whom 75% had to be at degree level (Pritchard, 1998, p. 73). Similarly, in Australia the numerical benchmark of 8 000 FTE students was used to determine eligibility for funding as a comprehensive university involved in teaching and research when the binary system was abolished (Harman and Harman, 2003, p. 35). Some of the smaller specialist players had to merge in order to attain the threshold numbers and in both countries institutions often sought their own partners (e.g. Locke, 2007). Such specialist colleges were in no doubt that they would satisfy the criteria, thus comforting themselves with the knowledge that a merger was the right decision. By 2011 the UK government, aiming to create more competition in the system, decided to lower the entry barrier and allow any public or private provider with at least 1 000 students to carry the title of university (BIS, 2011, p. 53; Baker, 2011). The pull factor of attaining university status as a driver for mergers has therefore disappeared in the United Kingdom, as there would be very few higher education providers operating on a scale below 1 000 students. In Australia,
more elaborate criteria have to be met by all established (and any proposed) universities (MCEETYA, 2007) but these were introduced long after the initial wave of mergers when institutions were upgraded.

In the case of Ireland, the pull factor of the coveted university status would be the principal rationale for IOTs to consider merging at all. The three larger institutions in Dublin, Waterford and Cork had already articulated their ambitions to achieve university status and submitted applications for recognition under the Universities Act. Following several years of multiple reviews and deferred government decisions, the national strategy finally declared that “there is no case for the establishment of any new universities in Ireland on the basis set out in Section 9 of the Universities Act, 1997” but the designation of amalgamated IOTs as “technological universities” might be considered (DES, 2011, p. 101). Unlike most other international examples of non-university sectors, Irish IOTs are already engaged in significant postgraduate activity, sometimes running into hundreds of students (HEA, 2011c). The applied research function of institutes is well developed, supported by co-located incubation centres and technology transfer offices. They compete with the traditional universities on a level playing field for domestic and EU research funding, and even though universities account for the bulk of this funding there are examples of IOTs being more successful in bids for particular niches. This substantial presence in research, regional enterprise development and innovation is combined with their more traditional mission, i.e. delivering education at sub-degree and degree levels across a broad spectrum of disciplines to full-time and part-time students. The sector accommodates about half the students in the Irish higher education system including many in traditionally under-represented groups, and some of the institutes are already larger than the smallest universities – thus casting some doubt on the analysis offered in the national strategy that consolidation through amalgamations is urgently needed in the IOT sector only.

The fact that, in other jurisdictions, HEIs with similar missions and origins to Irish IOTs have long since acquired university status (in the case of unitary systems such as in the United Kingdom) or the title “university of applied science” (in the case of evolved binary systems such as in the Nordic countries and the Netherlands) has not gone unnoticed in the sector. It is also evident that the performance, scope and stage of development of many of the Irish non-university players far outstrip the criteria that are typically set for status upgrading elsewhere. This posed a quandary to Irish policy makers, who wished to devise criteria that are sufficiently challenging to create a dynamic of reform and reconfiguration and that would also appease powerful voices in Irish society that are opposed to redesignation – not least the seven existing universities.
Under current legislation, the title of university is protected and may not be used “to describe an educational establishment or facility without the approval of the Minister” (Irish Government, 1997), although it is possible for existing universities to incorporate institutions or to enter into partnership arrangements with other providers to confer their awards (ibid., Part II, Section 8). New legislation is therefore required to implement the policy of forming a new category of amalgamated “technological universities”. The national strategy proposes a two-stage application process, involving national and international expert review panels (DES, 2011, pp. 102-106). The criteria are wide-ranging and some of them are potentially contentious, such as the expected impact of redesignation on the region and on the main stakeholders, amongst which are universities. Quantifiable criteria include the proportion of students engaged in upskilling and non-traditional study arrangements and the proportion of funding received from training or research contracts. Even though the draft policy emphasises the continued orientation on undergraduate provision within the sector, this should be underpinned by “a culture of sustained scholarship which informs teaching and learning in all fields in which courses are offered” (DES, 2011, p. 105). The breadth and volume of postgraduate activity in the new institutions would be a minimum of 5% of students enrolled, with a plan in place to increase that proportion to 10% within five years. Doctoral provision should be sustained in at least two fields of knowledge not closely related to each other (Marginson, 2011, p. 6).

Compared with other countries that have undergone similar developments in the higher education system, the proposed criteria to be fulfilled in order to be upgraded to technological university status in Ireland are complex and numerous: they extend to 39 bullet points, grouped under 9 headings. Whereas the attainment of university status is a powerful pull factor for Irish institutions to enter discussions with potential partners for amalgamation, the sheer complexity of the pathway towards that attainment counteracts this. Institutions themselves may be proudly confident that they already meet many of the criteria, but they can be less confident of a speedy outcome of the process. Timeframes are undefined, preconditions for the redesignation (such as new legislation and political will) are beyond the control of the institutions and there is a perceived risk that they may be expected to commit to mergers without being sure of reaping the desired reward.

There have already been instances of institutions pausing tentative discussions in a constantly shifting landscape of explorations involving groupings of two, three or four institutions at a time. This is a concern, as many authors point out that it is best to implement mergers rapidly rather than over a protracted period (e.g. Pritchard, 1993, p. 86). Subsequent HEA draft policies created further doubt by stating that “The recommendations [in this
document] in relation to mergers are particularly directed at Institutes and Colleges where challenges related to ensuring a minimum viable scale of operation are greatest” (HEA, 2011d, p. 17). Any positive reasons for amalgamation, namely the attainment of scale and performance levels that would merit upgrading to technological university status, were ignored in this later draft policy. Instead, IOTs could focus on trans-sector “regional clusters” with neighbouring universities rather than mergers, thus meeting the need for programme consolidation and shared services (Boland, 2011; HEA, 2011d, p. 7). These alliances would involve sacrifices as well as gains, but would be less invasive than full amalgamation. However, the danger to IOTs in such closer trans-sector clusters might be that their university partners would not treat them as equals and stifle their further development.

It is worth examining whether pull factors other than status upgrading exist in the Irish higher education sector, analogous with developments in other countries. Martin et al. (1994) predicted a wave of mergers in the United States motivated by a desire to achieve mutual growth and strengthened academic offerings. Harman and Harman (2008) and Oakleigh (2010) note a growing trend whereby strong institutions are engaging in strategic mergers to enhance their competitive advantage, for instance, their capacity to attract international students or climb up research rankings. Such strategic mergers can be “vertical”, involving entirely different but complementary academic profiles, or “horizontal”, involving overlapping domains with potential for synergies and critical mass. As the potential partners are already high-performing institutions, this would give rise to robust negotiations.

Perhaps unsurprisingly, research has found that several such strategic mergers have been explored, but very few have actually proceeded and other forms of collaboration and alliance were preferred (Martin and Samels, 2002; Harman and Harman, 2008, p. 107). The most high-profile, successful and strategic merger was between Victoria University of Manchester and The University of Manchester Institute of Science and Technology (UMIST); this gave rise in 2004 to the University of Manchester which benefitted from strong regional and national support totalling GBP 132 million. The rationale for this investment was that, following the merger, the United Kingdom would have another globally competitive university. Financial incentives from government were also on offer in the Finnish restructuring programme although at a less spectacular level, i.e. approximately EUR 7 million per consortium (Ursin et al., 2010, p. 329). Such pull factors are unlikely to be available in Ireland, given the long-term fiscal challenges faced by the state. The typical profile for strategic mergers reviewed internationally relates to research-intensive institutions looking to join a global elite, which does not apply to the Irish IOTs either. It would appear, therefore, that at present there is no strong set of pull factors that would make it attractive for the institutes to merge.
The case of Limerick Institute of Technology and Tipperary Institute

Before the merger, Limerick Institute of Technology (LIT) was a medium-sized IOT operating in the mid-west of Ireland. Tipperary Rural and Business Development Institute (TI) was a much smaller facility in the adjoining county that was set up by special government resolution in 1999/2000 to develop higher education provision and to support industry and the rural community. TI operated as a company fully owned by the Irish Department of Education and Skills (DES), which meant it was state-funded even though it was not part of any mainstream sector. A key trigger for LIT and TI to engage with each other was a government-commissioned report (McCarthy, 2009), identifying potential savings throughout the Irish public sector. TI was recommended for closure, since it was deemed not to have delivered its potential and to have an excessively high cost base. At the time of the report, TI had 339 full-time students and a staff of 120 which translated into a unit cost per student which was a quadruple of the norm. During 2009 TI parted company with its Chief Executive. Invited by the TI Board and with the approval of the DES, LIT seconded a senior manager to TI in the role of Acting Chief Executive while a process was being explored that would lead to the dissolution of the TI Board and the transfer of undertakings to LIT.

In the Scoping Exercise developed by a joint LIT/TI Steering Group (Hinfelaar, 2010) an undertaking was given that, following the incorporation, LIT would continue to offer 3rd level provision in Tipperary subject to the successful achievement of a number of objectives set out in a multi-annual viability plan led by the Acting CEO. This viability plan involved building up the profile and programme portfolio of the TI campuses as a 3rd-level facility. As a result, simply with some modest campus development and existing staff resources, the student population would grow to 1 000. Cost savings would gradually align Tipperary with the highly efficient Limerick operations. By 1 September 2011, the formal date of incorporation, this plan was well on track with student numbers exceeding 700 and the unit cost significantly reduced.

For TI, push factors drove their decision to become part of a larger organisation as it was the only way their two campuses could survive. Irish public sector workers enjoy job security, but the fact that TI was an anomalous public sector organisation governed by company law, coupled with the deepening national fiscal crisis that might lead to redundancies finally appearing on the agenda, led to TI staff feeling insecure until they had found a new “home”. The shock and anxiety caused by the recommendations for closure had made them receptive to change. They implicitly accepted that the model would be an unequal merger and endorsed a proposal that the name TI would not feature any more in the enlarged LIT organisation, as TI had not
been a successful brand. The language describing the process, however, was softened to “integration” rather than “incorporation”. The Governing Body and management of LIT took care to include staff and students from Tipperary as well as Limerick in developing a new strategic plan for the organisation ahead of the actual merger, thus ensuring buy-in.

LIT’s motivation to be a willing partner for the merger was driven by pull factors. The opportunity to expand the scope and size of the organisation was attractive, and this also addressed the incursion into a substantial part of the LIT catchment area by TI when it was formed in 1998. Other major considerations were that underutilised resources at TI were acquired by LIT and that the latter, having been enlarged, saw its position in the anticipated consolidation moves in the sector strengthened, even though it was not yet of the scale required for technological university status. In order to mitigate financial risks as well as fears of staff displacement in the “old” LIT, a five-year ring-fenced funding model was negotiated with the DES and HEA. Once this safeguard had been given in writing LIT’s Governing Body approved the decision to go ahead, but by this time the move was irreversible anyway as it had been signed off by Cabinet. The merger solved a serious political problem, as the closure of TI would have met with storms of protest in Tipperary even though the operation was clearly unsustainable. The chance to create some political good will was therefore another pull factor for LIT.

Conclusions

International studies demonstrate that a range of motivational factors can play a part in driving merger explorations and decisions in higher education. These can be classified into two broad categories: push factors, arising from external pressures which generate defence mechanisms; or pull factors which represent attractive options to organisations. A decision to merge is likely to be the hardest, most far-reaching decision an organisation will ever take – whether the organisation feels that it is in the driving seat or whether it feels backed into a corner. Even though deliberations may be influenced by a complex, simultaneous interplay of push and pull factors, at least one of these two categories should be so overwhelming that it drives the decision to go ahead and merge. In the case of LIT and TI, each organisation experienced very different drivers which created perfect complementarity, further reinforced by political support for the merger.

The National Strategy for Higher Education to 2030 encourages voluntary mergers in the IOT sector on a much larger scale, where the drivers may not always be as clear-cut as in the case of LIT and TI. Starting with push factors, there are serious questions to be asked whether these will be powerful enough to drive such an organic process. Firstly, experience across other countries
shows that efficiencies through mergers are harder to achieve than initially thought and there is a host of circumstances in Ireland that would confirm this. Secondly, a scenario of multiple voluntary mergers is extremely unlikely to be mainly driven by push factors such as cost considerations, given the international experience that such mergers are usually directed by government. An additional complication would be that the governing bodies of the IOTs have strong local representation and these bodies are likely to pose fierce resistance towards unequal mergers in cases where their own campuses and course offerings might be at risk of being downgraded.

Again, serious question marks hang over pull factors. The possibility to fulfil a long-standing ambition within the sector to achieve “technological university” status, representing a new type of institution that would co-exist with the established universities and lift the profile of the entire higher education system, could be a powerful driver. However, due to overly complex criteria, conflicting policies and lengthy procedures, this holy grail may be so far beyond the horizon that institutions are reluctant to move forward. Mergers may be too high a price to pay if the outcome is felt to be uncertain, if university status may not materialise and if few other tangible benefits are delivered. The more cumbersome and nebulous the application process is perceived to be, the less enthusiasm will be shown by the institutes. Many might opt for a model of strategic alliances instead, which would yield the desired “network system” of higher education overseen by the HEA. If, on the other hand, technological university designation of the first amalgamated cluster happens swiftly and the process is seen to be fair, other institutions will not want to be left behind in a third tier and will scramble to follow suit. This would result in a comprehensive overhaul of the IOT sector, “meeting new performance challenges” as envisaged in the national strategy (DES, 2011, p. 102). If robust legislation, policies and processes are developed to enable the implementation, the Irish experience could add to the international stock of knowledge with regard to the evolution of higher education systems supported by mergers.

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Strategic planning for academic research: a Canadian perspective

by

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University of Toronto, Canada

This paper reports on an empirical study of research planning in Canadian universities. Drawing on data compiled during interviews with senior administrators from 27 academic units in 10 universities, the paper analyses how strategic planning has been applied to the research mission over the past decade. Findings reveal variability in processes and attitudes about planning, while suggesting that the scope of planning activities in most cases has been somewhat narrow and short-term. The implications of these findings for the administration of research are discussed.
La planification stratégique de la recherche universitaire : une perspective canadienne

par

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Université de Toronto, Canada

Cet article rend compte d’une étude empirique sur la planification de la recherche dans les universités canadiennes. S’appuyant sur des données issues d’entretiens avec des cadres supérieurs de 27 unités académiques de 10 universités, l’article analyse la façon dont la planification stratégique a été appliquée à la mission de recherche au cours de la dernière décennie. Les résultats révèlent une variabilité dans les processus et les attitudes, tout en suggérant que, dans la plupart des cas, la portée des activités de planification a été quelque peu étroite et à court terme. Cet article présente les conséquences de ces résultats pour l’administration.
Overview of the problem

Over the past few decades, research universities in North America and beyond have attempted to organise themselves more strategically (Clark, 1998; Kruecken and Meier, 2006; Whitley, 2008). This trend is fuelled by an increasing emphasis on competition for resources and prestige, and the growing use of evaluation systems, performance indicators and ranking mechanisms (Dill and Vught, 2010). Government accountability agendas also compel universities to be more transparent on how well they carry out their missions, generating a need for institutions to rationalise their choices and make them public. Scepticism and criticism of these efforts to develop strategy abound. They range from an outright rejection of the idea that universities should be subjected to the principles of bureaucratic rationality that underpin strategic decision making, to pessimism about the likelihood that strategic decisions will be made and implemented (Rhoades, 2000; Birnbaum, 2000; Gumport, 2002). Nonetheless, strategic planning has gained a strong foothold in the operation of universities, being applied to an ever-larger number of areas including research (Keller, 1997; Taylor, 2006; Dooris et al., 2004).

Since the late 1990s Canada’s federal government has adopted an increasingly assertive role in regard to university research. Although it had historically been the primary sponsor of academic science, many agree that over the last decade significant institutional changes have taken place (Prichard, 2000; Cameron, 2004; Shanahan and Jones, 2007; Doern and Stoney, 2009; Fisher and Rubenson, 2010). Essentially, the federal government moved away from a relatively laissez faire approach emphasising the funding of field-initiated projects through the country’s three research councils. Over this period, a series of measures were taken giving rise to major strategic investments in large-scale programmes, research infrastructure and human resources. Such measures have entailed the creation of new funding bodies and programmes, as well as new modes of support for university research. Scholars have attempted to grapple with the multiple implications of this research boom for universities, whether in terms of their external relations with provincial and federal governments (e.g. Cameron, 2004), or the outcomes of major policy initiatives (e.g. Atkinson-Grosjean, 2006; Siler and McLaughlin, 2008).

The federal government’s enhanced role has been accompanied by regulatory changes. The Canadian Foundation for Innovation (CFI) and the
Canada Research Chairs (CRC) programmes are perhaps the clearest illustrations of its new approach. CFI supports research infrastructure in universities and research hospitals and the CRC programme funds 2 000 chairs on a competitive basis. This constitutes a new form of support for universities whose operating funds come from provincial governments (Doern and Stoney, 2009; Fisher and Rubenson, 2010). To be eligible for support from these programmes, universities have been required to formulate and submit research plans. Over the past decade, such plans have been produced and are now publicly available. At least formally, universities have complied with funding agency requirements. Considering the importance of CRC and CFI support for universities, some analysts foresaw potentially important impacts on how these operate (Cameron, 2004; Shanahan and Jones, 2007). Universities may not only have started to consider institutional priorities and resource allocation decisions in different ways, they argued, but they might be aligning their activities with federal research priorities. Others have claimed that these federal initiatives have helped bring a greater research focus on smaller universities (Lopreite and Murphy, 2009).

There is no evidence, however, on whether institutional planning has been of any substantive consequence to universities. Besides the information provided in planning documents, little is known about the impacts of research planning efforts within universities. What happens inside academic units when research plans are produced and submitted to federal programmes? This study examines the nature of universities’ research planning processes and outcomes. It seeks to elucidate the implications of changes in the institutional environment for academic science in Canada for the organisation of universities. More specifically, it aims to clarify:

- how research planning has been conducted in universities;
- whether and how research planning has changed previous organisational practices (e.g. priority-setting, resource allocation, etc.);
- what the outcomes of planning efforts, if any, have been.

**Methodology**

This study examines how research planning is conducted within major academic units in universities. While institution-wide research plans may be important, faculties are key units when it comes to making important decisions that shape the research enterprise.¹ Such decisions include recruitment, the organisation and support of academic departments and the delivery of graduate programmes. Investigating developments at this organisational level allows us to go beyond the obvious – and sometimes superficial – response of universities to regulatory requirements, and possibly
unveil diverse organisational behaviours within “loosely-coupled” universities.

The study involved two main methods and data sources. First, institutional strategic research plans of Canadian research-intensive universities were reviewed, involving “medical-doctoral” (N = 16) and “comprehensive” (N = 11) universities (Research Infosource, 2010). A content analysis (Weber, 1990) was carried out, identifying several themes concerning the nature, focus and targets of these strategic documents. Based on this analysis, a semi-structured interview protocol was designed.

The second step involved conducting semi-structured telephone interviews with senior administrators at the faculty level. These interviews with key informants examined the organisational impacts of research planning on various campuses and disparate academic settings. The objective was to understand how planning has been conducted in different faculties, to determine whether changes have taken place in organisational practices and to probe outcomes of planning efforts – whether flowing from the goals and strategies stated in the plans, or not.

The sampling procedure involved a stratified random selection of universities (Tables 1 and 2). Ten institutions were randomly selected, including seven “medical-doctoral” and three “comprehensive” universities. The emphasis on “medical-doctoral” universities was driven by their greater research intensity and commitment to doctoral programmes. Within each institution, three faculties/schools representing disparate fields (natural sciences and engineering, biomedical and health sciences, social sciences and humanities) were randomly selected. Table 1 presents the number of informants from each university across the three fields; Table 2 summarises the participating faculties by fields.

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1. Comprehensive universities.
The offices of the deans concerned were contacted to identify two or three individuals who were centrally involved in research planning. Thus, a total of 34 interviews were carried out between July and September 2010 with the following senior administrators: deans or equivalents (18), associate deans engaged in research/graduate studies (14), other (2). All of the interviewees were centrally involved in, and highly knowledgeable of, the faculty’s research planning process. Despite multiple invitations and follow-up contacts, we were not able to recruit representatives from three sampled faculties, as detailed below.

The interviews, which on average were 30 minutes long, were recorded and transcribed. Detailed summaries were produced and sent to informants for validation, in order to ensure accuracy. Thereafter, standard qualitative data analysis techniques were employed to organise, codify and analyse the data (Miles and Huberman, 1994; Strauss, 1987). First, open coding of the research results was carried out and a list of initial thematic categories was drawn up. The second step involved axial coding; here, the numerous categories related to research planning were refined and merged into similar and fewer groups, forming a coding paradigm. These new categories represented themes such as drivers of the research planning, key actors and interactions, the context of the planning process and outcomes. Finally, selective coding was used to integrate the categories, interpret data and present the research findings.

**Findings**

The interviews revealed a recent outburst in various planning activities related to research. What is considered “planning” or “strategy” in the research realm is variable though, and research planning is approached in different ways across faculties and universities. Overall, 23 of the 27 faculties are actively involved in research planning activities, 19 of them have created a strategic planning document. Of these, 3 had a specific research planning document; others have built a major research component into the academic plan. There were some exceptions too: 4 faculties from different fields (2 from a comprehensive university, and 2 from medical-doctoral universities)
indicated that they do not intend to develop any kind of formal research planning process or document. Five main findings emerged from the data, and these are discussed in relation to the study's research questions below.

**How is research planning conducted?**

**Drivers of research planning**

Interviewees repeatedly referred to the factors they believe are driving their efforts to engage in research planning. As expected, the most valued outcome of research planning at the institutional level is success in federal grant competitions. Representatives from 15 faculties across different fields reported that the planning process in their faculties has been focused on the Canada Research Chairs (CRC) programme. Several interviewees from various faculties indicated that all their research planning efforts at the university and faculty levels revolve around the application for support from the Canada Excellence Research Chair (CERC) and Canada Foundation for Innovation (CFI). As a dean in a health faculty notes, “The only benchmark [for research] that our university recognises is tri-council funding”. These findings point to the obvious effects of the regulatory changes implemented by these federal research programmes in the early 2000s.

However, judging by our data, research planning has become an important management tool even in universities where it had not been conducted some 10 or 15 years ago. In our sample, we found that internal university resources are usually allocated to the faculties, at least in part, based on their research plans. The following quote is illustrative: “In our next planning process we’re going to focus on persuading the university that we need more faculty positions and to try to obtain funding from the university for additional faculty positions” (health science faculty at comprehensive university). At the University of Western Ontario, planning has been conducted every 4 years because for the past 15 years it has been tied to internal budget cycles. These examples indicate that research planning helps the senior administration of faculties to provide evidence of strategic direction and demonstrate that they deserve support by the central administration.

Not surprisingly, new senior administrative appointments within faculties or at the central administration level (e.g. president, vice-president, dean) provided a further impetus to launch research planning processes. In five faculties representing different universities and fields, a freshly recruited administrator undertook research planning to chart new directions (Alberta/health sciences and social sciences, University of British Columbia (UBC)/social sciences, The University of Western Ontario (UWO)/science, York/social sciences). “I am new and usually with the appointment of a new director people expect some changes in all these matters”, explains one
recently hired administrator. It is a common belief that strategic planning helps a new leader to get to know an organisation, define its strengths and weaknesses and set future courses of action. Such beliefs have been translated into the realm of academic research, with administrators indicating during interviews that it was a natural thing to do to employ planning as a tool in the event of a new appointment.

For three health science faculties in Manitoba, UBC and Alberta, research planning is linked to strengthening their regional research agendas. As an informant notes: “The academic faculty is at [name of the main campus] and it is not really near any other health care facilities, so there has always been a geographic gap as well as some practical gaps in terms of our communicating and being able to collaborate with our clinical colleagues.” The three faculties aim to develop collaborative and broader ties with clinical faculty, public agencies and other relevant stakeholders. By increasing their visibility and positioning themselves as serving large populations through their research activities regionally, they can better demonstrate their value. This is viewed as ultimately helping to secure necessary resources from the provincial governments and federal agencies.

These findings illustrate the increasing rationalisation of research administration. From the perspective of faculty administrators, research planning is predominantly viewed as a tool to negotiate resources. The planning process is a complex undertaking and influenced by several factors such as the nature of the university’s planning process and the dean’s administrative style, as discussed below.

**Different planning styles**

The study responses showed that research planning is not a uniform process for faculties, even within the same university. In some cases there was inconsistency among academic units as to how their research planning efforts related to the university’s senior administration. While in most cases they are expected to align their research plans with those of the university, there were also a few cases where the university co-operates closely in planning activities with representatives from faculties that are particularly successful in obtaining sponsored research. In some cases, faculty administrators decided to conduct research planning independently. In most cases, setting up the institution-wide plan involves consultations with faculty representatives, primarily the senior administration. The practices reported by informants are complex, each incorporating its detailed nuances, sometimes described as messy business (Saskatchewan/health) or quite a complicated process (Alberta/health). These variegated experiences can be synthesised under three distinct approaches to characterise the relationship between the
university and faculty-level research planning: top-down, integrated and bottom-up.

The most common approach has a top-down nature. The university typically develops its strategic plan, usually involving faculties in the general consultation process and, as a result, sets the overall institutional strategic priorities. The faculties create their own plans independently but are then expected to align them to the university's vision (e.g. University of Alberta, UBC, UWO/science field, University of Manitoba, University of Waterloo, York University, University of Victoria). Generally, however, the universities' strategic research priorities are relatively broad, enabling the faculties to easily position their research strengths under them: “All of our research can actually be targeted under some university signature areas”, stated one interviewee. Broad research themes, listed in institutional research plans, consist of areas such as “biotechnology and genomics”, “human health”, “culture and society” and “sustainability”.

One case exemplifies a top-down research planning process, described by the informant from a science faculty: “The entire university's strategic plan was written out of the president's office in consultation with the president's executive team, [who] are all VPs. It was brought forward to the faculty members and the senate for review... [it] was discussed and there was feedback given, and it was formally endorsed by Senate.” However, the experience of other faculty administrators is less hierarchical. All the other informants indicated that the university had asked faculties to contribute towards the institutional plan.

Some faculties were involved in a more integrated planning process. In those cases, faculty planning takes place in parallel with the university's planning process through extensive back and forth communication and co-ordination (e.g. University of Saskatchewan, UWO/social science faculty, Dalhousie/social science faculty). The most illustrative case of this approach is the University of Saskatchewan, which refers to its current strategic planning initiative as the “Third Integrated Plan”. As one informant described it, “The university has set up a collaborative process and colleges have to submit a strategic plan. Now, as we start the third integrated planning process, it is coming closer to a university-provided structure but with the content being from the college level.” The planning exercise is seen as an evolution from earlier iterations. Another version of this type of integrated activity is when the faculty's research plan feeds into the university plan; that in turn guides the faculty (e.g. UWO social science). There is constant back and forth communication between the faculty and the Office of Research to develop and refine various research areas.
A few faculties had engaged in an essentially **bottom-up** research planning process. This approach is characterised by their initiative to create a research plan which aims to promote self-improvement. The informants reported cases where research planning was conducted by the faculty in order to drum up support for research teams, to influence the university’s research priorities or just to have a more systematic approach to reinforce research strengths (e.g. Dalhousie/health, McGill/science, UBC/social science, UBC/science). For example, a comment made by the informant of a health faculty characterises this view: “perhaps it’s about time for us to look at our own research achievements, initiatives, research centres, strategies and so forth. We need to identify the kind of issues, strategies and work to be done. Those are more important components than a published document.”

Some strong and competitive academic units – such as the science faculty at one of the large medical-doctoral universities – even have the power to influence what the strategic priorities for the university should be. In this case, the university has shaped its strategic vision around the faculty’s research strengths. One informant noted:

The university’s plan reflects what the departments think the strategy should be, instead of the university writing the strategy and the departments following. It may not be the same with other faculties. Being the strongest [science] faculty in the university and in the country, we strongly believe in the grass-roots approach. We justify this approach by the [academic unit’s] strengths based on the key [research] performance indicators.

**Planning processes within the faculties**

Another source of variation across the faculties stems from internal planning processes. More than half of them (15) have conducted a formal planning process over the past two years. Interviewees were thus able to provide very up-to-date information on their planning processes. However, when it comes to recalling previous research planning activities, most interviewees were not as knowledgeable. Only 7 interviewees out of 34 were able to report on previous planning processes (Manitoba/science, Manitoba/health, Saskatchewan/health, Waterloo/social sciences, Waterloo/science, UWO/social sciences, York/science). Seven interviewees noted that they were appointed as deans or associate deans within the previous two years; in most cases they were recruited externally and had little knowledge of past experiences. In such cases, there seemed to be little institutional memory on previous planning efforts. Others pointed out that such a formal planning process had not taken place in the faculty before. Hence, in most of them, planning is still not institutionalised through systematic routines, processes
and impersonal rules. To a large extent, it is conditioned by the degree of initiative and the style of administrations in charge of research portfolios.

The scope and the level of formality of research planning efforts vary among the faculties. In some cases, all faculty members are provided with an opportunity to fully contribute to the planning process; in other cases, selected faculty representatives are able to participate. Some faculties – according to their size and the administrative style of the dean – may opt to form a committee, while others prefer to conduct informal planning processes. This involves conducting a planning exercise without having a formal committee or delineated process. Smaller faculties tended to conduct the planning process in a rather casual manner, usually driven by the dean.

Several informants described more “selective” planning processes, noting that they sought to burden faculty as little as possible (e.g. UWO/science, Dalhousie/health). In these cases, a group of professors represented the faculty. The number of professors sitting on committees in bigger faculties could be larger than the total faculty body of smaller ones. More “inclusive” processes were reported by faculties who organised retreats or open sessions to provide opportunities for all professors to participate in planning efforts. An example of a formal and inclusive approach was described by a dean from a health faculty: 8 faculty members at a time were invited to lunch meetings to discuss the directions the faculty should take in its strategic plan (8-9 groups in all over 18 months). Formal planning exercises following this approach involve extensive consultations among various administrative bodies. The importance of involving faculty members was emphasised in several other cases. One interviewee from a science faculty argued: “The second most important thing that wasn’t in focus before is the objective to [ensure] faculty’s ownership in the strategic research plan.” Informants assumed that faculty’s involvement in the process helps later with implementation of the plan.

In several cases, informants stressed the ongoing and informal nature of strategic concerns about research. They described a range of interactions and activities involving other academic administrators and professors as part of their “planning” for research, which is unrelated to producing a formal planning document. In other words, interviewees distinguished between a product and a process orientation in strategic planning (Mintzberg, 1994). A few claimed that research planning takes place at the individual researcher’s level and that the role of the administration is merely to facilitate research, not to plan it formally.
Organisational changes and the outcomes of research planning

Shifting cultures and practices

All but four of the faculties reported on the tangible outcomes of their planning processes. The impacts of research planning were largely described in terms of success in federal research grant competitions, more recruitment in strategic areas and administrative initiatives to facilitate research. These include allocating resources such as space, research release time and support mechanisms, e.g. grant editors. Some noted, however, that it is hard to ascribe certain outcomes to the research planning exercise. While there were only a small number of informants who were able to detail specific long-term outcomes of the planning process, most confirmed that a major shift has taken place in institutional research culture.

In terms of changes in organisational practices and processes, research planning has helped shape faculty hiring at four faculties (in the three fields listed in Tables 1 and 2) from different universities. Notably, they reported allocating new recruits primarily to strategic research areas identified through research planning exercises. As an informant from a science faculty at Alberta notes: “We identified our priority areas, and all our staffing decisions were influenced by these decisions.” Another administrator contends: “The upper administration has given three new professorial appointments for each of the CERC areas” (Waterloo/science). The informants raised concerns over limited resources for hiring new professors needed to strengthen research areas, thereby providing a rationale for the use of planning. Clearly, for the faculties which made planning a required tool when negotiating new recruits with departments, the research plans have led to tangible outcomes.

The faculties are also providing a variety of administrative support mechanisms to facilitate research; these recent initiatives are linked to the drive to maximise federal research funding. Faculties have introduced positions such as grant editors and research co-ordinators specifically to enhance their competitiveness in federal grant applications. One health faculty at Western Ontario has developed a model called the “Tri-council Initiative” that is now being emulated across faculties in the university. A review team evaluates proposed grant applications internally, provides feedback to the researcher and makes seed money available. Other faculties have also implemented similar schemes. Another common approach to increase the success of grant applications, as reported by seven interviewees across different fields, has been to institute a mentoring system in the faculty. Senior professors who have extensive experience in writing grant applications provide advice to others, especially junior faculty members. In three cases this would also include training sessions and seed money for grant applications.
The explicit objective of obtaining large collaborative grants has driven faculties to broker partnerships and stimulate research across academic units and disciplines. Because the tri-councils are leaning towards collaborative grants, informants from 12 faculties stated that, in their research planning, they are focusing more on large team grants than small individual grants. One interviewee from a health faculty at Victoria noted that professors in the unit were strategically recruited to work in groups and that this has helped them to obtain external grants. Another dean from a health faculty at McGill university asserted, “We are beginning to look at how we can structure ourselves to support those group grants and allocations, as well as being involved in them. This would be one of our priorities”. Six faculties emphasised the importance of encouraging interdisciplinary research teams across faculties and disciplines. Supporting collaborative research has become common practice, as funding agencies emphasise these modes of support.

For the social sciences faculties (e.g. Alberta, Dalhousie, York, Western Ontario, Waterloo), these shifts have been particularly noticeable. According to five informants, all from social sciences faculties across various universities (including three from medical/doctoral universities and two from comprehensive universities), heightened awareness of conducting sponsored research among faculties is a particular outcome of research planning. They reported making focused efforts to develop a research culture within the faculty and raise awareness among faculty members to strategically pursue research funds (Alberta, Dalhousie, Saskatchewan, Waterloo, York). The shift in research culture is apparent in the following statements by informants from social science units in different universities.

The engagement of faculty members [in] the research piece is something that has relevance to the institution as a whole [and] has changed, I would say, from 10 or 15 years ago. (...) One observation I might make is that I think everybody in the institution has a much stronger sense of the relevance of research to the university's functioning and its contribution to society. (small medical-doctoral university)

There has been a major shift in the culture setting in the faculty as a result of the government shift. If one goes back 10 to 12 years before the existence of CFI, the type of research activity was much more of individuals seeking funding for their own research laboratory primarily. And the creation of CFI has led to much more group-type (...) activity. (comprehensive university)

These reactions were accompanied by concerns that federal agencies are increasingly emphasising the need for large research teams along the lines of a “big science” model. Comments concerning increased attention to performance indicators in social science academic units suggested a
heightened awareness towards measurable research outcomes used in the sciences to justify grant funding.

There is also greater awareness about building graduate programmes; this stems from research planning practices in several of the less research-oriented faculties. Graduate students are an important element in facilitating research. As an informant from the social sciences at Dalhousie states: “That’s something we don’t often think much about, that having those [groups of] researchers in the classroom presenting their cutting edge research work actually helps to change the views of undergraduates and that interaction between teaching and research is one thing we often forget about.” Facilitating opportunities for graduate students to get more involved in research serves as an expected long-term outcome of the planning process.

The perceived value of research planning

As discussed above, research planning is common to most faculties we investigated and has generated changes in organisational practices and processes. However, attitudes towards research planning vary among interviewees and range from scepticism to enthusiasm. Most interviewees fell somewhere between those extremes, seeing some value in attempting to approach decisions about research in a more systematic manner, but recognising the limitations of planning in shaping the research process.

At one end of the continuum, research planning is welcomed with great enthusiasm and seen as a necessary tool for administration. For example, one informant from the social sciences remarked: “I would say that planning is desirable, planning is needed and also planning allows us to proceed in a kind of a systematic manner.” This view was endorsed by five interviewees: they believed that a formal planning exercise helps to raise awareness and address organisational challenges in an efficient way. In three cases a formal plan was seen to be a helpful tool in making administrative decisions in the faculty. In their opinion, having defined research goals would oblige senior administrators to support these goals through specific initiatives. The supporters of planning, however, frequently pointed out that the implementation of the plan can sometimes be difficult. The most common obstacles seem to be a lack of resources and the fact that the faculty shows little interest in it.

The faculties where there had not been a formal research planning process were represented by sceptics. Administrators from two faculties in the same university objected to formalised research planning; this was viewed as having the potential to infringe upon academic freedom. In one case, a research plan had been drawn up but the result was not acceptable to the university administration. The informant who led the planning process
expressed a sense of “helplessness” because it was conducted merely to comply with institutional strategy. However, refusal to do so would have meant a financial loss to the faculty. As he noted, “it has been made quite evident to us that unless this plan is truly strategic you’ll be less than successful in resource allocations”. In this case, research planning was seen as merely conforming to institutional strategy.

Five informants questioned the value of research plans, referring to the overly generic nature of goals and outcomes. A participant from a science faculty at a medical/doctoral university remained sceptical about the effectiveness of planning, given the considerable amount of time and resources required to produce a planning document: “I am not sure how useful these things are. If, after spending a lot of resources, I am asked by senior administrators to come up with a fairly generic strategic research plan, I will not be too enthusiastic.” In one case, the faculty’s extremely diverse research areas raised scepticism about having a research plan. As an informant explained: “If we tried to produce a document that would summarize everything, it is either leaving a whole bunch of people out or being so vague that is not being very useful” (social sciences faculty, comprehensive university). Three other informants from different universities were concerned about how to make a plan that is neither too generic, as it would lose meaning, nor too specific, as it would preclude other research.

The perceived value of the research planning and overview of the outcomes illustrates the variety of organisational changes resulting from research planning processes. It is evident that most of these initiatives, as described above, are designed specifically to address the requirements set by federal granting agencies to enhance faculties’ competitiveness through research. In this environment, the administrators interviewed were of the opinion that there is a need to develop stronger research cultures. These should be construed as a more active and deliberate involvement in sponsored research, even in fields where funding is not as paramount as in science and engineering disciplines.

**Discussion**

This study has explored the dynamics of research planning across various faculties in selected universities, revealing a range of organisational responses. It concludes that although all the universities in the sample have generated institutional research plans, the impacts of research planning are uneven across universities. Furthermore, the nature, process and outcomes of planning vary considerably within them, i.e. across faculties.

Our analysis reveals that research planning means different things to different audiences. Some faculties, primarily in “medical-doctoral”
universities, indicated that they conduct explicit research planning processes. Faculties from less research-intensive “comprehensive” universities have added research components to their academic plans. For some of them, research planning implies a formal large-scale exercise, involving a range of internal and external stakeholders, while others conduct planning in a more informal manner. A few faculties indicated having only a facilitator role in supporting individual staff members’ research and they underplayed research planning as a process. While some of them are conducting strategic comprehensive assessments of their units, listing priority areas and demonstrating alignment with the institutional plan, other faculties and universities are focusing on tactical endeavours, explicitly targeting CRC funding and other major external grants. Their research planning takes place more in an ad hoc manner and they are making substantial efforts to succeed in grant competitions.

Success in sponsored research is, of course, a universal marker of quality and prestige for universities. In Canada, the increasing rationalisation of inter-institutional competition for funding from federal councils and foundations is reflected in the flurry of initiatives reported above. By and large, there were no notable differences in research planning across faculties in the fields of science/engineering, biomedical/health sciences and social sciences/humanities. Only some administrators of social science faculties in different universities noted increased pressure to develop stronger research cultures in their units. Such faculties were pressured to generate more external funding for research and to provide evidence of productivity following measures applied to the natural science and engineering fields. Overall, some issues play a critical role in understanding the dynamics of research planning: how planning takes place within institutions, the dean’s leadership style and the extent to which the faculty is motivated to succeed in internal and external funding competitions.

Overall, it seems that there is a link between the intensity with which faculties undertake research and their past performance in relation to grant competitions, and their reaction to research planning. Some of them are accepting the need for it since it has brought them some tangible benefits, whether from the central administration or from external agencies. Other faculties are complying with research planning mandates in order to enhance their legitimacy, as is the case of faculties where research has traditionally not been a central focus. Still others face conflicting institutional demands: pressures from the university as well as internal resistance; all of this in an environment which compels the use of planning techniques in research. Senior administrators hope to compromise by balancing the interests of both groups. Finally, a few faculties are implementing planning in a ceremonial or symbolic way but do not really intend to implement their plans: these are
produced in a formulaic manner simply to meet the requirements of federal research programmes such as that of the CRC or the university. During the interviews they were sceptical about planning and expressed reservations about the overall value of planning.

In our sample, four faculties claimed that research does not lend itself to planning; second, pressuring faculty was seen as a serious infringement of academic freedom. Administrators did not accept research planning as unchallengeable, i.e. a standard way of conducting their administrative work. They questioned the view that research planning – as an activity to direct research – would be useful. In one case, the faculty distinguished itself as a professional faculty set apart from the university in several respects.

Examining planning at the faculty level proved useful: here, it is more readily translatable into changes in resource allocation, recruitment, administrative support mechanisms or development of programmes, whereas institutional-level research plans are often quite generic. While research indicators are increasingly used by university administrations, the long-term outcomes of research planning are hard to grasp for most interviewees. The nature and outcomes of the research process are highly uncertain. As noted by Whitley (2008), strategic behaviour in universities is constrained by broader social structures and the very nature of the research enterprise. As such, administrators use institutionalised indicators that serve as proxies to performance. A list of recent changes was mentioned that related to an increase in internal and external funding, new hires and increased emphasis on research activities in general. Long-term planning outcomes were hardly mentioned, as several of the respondents had been recruited recently and, in general, there seemed to be a lack of institutional memory to support comparisons. Therefore, it is anticipated that research planning in the Canadian universities investigated in this study will primarily lead to outcomes in sponsored research performance as opposed to meaningful organisational changes with a longer-range perspective.

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Notes

1. We employ the term “faculty”, even if on a few occasions such units are called “colleges” or “schools”.

2. Other roles include a former associate dean research and a research officer. One interviewee preferred to provide his answers in writing and the questionnaire was sent to him by email.

References


Proliferating excellence gold standards in the global academic system tend to obscure the far-reaching diversification of academic missions, practices, ambitions and identities brought by massification. This article approaches this topic by a review of theory on academic scholarship and how it has changed in the wake of academic massification and the development of binary higher education systems. In addition, the article reports on the first results of a study on research groups in “newcomer” higher education institutions in Sweden. By synthesising findings and arguments about institutional constraints and the individual ambitions of researchers, the article offers a few preliminary conclusions. It also calls for more scholarly attention to the existence of an academic labour force that corresponds to a widened or altered definition of academic scholarship and that seems to be predominantly found in newcomer academic institutions.
En quête d’identités alternatives pour les chercheurs dans les institutions universitaires nouvelles venues en Suède

par

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La multiplication des normes d’excellence dans le système académique mondial tend à occulter la large diversification des missions d’enseignement, des pratiques, des ambitions et des identités entraînées par la massification. Cet article explore le sujet à travers un examen de travaux théoriques sur l’excellence scolaire et son évolution dans le sillage de la massification et du développement de systèmes binaires de l’enseignement supérieur. L’article décrit également les premiers résultats d’une étude relative à des groupes de recherche dans les établissements d’enseignement supérieur « nouveaux venus » en Suède. En synthétisant les conclusions et les débats concernant les contraintes institutionnelles et les ambitions individuelles des chercheurs, cet article propose quelques conclusions préliminaires et plaide pour une attention accrue de la part du monde académique à l’existence d’universitaires dont le profil correspond à une définition plus large ou modifiée de l’excellence scolaire et qui semble être prédominante dans les nouveaux établissements universitaires.
Introduction

Recent developments in the global research system are characterised by conflicting tendencies: those of diversification and stratification. While expansion leads to institutional variety and professional specialisation, the pursuit of academic "excellence" tends to focus attention on a small number of elite institutions whose conditions and practices are emulated the world over. The focus on "star" scientists and "elite" institutions is substantiated by standardised evaluations and ranking tables, but this runs counter to the concurrent emphasis on the role of the "entrepreneurial" academic as a dynamic player in the knowledge-based economy. The elite are all too often identified by means of conservative indicators of academic performance.

This article has two overarching objectives. First, it calls for comprehensive studies of academic scientists in what could be called "non-elite" environments. Taking a first step in this direction, it reviews theory on the topic and reports on the preliminary empirical results of a survey undertaken in Sweden. The article argues that "non-elite" scientists have established activities in the shadow of conformist ideals of excellence which have been driven by the institutional conditions of binary higher education systems but also by personal interests and ambition. Importantly, it seems that a major incentive for these scientists is to be able to work closely with industry and to make lasting, tangible contributions to the economy and wider society other than via academic publications.

Second, the article sets out to synthesise various studies: first, on the relationship between the worlds of academia and industry at the level of the individual (D'Este and Perkmann, 2011; Lam, 2010); second, on redefined notions of academic scholarship (Adams, 2000; Boyer, 1990; Paulsen and Feldman, 1995); third, on individual researchers' career moves and scholarly ambitions (Hermanowicz, 2009; Strike and Taylor, 2009); and finally, higher education institutions that are newcomers or late developers in research (Hazelkorn, 2004; 2005). Discussion is also based on empirical material, i.e. the initial results of an on-going inquiry which involved in-depth interviews with 12 researchers engaged in some of Sweden's new higher education institutions.

The article therefore limits itself to a dual objective. The first is to confront these initial observations with theory. The second is to throw light on an understudied topic at the intersection of two research themes: a) the
growth of research activities in newcomer higher education institutions and the so-called “academic drift”;
and b) redefining academic scholarship and science in the context of application. A combination of both of these strands, the article argues, would constitute a useful and rewarding research theme for further studies. It could contribute to a more nuanced view of academic research across the spectrum of elite and non-elite environments as well as the recognition of productive (and societally relevant) research activities undertaken, in spite of unfavourable conditions, within the framework of alternative academic identities. Studies based on international comparisons – and comparisons between established and newcomer institutions – would be particularly useful, as well as further inquiry into the workings of academic drift, and an analysis of academic ideals and how they fare in the face of practice in given institutional settings.

Newcomer and late developer academic institutions: the case of Sweden

The 20th century brought far-reaching diversification to academic science, in essence creating “multiversities” (Kerr, 1963) by continuously adding new (and potentially contradicting) missions, identities and ideals to academic institutions and professions (Enders and de Boer, 2009; Weiler, 2005). The “massification” of higher education in Europe in the 1960s and 70s brought about an almost tenfold increase in the number of tertiary education students in Europe (Geuna, 1998, p. 257) and changed the institutional landscape of higher education across the continent. Existing universities which cover the full breadth of research were substantially expanded, several new institutions were created and professional schools were upgraded. This led to the emergence of what was increasingly referred to as higher education systems (Kyvik and Lepori, 2010, pp. 3-4; Hazelkorn and Moynihan, 2010, p. 77); they were internally stratified and included “elite institutions” and “mass education institutions” (Hazelkorn, 2005, pp. 30-31; Geuna, 1998, pp. 255-265; Clark, 1983), the latter of which are henceforth referred to as newcomers or late developers (in relation to research) or second tier institutions.

In the more recent past, newcomers have developed research activities alongside their teaching missions (Lepori and Kyvik, 2010, p. 259; Bleiklie, 2005, p. 53; Hazelkorn, 2005, p. 41) and, increasingly, “academic drift” has caused them to seek to imitate prestigious academic institutions with the aim of becoming fully fledged universities (Boyer 1990, p. 55; Geuna, 1998, p. 259; Dill and Soo, 2004, pp. 61-62). The global proliferation of ideals relating to excellence doubtless sustains academic drift (Boyer, 1990, p. 53), but it has also generated policies in several countries designed to create or reinforce structural stratification and crown top-ranked institutions (Vaira, 2009, p. 135;
Wildavsky, 2010, pp. 70ff). Furthermore, the institutional expansion of research activities has not, on the whole, been matched by funding, which means that newcomers are still financially dependent on their core educational activities (Lepori, 2010, p. 61). Thus, the de facto polarisation of many national higher education systems has been reinforced by policy- and market-driven mechanisms of structural stratification (Hazelkorn, 2005, p. 138; Clancy and Dill, 2009, p. 9).

The introduction of a research mission for newcomers was policy-driven; it stems from the idea that higher education should be linked to research activities (Heggen et al., 2010, p. 48), but also from the notion that newcomers should take part in regional development (Kyvik and Lepori, 2010, p. 15). Both objectives appear to have had an impact, as research activities among newcomers often seem to be directed towards ensuring applicability (i.e. societal relevance) and integrating educational programmes, local and regional industry as well as academic science in joint activities (Hazelkorn, 2004; 2005). Funding difficulties also contribute to increase collaboration with industry, as this has become a potential source of revenue given the shortage of comprehensive government funding (Geuna, 1998, p. 266).

The tendencies described above have a particular resonance in Sweden where, in the 1960s and 70s, a number of new higher education institutions were created in order to bring “elementary university education” to peripheral regions (Premfors, 1986, p. 65). As it was not expected that they would develop research activities, they were not endowed with permanent resources for research. While, in principle, the higher education system was unified and levelled (Bauer et al., 1999, p. 54; Elzinga, 1993, p. 191), in practice it was diversified and highly unequal. The old universities retained their influential and prestigious status in both education and research, whereas the newcomers focused on their regional education missions (Ruin, 1985, p. 119). In the 1990s reforms were undertaken in an attempt to decentralise decision making in the sector and increase the autonomy of the newcomer institutions. As a result, the newcomers were awarded permanent research funding and in theory they were able to make upward institutional career moves, become research institutions and eventually reach university status (Benner, 2001, p. 49; Benner, 2008, p. 115; Engwall and Nybom, 2007, p. 36). In practice, however, the research funding for the newcomers was minuscule in comparison to that of established universities and the university status granted to three of them in 1999 (Växjö, Karlstad and Örebro) and one in 2004 (Mid-Sweden University) did not give them the means to compete with the established research universities (Benner, 2008, p. 145; Skoie, 2000, p. 413).

In 2004 state policy changed dramatically and, according to the government, there were too many research institutions, they were too small and too uncompetitive, hence resources were being inefficiently utilised. This
led to system reforms which closed the newcomers’ institutional career path and diverted funding back to the established universities (Benner, 2008, p. 124-125). New funding schemes were introduced which linked resources to research quality and output (publications, citations and the ability to attract external funding) and enhanced support for so-called “centres of excellence”.

Although it was never explicitly stated, this policy was clearly designed to favour the established universities and has therefore contributed not only to preserve but also to reinforce the stratified higher education system in Sweden. Newcomer institutions have therefore remained in the system’s second tier. They have been forced to consolidate their role as a local and regional resource, primarily serving the common aims of education in their immediate surroundings, and have had to find their own ways of developing and financing the research activities that they have already substantially invested in.

Reconsidering scholarship: alternative academic identities, purposes and ideals

The ubiquity of theories about the changing dynamics of science, which includes the disintegration of former borderlines, is overwhelming. The massification of higher education and academic research has accelerated the diversification and fragmentation of ideals, identities and practices (Hazelkorn and Moynihan, 2010, p. 78). Scientists’ profiles vary highly in relation to age, career stage, employment, employer, nationality, discipline and field and, notably, personal preferences (Hermanowicz, 2009). Hence, to the extent that there ever was a single academic professional identity, it has been fragmented beyond recognition (Hazelkorn and Moynihan, 2010, p. 78; Marginson, 2000, p. 23). Growth has been levelled, competition is more intense and academia has to contend with constraints in terms of relevance and productivity. These factors have fundamentally changed working conditions (Whitley, 2010, p. 4; Ziman, 1994) but change has also been epistemic, as cross- and trans-disciplinary constellations have brought new definitions and qualifications for essential concepts such as quality, validity, significance and relevance (Geuna, 1998, p. 262; Hessels et al., 2009).

Attitudes towards certain facets of scientific research also appear to vary greatly, notably in relation to relevance and applicability; players at one end of the spectrum believe in the need to keep clear divisions between basic and applied science and between the activities of academia and industry. On the other hand, there are those who believe that these boundaries are entirely porous and that collaboration between science and the business sector is essential to development. Between these extremes there are a myriad of different ambivalent, pragmatic or hedged attitudes in relation to links
between university and industry as well as science in the context of application (Lam, 2010, pp. 317-319).

Links between university and industry have traditionally been viewed as linear flows of knowledge between essentially different institutions and practices, and the contemporary understanding of “technology transfer” from university to private sector hinges on patenting, licensing and forming spinoff companies. It has, however, been argued that most incidences of (successful) university-industry knowledge transfer take place through embedded collaborative projects (besides the dissemination of results through traditional publications and the recruitment of students or PhDs by industrial firms) (Cohen et al., 2002, pp. 2, 21; Lester, 2007, pp. 12-14). Such activities require direct, interpersonal collaborative work in joint projects and are therefore mitigated by institutional conditions, regional interfaces and personal ambitions.

Authors have also argued that the specific institutional conditions created in the newcomer institutions – limited resources, strong educational and regional missions – have created a new “class” of academics that favour regional impact, collaboration with industry and a context of application, besides classic academic ideals. In this context, the academics have called for a “new understanding of what constitutes academic work” (Hazelkorn and Moynihan, 2010, pp. 79, 89) and an awareness that academic scholarship can be oriented towards societal relevance or economic value besides, or in addition to, recognition and prestige (Boyer, 1990, p. 3).

Academic staff in newcomer institutions typically have “work experience in their profession” as well as academic qualifications (Adams, 2000, p. 68) and feel a sense of responsibility not only to seek new knowledge “for its own sake” but also to synthesise and repackage knowledge and to work towards its application by collaborating with actors in other sectors of society (Boyer, 1990, pp. 16-23). While there is no reason to believe that these ambitions would not be found in established full-breath (“elite”) research universities, it appears that newcomer institutions foster or even drive them.

The regional and professional-oriented mandate of these institutions makes it natural to focus on the applicability and relevance of research activities (Hazelkorn, 2005, p. 60). But the lack of solid institutional identity (of the type found in established universities) may also cause the fragmentation of purposes, norms and ideals that authors have cited as reasons for reconsidering the content and meaning of academic scholarship (Davis and Chandler, 1998). Ideally, the notion of academic scholarship should be broadened rather than replaced, and its applicability should be developed in synergy with the academic or discipline-specific relevance of the work and its quality.
Academic drift and the art of the possible

The expansion of missions, identities and practices in the field of academic research at the institutional and individual level doubtless originates, in part, from a desire to increase the openness and relevance of academic work. But structural stratification, as well as changing and growing demands from society, is also obliging late-developer institutions and the academics that populate them to modify or widen their ambitions. Academics in newcomer institutions occupy weaker positions in the scientific community compared to their peers in established universities (Lam, 2010, p. 335). This challenge, along with limited access to first-stream research funding, harsh priorities, the need to work strategically in order to secure third-party funding, as well as the necessity to find innovative funding solutions, are all part of their everyday reality (Kyvik and Lepori, 2010, p. 18).

Originally, most of these academics were teaching vocational courses. They had very few formal qualifications and little research experience. Academic drift and growing ideals of connecting higher education with research activities eventually caused this to change and forced institutions to start the complex process of building up a local research base. Such a shift in objectives is requiring major institutional transformation (Lepori and Attar, 2006, p. 64) including “generational change” that “could take 20 years” (Hazelkorn 2008, p. 166); furthermore, it is unlikely that it will succeed in completely transforming institutions into research universities. Hence, it is more likely to occur within the framework of the newcomer logic outlined above: through developing strong regional links, maintaining a focus on education and, because of the shortage of government grants, by obtaining funding from the private sector. In this process, institutions will need to constructively exploit the ambitions of their staff (Hazelkorn, 2008; Lepori and Attar, 2006).

However, academic drift is also discursive. It is intimately linked with prestige, and its influence on managers and their ambitions to enhance the status of their institutions should probably not be underestimated (Kyvik and Lepori, 2010, p. 10). Academic drift has been called “the gravest threat to institutional diversity” (Morphew, 2009, p. 246) because it tends to work against strategic profiling and specialisation. Managers of newcomer institutions may well attempt to “mimick” or “adopt the accoutrements” of traditional universities, rather than living within their means and building on existing conditions and core competencies (Hazelkorn, 2005, p. 34). This could generate the formation of university-like organisations within the newcomer institutions that embody inert and conservative academic ideals and, hence, impede the growth of a research base built on vocationally related activities in
the context of application and which demonstrate a broadened or reconsidered ideal of academic scholarship.

**Preliminary empirical results**

The empirical investigation that is presented here consists of 10 in-depth, semi-structured interviews with 12 academic researchers based in newcomer higher education institutions in Sweden; they are all research leaders within their department or group. The relatively small sample precludes qualified generalisation and comparison and only represents preliminary observations, but the information gathered nonetheless contains several interesting points worthy of consideration. Processing the material was limited to sorting quotes thematically in line with the theory synthesis above and putting them into context. In order to make depth as well as accuracy in representation compensate for the limitations of a small sample, this section only contains quotes, opinions and arguments which are presented straightforwardly with little or no synthesis or complementary analysis; these comments are presented in the last section of this article and its concluding discussion.

All interviewees claimed that collaboration with industry is a vital part of their group’s mission, and that it constitutes a context of application that is essential to their identities. Several interviewees reported that all research projects in their group are carried out in collaboration with industry and, therefore, that their results have components of applicability and relevance. Some went as far as to claim that working as consultants for industry is part of their mission, although their activities always entail academic research and conventional publishing. An important point, raised by all interviewees, is that their partnership with industry entails real collaboration and not merely an exchange of information or results. This collaboration is perceived to be essential in order to gain new knowledge that is useful and valuable for both partners:

For the most part, we identify a problem together with our contact at the firm, a problem for which we could contribute to the solution, and then we run the project in very close collaboration.

It is not about asking firms what their problems are and then saying let’s solve them together. It is just as much about telling them about possibilities or problems that exist and getting them interested in new fields that we are experts in and that could be interesting for their applications.

It’s not as if you can make a hole in the wall of the university where you throw out results – nobody would understand the stuff we throw out. We have to be part of the process.
There are several reasons why collaboration between research groups and industrial firms can be of mutual benefit. Having access to challenging issues, data and real case studies is one incentive for researchers. Firms, on the other hand, consider that academic research has a role to play in certain problem areas “because it possesses a different set of problem-solving tools and has acquired different experiences”, as well as valuable knowledge networks. But making academic research relevant to the industrial context is not only about ensuring that results are applicable, it is also about adding to scientific knowledge and its progress. Both matter equally:

The literature in our field is filled with staplers and coffee machines, because that is what academics have around and that is what they use as cases. This is completely useless, in my opinion, because you are never confronted with the real issues. You solve made-up problems that no one is interested in.

In our field, we arrived at a level where everyone’s academic results were equally good, regardless of where they were produced. And thus the whole field came to a plateau and made just minute progress here and there. … So what we needed was to start applying these things to real systems, and that is where the breakthrough came. Now we can publish very interesting papers that are highly appreciated in the field and have some tangible impact.

We have a dual purpose; right from the start we identified that if we solve this we can solve both the industrial issue and the scientific issue, so in practice we have two questions that we want answered. We want to solve the technical problem for the firm and simultaneously answer the research question and give academic relevance to what we do.

There are two facets: one is the satisfaction of creating a new understanding, the joy of finding things out. But if a company engages in it, and we can actually deliver something, there’s enormous pleasure in that.

Informants agreed that securing their group’s performance – as measured by academic standards – could potentially conflict with their collaborative ambitions, but their goal is to combine these into a synergistic relationship since they believe that “the road to academic excellence is through collaboration with industry” and “excellence can be used to do things”.

Various factors have influenced the way in which these scientists have forged their identities and developed their attitudes towards collaboration with industry and science in the context of application. In many cases, it emanates from the clear, original mission of many newcomer higher education institutions to collaborate closely with local and regional actors. But the scarcity of resources is another factor, in other words, the “art
of the possible" logic: "by necessity, we have had to seek out these other opportunities." However, personal motivation is also important. In some cases, groups have been created uniquely on the basis of individuals wanting to conduct scientific research in the context of application and make tangible contributions. In others, there has been a mix of personal ambitions and institutional opportunities and constraints. One researcher even went as far as to say that academic recognition is merely a means to contribute something “useful”:

Had academic recognition been important, or had it been important to have a distinguished position, then we would go for that. I never considered university status as something important. And this allowed us have utility front and centre, which we still do.

I don’t see how the things I do become more relevant by me getting more citations. But since those who fund our activities look at those things, it is part of our maturation process to become better in this area.

The ambitions of the research leaders interviewed have contributed to develop an aura that attracts a certain type of people. At one level, given that Sweden has a two-tier higher education system, this could be taken as an attempt to conceal the disappointment some academics feel to work in a second-tier institution. But this situation can be advantageous, if the researcher has alternative ambitions. One informant repeatedly spoke of “those who find their way here” and pointed out that intense collaboration with industry, from a practical point of view, tempts researchers to seek out opportunities in his group; it also fuels a genuine ambition to contribute to the evolution of activities. Another interviewee clearly stated that “those who do not like our way of working wouldn’t come to work here”. A third commented:

Of course, if I wanted to focus only on basic science and get Research Council funds and not have to think about co-production or co-funding from industry, would I find my way here – or would I go to, say, the Royal Institute of Technology? If I had the chance, I would go to the Royal Institute of Technology. So in that sense, yes, we will get a greater concentration of researchers here who are interested and willing to work with industry.

Despite the fact that the interviewees were unanimous in relation to the specific nature of the appeal of their groups and their work, they came from two distinct backgrounds. Some of them seem to have gone into academic research reluctantly, or drifted into it from a previous position in industry or in education. They consider qualifications and distinctions only to be necessary from a strategic point of view, i.e. only if they benefit the group’s overall activities, and attach very little importance to titles. The others were eager to leave research groups and activities in established universities in order to
break new ground and/or escape inhibitory institutional conditions. They cited a slightly more complex set of reasons for their career moves, including an alleged lack of opportunity in established institutions and better prospects to fulfil their ambitions in their new work environments (despite second-tier drawbacks such as limited funding and less visibility):

I had the chance to be part of it right from the start, and that’s a once-in-a-lifetime chance, so I quit Linköping [University] and became a professor here.

What appealed to me was to be part of it right from the start and see it grow. Because I was the first one here, I had the chance to do something on my own.

Most interviewees, including some of the “reluctant academics”, described their experiences of the constraints of tradition and institutional inertia in established institutions and how newcomers, in contrast, provide totally different opportunities for new and innovative activities. When discussing the institutional framework of his group and its activities, one informant made a clear comparison with his previous employer, Uppsala University (which is Sweden’s oldest institution):

Over the years I have been here, surely this place has also matured and thus stagnated in a sense, but there is still a long way to go before we reach the same conditions as in Uppsala in that respect.

In Uppsala each faculty had a list of priorities and that list had to be followed very strictly; you had to refer to it when discussing who should get resources to do what. I was assistant professor then and would probably have become professor in a few years’ time, but there was no way I could have done there what we have done here.

Conclusions

This article presents preliminary findings in relation to individual researchers in newcomer higher education institutions as well as a review of macro-level theory of the organisation and character of research activities in these institutions. It explores alternative academic identities and ideals among these individuals seen against the second-tier status of the institutions where they work. Many of the interview results clearly tally with elements of theory reported in the literature review, and both point to the first preliminary conclusion of this article which is that there does indeed seem to be a correlation between alternative academic researcher identities and the conditions in which research is conducted in newcomer academic institutions. Hence, insofar as there is interest in learning about the professional environment of scientists working in the shadow of excellence initiatives, broader or new definitions of academic scholarship are clearly both
useful and appropriate. Since there is nothing to suggest that traditional academic ideals are lacking among these researchers, a broadened rather than new definition is probably the favourable alternative.

More specifically, both theory and empirical evidence point to the fact that university-industry collaboration is particularly strong in “non-elite” research environments. An explicit contribution is made at the level of the individual; much of the existing literature on university-industry relations focuses on institutional and political factors and gives significant weight to the ability of institutions and organisations (or their managers and policy makers) to create good breeding grounds.

The empirical material presented in the previous section sheds light on the interplay between institutional conditions (the art of the possible) and individual motivation (redefined notions of scholarship) in building university-industry collaboration. Therefore, a second preliminary conclusion is that fruitful university-industry collaboration, along with equally productive research activities, can apparently be developed in institutions which are disadvantaged both in economic terms and with respect to reputation and prestige, especially as some researchers actively seek to work with industry in order to add relevance and usefulness to their activities and results. In some cases (with one strong caveat: more in-depth studies on the topic are clearly required), it almost appears that conditions are more favourable in newcomer institutions.6

However, the argument can be turned the other way around and also be more affirmative: in order to build an equally successful research environment in a newcomer institution, researchers need to engage with industry at the local and regional levels. Other than being supported by empirical material and the review of theory, this argument is also quite logical. While there is no reason to believe that dynamic university-industry collaboration does not also take place in established, adequately funded universities, it is clear that opportunities to conduct basic scientific research without collaborating with industry are scarcer in newcomer institutions with smaller research budgets. In other words, professors at “elite” institutions may have the possibility to conduct “blue-skies research” – it might even be their primary task – whereas the researchers from newcomer institutions who were interviewed have very little or no such freedom. Over time, then, collaboration with industry will not only become the only way to obtain funding but is probably also the best way to establish relevance and a raison d’être for research activities that apparently are never destined to match the status and recognition of those conducted by centres of excellence in established universities.
In connection with this, a third and twofold preliminary conclusion can be drawn regarding institutional conditions. First, it seems that a certain lack of tradition and a lack of institutional inertia might work in favour of researchers with creative ambitions. Second, betting on the unconventional, in this respect, might indeed prove to be a viable option to develop research capacity among managers in newcomer institutions. It might be easier to establish cross- or trans-disciplinary entities and research programmes which entail inventive collaborative activities with industry at new institutions, because there are not as many obstacles in terms of established practices to overcome.

This has become a pressing policy issue for the higher education sector as a whole: how to facilitate a combination of the best of several worlds – academic culture, newcomer flexibility, fruitful and dynamic collaboration with industry – while avoiding the risk of becoming institutionally inert and failing to nurture the initiatives of individual researchers with alternative scholarly ambitions.

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Notes
1. In 1997, Sweden’s 18 new higher education institutions received only some 4% of the government’s first-stream research funding, and 96% was allocated to the 12 established universities. The new higher education institutions’ share has since increased: in 2007 it accounted for approximately 10% of the total (Högskoleverket 2009, p. 35).

2. A quantitative study by Ljungberg et al. (2009) reveals “two quite distinct groups” of Swedish higher education institutions, one with a large volume of research and one with heavy dependence on the educational mission and with only marginal research activities, that often lack critical mass in funding as well as staffing. Twelve institutions populate the first tier, which includes both full-breadth
research universities and specialised institutions with university status: Chalmers Institute of Technology, Gothenburg University, Karolinska Institute, Linköping University, Luleå University of Technology, Lund University, Royal Institute of Technology, Stockholm School of Economics, Stockholm University, Swedish University of Agricultural Sciences, Umeå University and Uppsala University. The second tier includes the four institutions recently upgraded to university status: Karlstad University, Mid-Sweden University, Växjö University, Örebro University; as well as 14 regional colleges: Blekinge Institute of Technology, Borås University College, Dalarna University College, Gotland University College, Gävle University College, Halmstad University College, Jönköping University College, Kalmar University College, Kristianstad University College, Malmö University College, Mälardalen University College, Skövde University College, Södertörn University College, Väst University College.

3. It may well be argued, however, that this situation is nothing new. Disciplinary and international variations have likely existed as long as there has been a scientific community, and attitudes towards the idea of science in the context of application have also varied greatly, not least between Europe and the United States (Paulsen and Feldman, 1995, p. 617).

4. Quite the opposite: far from having only “classic” ideals, academic identities and practices in line with the discussion here also exist in established universities, particularly in specialised institutions such as technical or medical universities. This discussion should, hence, not be perceived as an affirmation that newcomer institutions monopolise broader academic ideals and their operationalisation. It is simply that certain institutional conditions seem to stifle the development of such identities, a matter that is of central interest here and will be discussed further throughout the rest of the article.

5. Their status of research leader is underpinned by the fact that they were main points of contact for the funding applications that served as selection criteria for the choice of interviewees, and this has been confirmed in the interviews. The material has been anonymised, and no references are therefore given in the following paragraphs. All quotes have been translated from Swedish by the author; original wordings (including colloquial language) have been kept as far as possible. The institutional affiliation of the interviewees are as follows: Dalarna University College (1 researcher), Halmstad University College (1), Jönköping University College (1), Karlstad University (2), Malmö University College (1), Mälardalen University College (1), Skövde University College (1), Väst University College (1) and Örebro University (2). The choice of interviewees was made on basis of an ambition to maintain an exclusively qualitative approach to the subject: documentation in the form of applications for funding was used to identify individuals and groups with apparent interest and proficiency in working in collaboration with industry and in a context of application, while still showing that they regard academic standards as important. The research team also set out to ensure an equitable geographic distribution among interviewees. Little a priori attention was paid to disciplines; however, in the final selection, all groups except one were in the natural and technical sciences.

6. It should be noted that the groups investigated here are probably among the comparably successful within the institutions in the second tier. They were created in the early phases of establishing research at the new higher education institutions and grew gradually, together with the growth of the parent higher education institution, and thus had the opportunity to co-create the local institutional norms. Studies which include investigating “failures” are, naturally, part of the research desiderata on this topic.
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This paper explores how admissions tests are used in different higher education systems around the world. This is a relatively new area of research, despite the fact that admissions processes are a key component of university practices and given the ever-increasing globalisation of higher education. This paper shows that aptitude and achievement tests, for example, are used in many developed countries. In some of them, a specific test is nationally instituted and generalised; consequently, the function of the test is well embedded in the education landscape of the country. Elsewhere, tests exist but are administered in an ad hoc fashion with little consistency across the sector. This paper provides an important reference tool for national systems and individual institutions interested in examining their position within the realm of international practice in the utilisation of admissions testing for university selection.
Une enquête sur les pratiques internationales des examens d’admission aux études universitaires

par
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Cet article explore l’utilisation des examens d’admission dans différents systèmes de l’enseignement supérieur à travers le monde. Il s’agit d’un domaine de recherche relativement récent, en dépit du fait que les processus d’admission sont un élément clé des pratiques universitaires et au regard de la mondialisation croissante de l’enseignement supérieur. Cet article montre que les tests d’aptitude et de niveau, par exemple, sont utilisés dans de nombreux pays développés. Dans certains d’entre eux, un examen spécifique est institué au niveau national et généralisé. Par conséquence, la fonction de test est bien intégrée dans le paysage éducatif du pays. Ailleurs, des examens existent, mais ils sont administrés de façon ad hoc avec peu de cohérence au sein du secteur. Cet article fournit un outil de référence important pour les systèmes nationaux et les établissements intéressés par l’examen de leur positionnement dans le domaine de la pratique internationale du recours aux examens d’admission pour la sélection universitaire.
Introduction

This paper provides insights into the use of admissions tests, whether in relation to aptitude or achievement, in university admissions procedures across developed countries and explores how they are used in different higher education systems. While its main purpose is to inform decision makers in Australia on the complex issue of admissions testing, the analysis also provides an important reference tool for other national systems and individual institutions interested in reviewing their position in relation to international practice in this field.

A detailed survey of literature suggests that this is the first comprehensive international synthesis of admissions testing practices. This is somewhat surprising, given that admissions processes are a key component of the operation of universities almost universally and given the ever-increasing globalisation of higher education. As such, this paper is purposefully descriptive in its approach, providing a basic environmental scan. It paves the way for future research as well as further analyses and comparisons of higher education systems and their admissions practices.

The research documented in this paper was developed as part of an international scoping exercise that studied aptitude testing in Australian higher education. One of the outputs of the study was a report (Coates et al., 2010) and this paper is a revised version of one part of it (id., pp. 14-23). The detail included here is purposefully general in its approach, therefore making it transferable to other higher education contexts and analyses within systems the world over.

Educationalists and policy makers in Australia are seeking new ways to admit students into higher education and this policy shift is unfolding in parallel to a new approach for funding higher education based on student demand. The system, which was previously regulated by government-imposed enrolment quotas, is now opening up. Additional funding is being offered to reward universities for enrolling students from low socio-economic backgrounds and structural adjustment funding is being provided to universities to facilitate system expansion and entry into non-traditional student markets. Lastly, ambitious targets are being set for bachelor degree graduation rates (Australian Government, 2009; Birrell et al., 2010; Edwards, 2010, 2011).
As a prelude to the main points discussed in this paper, the next section explores rationales for the use of admissions tests for university selection. We then provide a unique and relatively detailed synthesis of information relating to admissions processes in 13 higher education systems across the world, supplemented with an overview of several other systems, before returning to current practice within Australia and examining possible directions for the future.

**Broad rationales for admissions testing**

While the purpose of this paper is not to analyse debates on the use of admissions testing in higher education, it is helpful to reflect on this issue before examining international practice. This section outlines some of the key rationales for admissions testing and describes some issues and concerns related to the practice.

From the international study which inspired this paper, it appears that the main driver for the inclusion of such tests in selection processes is the belief that they can offer a more efficient, valid, or at least supplementary means for selecting the most appropriate candidates for university. In certain countries, tests are administered because of a lack of consistency in secondary school assessment processes, while others use tests in conjunction with various measures of achievement to strengthen selection methodology.

In the current higher education policy setting in Australia there appears to be cogent rationales for the wider and more transparent use of admissions tests in selecting university candidates. Analyses of the effectiveness of admissions tests in higher education suggest that “well developed tests are valid for their intended purpose” (Sackett, 2005, p. 109; Wightman, 1997; Wilson, 1981). Specifically, the use of admissions testing – alongside other selection metrics such as secondary school outcomes – has the potential to positively assist institutional selection processes (Coates et al., 2010). It can be useful, for example, when:

- attempting to identify greater numbers of candidates from under-represented groups (including low socio-economic backgrounds) whose secondary school outcomes may not reflect actual academic capacity;
- students come from various schools and states that emphasise or teach different curricula;
- there is a need to discriminate more finely between various levels of performance;
- considering recent applications from immigrants and overseas students;
- there is a case for giving people further insights on what they are capable of achieving (diagnostic);
● information on general capability can complement that provided by curriculum competence;
● there are good arguments that achievement scores need to be supplemented or replaced by academic aptitude tests;
● the addition of common and objective data can enhance transparency.

However, there are valid and important reasons cautioning a careful approach (or the outright rejection) of admissions testing for higher education. In general, these issues relate to the validity of the instrument being used (Sackett, 2005), especially in contexts where there is:
● a lack of available evidence on the effectiveness of such tests, and without evidence institutions cannot be sure that the tests add value to the admissions processes;
● structural or content bias in the tests that may be meant to benefit certain groups or cultures but may in fact do the opposite;
● a major administrative burden on institutions to run the tests, or a cost burden on applicants.

The analytic approach

Admissions tests are used internationally and are employed in a variety of ways; they can either constitute the sole criteria for selection or be used in conjunction with other measures of achievement (usually secondary school grades). There are system-wide general tests, institutional tests specific to one or a small group of universities, discipline-specific tests designed for entry into particular courses and tests which help select students from non-traditional entry pathways (in particular “mature age” applicants). Some tests are mandated and run by government or public authorities while others are chosen and utilised by individual universities.

Given the substantial scope that an analysis such as this could have, the discussion here focuses on a few key areas of university admissions process. In the main, the discussion is limited to entry to undergraduate-level courses for domestic students and the primary (but not exclusive) focus is on OECD member countries. The research underpinning this paper explored admissions practices in all of them and the countries for which sufficient information was available have been included here. Information about South Africa and China has also been included.

Charting these selection tools worldwide is a difficult process. The nuances among university entrance criteria in each country are not always transparent and processes are often unclear to “outsiders” and even to experts within a system. The authors are indebted to numerous international colleagues for assisting with this analysis. Even despite their input, in many
cases some specific details of a system were not entirely clear. Furthermore, sometimes admissions processes are decentralised and used differently within systems. Therefore, while the countries examined here are varied and numerous, this discussion does not cover every admissions process that exists within the scope of the analysis. The country-specific discussions in this paper vary in detail according to the amount of information available.

In addition to these parameters, it is important to underline that in exploring “admissions tests” the discussion canvasses aptitude and content-specific tests designed for university entrance selection. It does not, however, cover secondary school examinations, matriculation tests or certificate qualifications that may help to qualify candidates for university.

This review of international practice is composed of two sections: the first one comprises the main discussion which outlines the broad, generic “non discipline-specific” tests used across the world and explains the way in which they contribute to selection. Three main uses of general admissions tests are identified: system-wide tests used as the sole determinant of entry to university; system-wide tests used as a key measure, but supplemented with other achievement measures; and other uses of general admissions tests (i.e. tests that are not system-wide in usage and tests designed for mature age entry). Countries in each section are discussed in alphabetical order. The second section of this review of international practice contains a brief overview of the use of admissions tests to determine entry into particular fields of education.

The three main uses of general admissions tests

General admissions tests as the sole determinant of entry

It appears relatively uncommon for an admissions test to be the only measure for university admission. Examples of countries for which this is, to some extent, the case include China, Greece, Portugal and South Korea. In all these instances, the admissions test is run by the government or a government authority.

The Chinese university entrance system, known as gaokao, is based on three key admissions tests which are undertaken by prospective students following completion of their secondary schooling (Davey et al., 2007). The administration of the Chinese test is co-ordinated by the Ministry of Education, which also oversees the construction of the test. The test has run in a similar format since 1952, apart from a ten-year period during the Cultural Revolution (Unger, 1980). This test is required for entry to all universities in the country and success determines not only whether a university place is secured, but also the type of university that a student is accepted into.
As elsewhere, the prestigious institutions generally take the highest scoring applicants (Davey et al., 2007).

The Chinese admissions test, which students sit over a two- or three-day period, is multi-faceted. They are achievement tests, designed to cover specific knowledge and theory across a range of disciplines learned by students during their schooling. They do not involve practical or more aptitude-based problem-solving questions. This particular fact has been criticised as a limitation of the current testing process (Davey et al., 2007; Zhang, 1995).

Competition for places in China is very strong and many potential candidates do not succeed in gaining an offer from a university. Unsuccessful candidates have to wait another year before they can re-sit the test. Therefore, much emphasis is placed on studying for the test from the early years of schooling (Davey et al., 2007; Zhao, 2007). The high stakes of this test also appear to open it to controversy surrounding bias towards the cultural and political elite, corruption and cheating (Chunlin, 2005; Davey et al., 2007).

The transition from secondary school to university in Greece is also determined entirely by a national higher education entrance examination (Psacharopoulos and Tassoulas, 2004). Students in the final year of secondary school who wish to gain entry to university must sit this multi-disciplinary exam, which is administered centrally by the national government. Universities select students on the basis of their exam results and the preferences for courses that they specify during the application process. As is the case in many other countries which place a high value on the outcomes of one examination for determining entrance, this test has become entrenched in the national psyche: students and families invest substantial time and resources in studying and being tutored in the hope of increasing success in the national entrance examination (id.).

The admissions process for Portuguese universities is based primarily on an entrance exam. Entry into publicly funded universities is gained by sitting the Concorso Nacional, while for private institutions candidates sit the Concorso Local (European Education Directory, 2009a). These admissions tests are sat by all students under the age of 23 who wish to study at undergraduate level and they are designed to measure knowledge in particular subject areas. However, the tests do not only cover content included in the senior school curriculum. Candidates who sit the test are admitted to their selected courses on the basis of their level of achievement in the test and completion of specific prerequisite subjects in their final years of schooling.

In recent years, the outcomes of national admissions tests have become increasingly important in Portugal. As of 2005, the minimum score on which a candidate can be admitted to university was set at 95 (out of a possible
200 points). From the perspective of policy makers and institutions, this change was implemented to ensure that the country’s higher education standards are kept high and that policy is in line with the Bologna Process, but in practice many candidates now miss out on available places, making the stakes of these tests even higher than in previous years.

In South Korea, the College Scholastic Ability Test (CSAT) or suneung is the sole determinant of whether students are admitted to university. The CSAT is developed and implemented by the Korea Institute for Curriculum and Evaluation (KICE) on behalf of the government (KICE, 2008). It is an achievement test (rather than aptitude test) and is based on the national school curriculum. Much importance is placed on successfully completing this test, to the extent that students are coached for years before they actually sit the exam. All universities base their admissions on CSAT results, with the most prestigious institutions taking the highest achievers.

As noted at the beginning of this section, very few systems in the world only use an admissions test for entering university. Even in the ones discussed above there are, in some cases, nuances that make entry conditional to more than just the test. In Portugal, for example, where the national admissions test is the only measure used to rank students for university selection, certain prerequisite subjects at secondary school must also be completed. Comparisons of entry, equity and student outcomes from systems with these specific entry modes, as well as an examination of other systems with different approaches, would provide a worthwhile supplement to this initial scan.

**General admissions tests as a supplementary criteria for entry**

There are a number of systems across the world where the admissions test is not the only criteria used to determine entry to university, but it nevertheless plays a dominant role. The systems discussed in the following section also have an admissions test that most applicants for undergraduate courses sit as part of the admissions process. Japan, South Africa, Sweden, Turkey and the United States are included in the discussion here. The implementation of tests in these countries varies from being sanctioned by the state in the first four, to individual institutions being free to choose whether or not they apply them in the United States.

The Japanese admissions process is not dissimilar to that of China, South Korea and Greece in terms of the importance placed on the admissions test. For entry into the public universities and many private institutions, applicants sit a test administered by the National Centre for University Entrance Examinations (NCUEE). Institutions decide on an individual basis which specific parts of the test devised by the National Centre they will include each
year and candidates take the sections relevant to their preferred courses. The admissions process followed is different for each institution, but in many cases the test score is combined with applicant interviews or teachers’ letters of recommendation. However, Teichler (1997) notes that, in general, the more prestigious the institution, the more likely it is to rely solely on the examination score for selecting candidates.

The Japanese National Centre Test for University Admissions has been administered since 1990, when it replaced a similar test which had run since 1979 (NCUEE, 2009). Such tests were also run in Japan prior to 1979 in slightly different formats, so this admissions system is well entrenched in the country. The current test is primarily designed to measure secondary school graduates’ achievement levels in a range of disciplines.

Given the hierarchical nature of the Japanese education system, entry into the most prestigious higher education institutions, in many cases, provides a stepping-stone towards successful careers and substantial cultural leverage. As such, the entrance test in Japan is considered very important. Most people enrol in tailored tutorials to prepare for the test and many of those who fail to gain entry on leaving school spend the subsequent year having further tuition (these candidates are known as ronin) in order to increase their chances of success for the next time round (Mori, 2002; Ono, 2007; Teichler, 1997).

In South Africa a new national admissions test known as the National Benchmark Test (NBT) was implemented in 2009. It is an achievement test, with elements based on the National Senior Certificate (NSC) curriculum. It was designed to provide an improved selection tool for universities, and replaced the Standardised Assessment Test for Access and Placement (SATAP) which was widely used by institutions as one measure for selecting undergraduate candidates (Scholtz and Allen-Ile, 2007). The NBT now supplements secondary school results in determining which students are offered a place in the highly competitive university sector.

In Sweden, although tertiary entrance requirements are different to all those mentioned in this paper, there is nevertheless an admissions test – the Swedish Scholastic Aptitude Test (SweSAT) – which constitutes a key criteria for entry to university. Prior to 1991, the SweSAT was only used for mature aged applicants, but since then, any applicant can sit the test and these results count towards their chances of gaining admission (Berggren, 2006, 2007).

The SweSAT is not mandatory for all school leavers. However, all universities accept students on the basis of SweSAT scores. Students therefore gain access to university either through their secondary school grade point average (GPA) or by their SweSAT score.
The Swedish National Agency for Higher Education, Högskoleverket, oversees the national admissions processes. It stipulates that of all new students admitted to each institution in a given year, at least one-third must be accepted on the basis of their SweSAT score, at least one-third on their secondary school GPA and no more than one-third through other forms of admission such as prior learning and experience, proficiency in specific areas and interviews (Högskoleverket, 2009).

The main rationale behind this segmentation of admissions to university in Sweden is to encourage a diversified university student body. By focusing on two distinct methods of selection – achievement in high school and an aptitude test – it is hoped that more students from under-represented groups will be admitted. However, research by Berggren (2007) questions the extent to which participation is indeed broadening as a result of the current selection policies.

In Turkey, entry to university is based on the results of the ÖSS, a compulsory examination that is based on verbal and quantitative tests. The tests span a variety of disciplines including science, mathematics, Turkish and foreign languages as well as social sciences (Karakaya and Tavsancil, 2008). The ÖSS results are combined with grade point averages as recorded in the Turkish school leaving certificate Lise Diplomasi (European Education Directory, 2009b). University applicants are selected in function of these outcomes. The Council of Higher Education (Yükseköğretim Kurulu, YÖK) is a constitutional body responsible for co-ordinating and overseeing higher education institutions’ major activities (Eurydice, 2008). It determines the criteria for selection and undertakes the selection itself.

Academic aptitude tests are used prolifically in the United States, where there are some 12,000 local education authorities. Given the plethora of jurisdictions – which each have a variety of standards and curricula – educational achievement is necessarily heterogeneous. This explains why the United States puts a strong emphasis on academic admissions testing for college entry.

Individual institutions in the United States are empowered to make their own decisions about the student selection process. However, admissions tests are almost systematically used as a key component of selection. While there are numerous general tests used throughout the country, two specific ones dominate the sector: the SAT and the ACT. These tests measure students’ knowledge in subject areas and content included in the national school curriculum; the SAT goes a step further to include items relating to critical thinking and problem-solving skills which are “attained in and outside the classroom” (College Board, 2009). In some states, different admissions tests such as the Texas Higher Education Assessment (THEA) are widely used.
There is substantial academic research and commentary about the SAT and ACT in particular that offer insights into these tests (see, for example, Clark et al., 2009; Geiser, 2009; Grove et al., 2006; Simpson and Kadhi, 2009; Sternberg, 2006; Stringer, 2008; Thomas, 2004).

In all the systems described above, the existence of an aptitude test is no doubt a dominant issue in the psyche of university applicants. However, within this generalisation, there are clearly differences worth noting. Whereas the Japanese admission test is so intertwined with the selection process that university admission seems to depend on passing this test, the Swedish system operates in such a way that the test is but one quite distinct method for gaining entry. Therefore, Swedish students with low results in the SweSAT are limited as to the number of routes by which they can gain entry, but it does not prevent them from getting high scores elsewhere (such as secondary school results) that may offer a pathway to university.

Other approaches to using general admissions tests

In many countries, the use of university admissions testing to supplement the selection process is used more sporadically than in those mentioned above – but such measures are nonetheless widely used. In Australia, Canada, Mexico and the United Kingdom, for example, a few universities utilise achievement and aptitude tests for undergraduate entry. In other countries, admissions tests are used for particular cohorts of applicants such as mature age students.

A number of universities in Australia and the United Kingdom deploy uniTEST as a supplementary tool for admissions. The test was developed to assess the kinds of generic reasoning and thinking skills that are required in higher education. uniTEST assesses these skills across two broad domains: those of mathematics and science and humanities and social sciences. The test is designed for school leavers so that they can complement existing selection criteria such as secondary school results.

In Australia, uniTEST has been implemented as a pilot programme and is funded by the Australian Government (ACER, 2011). Six universities have used uniTEST in their selection process. In the United Kingdom, seven universities have used uniTEST, while others use additional admission tests. For example, Oxford and Cambridge both use specific versions of the Thinking Skills Assessment (TSA), a pre-interview admissions test for applicants to undergraduate courses, to inform their admissions processes.

In the Canadian higher education system, admissions vary province-by-province. Some are co-ordinated by province-based admissions centres (for example, applications for universities in Ontario are facilitated through the Ontario Universities Application Centre), while students apply directly to the
institute of their choice in other jurisdictions. Individual institutions stipulate their entry requirements for courses and each one makes its own admissions offers, regardless of the provincial application procedure. Some use of testing is made in specific subject disciplines (as discussed in the section below) and there is ad hoc use of more general admissions tests, but domestic applicants are primarily selected on the basis of their achievement in the final years of secondary school.

Increasingly, admissions tests are being used to contribute to the selection processes for Mexican universities, especially since the establishment of a national centre for the assessment of higher education (Centre Nacional de Evaluación de la Educación Superior) in the mid-1990s (Backhoff et al., 2000). However, at the moment there is no nationally co-ordinated selection test process. Instead, individual institutions and groups of institutions in Mexico have been developing admissions tests that fulfil their requirements for entry. The Basic Knowledge and Skills Examination (EXHCOBA) was developed at, and is used by, the Universidad Nacional Autónoma de México Autonoma de Baja California and some other institutions. In addition, a range of other large universities such as the Universidad Nacional Autónoma de Mexico and the Universidad Autonoma Metropolitana have developed their own specific admissions tests over the past decade or so (id.).

In addition to these examples, many countries use admissions tests to facilitate the selection of mature age entrants to university. In general, these tests are administered in the absence of any secondary school results, once applicants reach a certain age, or after a defined period out of schooling. Universities in both Australia and New Zealand use the Special Tertiary Admissions Test (STAT) in this way. Other countries that use tests for similar purposes include Canada (Canadian Adult Achievement Test, or CAAT), Austria (Berufsreifeprüfung), the Netherlands (Colloquium doctum), Switzerland and Portugal (Exame Extraordinário de Avaliação de Capacidade para Acesso ao Ensino Superior).

In the three sections above we illustrate different uses of a similar general concept: using an objective test to provide data that feed into the university selection process. The spectrum of use of these tests is substantial and the penetration of these tests into cultural understandings of what gaining a place at university signifies is also significant and worthy of further comparative analyses. Further synthesis and a discussion of this synthesis are provided at the end of the following section.
Discipline-specific admissions tests

Many universities throughout the world use tests for various disciplines. Table 1 provides an overview of the kinds of subject areas and countries in which discipline-specific tests are used. As can be seen from the sample provided, the health science fields are commonly linked with some kind of admissions testing, while in most other fields there is less uniformity in terms of worldwide usage. Given the complexity of higher education systems and university admissions processes, the detail in the table only shows the tip of the iceberg in terms of the kinds of tests being administered for entry into specific courses or for particular subject matter. Most of the tests featured here are well established and widely known. Rather than providing specific commentary in this paper about each of these tests, through this table we give a broad overview and an indication of the extent to which the tests are utilised within these countries.

In addition to these discipline-based instruments, other tests that were discussed in the earlier section relating to broad or generic-type admissions tests also include optional discipline-specific “add-ons”. The SAT subject tests in the United States provide a notable example that is not included in Table 1.

Conclusion

This paper has charted the international landscape in terms of the practice of administering admissions testing for selection into higher education institutions. It offers a contextual background to facilitate the consideration of admissions practices in Australia, but the resource provided here also could constitute a useful reference point for universities and policy makers throughout the world.

This synthesis of world-wide admissions practice is the first of its kind. It describes the various facets of a common and essential practice undertaken internationally each time a student is admitted to university. Overall, this paper shows that the use of aptitude or achievement tests is prevalent in developed countries. In many systems where a specific admissions test is nationally instituted and almost systematically undertaken (for example in Japan, China, Portugal, Greece, Turkey, South Korea and Sweden), the function of the test is well embedded in the education landscape of the country. In other countries, such as Australia, Canada, Mexico, New Zealand and the United Kingdom (among others), admissions tests exist but are administered in an ad hoc fashion with little consistency across the sector.

Admissions tests can bring advantages. In those countries where they are an important and accepted part of the selection process, students have a clear understanding of what the tests are designed for, when they will be required to sit them, how their scores contribute to university admission and what the
testing process involves. There are also unintended consequences stemming from these tests, notably the significant amount of pressure put on candidates to succeed and the burgeoning private market for coaching in their national test(s). Those countries that use a national test but also balance these outcomes with school results seem to have fewer concerns with these problems. This paper helps to identify such issues, paving the way for further research in this area.

When it comes to admission for particular courses, the patterns are slightly different. In particular, for entry into subjects in the health science fields (especially medicine) there is almost world-wide acceptance that the admissions process should include a core component: i.e. an admissions test. Tests such as UMAT, HPAT-Ireland and Ulster, MEET, GAMSAT, MSAT and MCAT

Table 1. **Sample of discipline-specific admissions tests**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Country</th>
<th>Test name</th>
<th>Acronym</th>
<th>Use within country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical and health sciences</td>
<td>Australia</td>
<td>Undergraduate Medical Admissions test</td>
<td>UMAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>Belgium</td>
<td>Toelatingsexamen</td>
<td></td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>Canada</td>
<td>Dental Admissions Test</td>
<td>DAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>Ireland</td>
<td>Health Professions Admission Test – Ireland</td>
<td>HPAT-Ireland</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>Korea</td>
<td>Medical Education Eligibility Test</td>
<td>MEET</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
<td>Undergraduate Medical Admissions test</td>
<td>UMAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>N. Ireland, UK</td>
<td>Health Professions Admission Test – Ulster</td>
<td>HPAT-Ulster</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>Medical School Admissions Test</td>
<td>MSAT</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>BioMedical Admissions Test</td>
<td>BMAT</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Dental Admissions Test</td>
<td>DAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Pharmacy College Assessment Test</td>
<td>PCAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Medical College Assessment Test</td>
<td>MCAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Optometry Assessment Test</td>
<td>OAT</td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Veterinary College Assessment Test</td>
<td>VCAT</td>
<td>System-wide</td>
</tr>
<tr>
<td>Law</td>
<td>Australia</td>
<td>Australian Law Schools Entrance Test</td>
<td>ALSET</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>Korea</td>
<td></td>
<td></td>
<td>System-wide</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>National Admissions Test for Law</td>
<td>LNAT</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>Cambridge Law Test</td>
<td></td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>Law School Admissions Test</td>
<td>LSAT</td>
<td>Selected institutions</td>
</tr>
<tr>
<td>Education</td>
<td>Finland</td>
<td></td>
<td></td>
<td>Selected institutions</td>
</tr>
<tr>
<td>Engineering</td>
<td>Australia</td>
<td>ATN Engineering Selection Test</td>
<td>ATNEST</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>Belgium</td>
<td>Aptitude for Engineering Assessment</td>
<td>AEA</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>History Aptitude Test</td>
<td>HAT</td>
<td>Selected institutions</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>Sixth Term Examination Paper</td>
<td>STEP</td>
<td>Selected institutions</td>
</tr>
</tbody>
</table>

are all well-established medical entrance tests in use throughout developed countries. Acceptance of entry tests for other disciplines is less generalised than in the health sciences field, but as the examples in this paper show, there are a number of widely used tests in a range of fields including law, engineering and education.

From an Australian perspective, the national higher education system has not universally embraced the use of tools other than Year 12 scores for selection into undergraduate study. In general, the current selection system has not fundamentally changed over the past few decades, despite substantial changes in the higher education system as a whole. Recent times have seen a boom in enrolment numbers and a growth in the proportion of the population who attend university. If recently announced ambitious targets for university attendance (Australian Government, 2009) are to be met in the years to come, this growth will have to continue. It is possible that some change in the current selection methodology for admission to Australian universities may assist in promoting wider representation of students from historically underrepresented groups. In this context, it would be useful to further explore the selection tools available and how they could assist in creating a more robust and transparent admissions system that promotes wider participation in Australia.

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Identifying effective drivers for knowledge exchange in the United Kingdom

by

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This paper examines the drivers for knowledge exchange in British research-intensive universities, at a time when research impact is coming to be seen as an increasingly important outcome of research in all disciplines. It provides evidence of an over-emphasis of the economic benefits of knowledge exchange in the policy sphere and of a quite different value system amongst academics. Academics’ commitments having been described as occupying a single bounded space, this enhanced understanding of the motivations and needs of academics as they engage in knowledge exchange points to a new way of approaching the facilitation and promotion of knowledge exchange activity.
Identifier les moteurs efficaces du transfert de connaissances au Royaume-Uni

par
Stevie Upton
Institute of Welsh Affairs, Royaume-Uni

Cet article examine les moteurs de transfert de connaissances dans les universités britanniques à forte intensité de recherche et à un moment où l’impact de la recherche vient à être considéré comme une finalité de plus en plus importante dans toutes les disciplines. Il fournit la preuve d’une surestimation des retombées économiques du transfert de connaissances dans le domaine de la politique, et d’un système de valeurs bien différent parmi les universitaires. L’engagement des universitaires ayant été décrit comme occupant un espace unique limité, cette meilleure compréhension des motivations et des besoins des universitaires alors qu’ils s’investissent dans le transfert des connaissances souligne une nouvelle façon d’aborder la facilitation et la promotion de l’activité d’échange de connaissances.
Introduction

As UK universities approach the first Research Excellence Framework assessments on which crucial funding decisions will rest, the status of research impact has never been greater. But precisely why is knowledge exchange – the creation of research impact – so important? And are the drivers designed to facilitate it effective? This paper argues that the potential uses of academic research – and the motivations of those conducting it – are manifold, but that the drivers for knowledge exchange fail to adequately take account of this fact. Consequently, an opportunity to maximise societal gain from academic research is being missed.

The 1997 National Committee of Inquiry into Higher Education (NCIHE) identified four main purposes of higher education:

- to inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well-equipped for work, can contribute effectively to society and achieve personal fulfilment;
- to increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society;
- to serve the needs of an adaptable, sustainable, knowledge-based economy at local, regional and national levels;
- to play a major role in shaping a democratic, civilised, inclusive society. (NCIHE, 1997).

Together, these also constitute a comprehensive vision of the purposes of knowledge exchange, both teaching- and research-based. It is on the latter that this paper focuses. Taking the Committee’s findings as its lead, it begins from a position in which research-based knowledge exchange is understood to contribute to the enhancement of “knowledge and understanding for their own sake”, to the economy and to “a democratic, civilised, inclusive society”.

The findings presented here are based on research conducted during 2007-08 in three research-intensive British universities – Cardiff University, the University of Edinburgh and the University of Leeds – and in the national administrations of Wales, Scotland and England. The research involved interviews with some 50 respondents, including senior civil servants and the universities’ vice-chancellors, coupled with close scrutiny of national and institutional policy frameworks. It incorporated findings from an
interview-based study of six knowledge exchange projects, one drawn from
the sciences and one from the social sciences or humanities at each
university. These cases were selected not as representative, but rather as
illustrative of the variety of knowledge exchange activity occurring within
research-intensive environments. The aim being to explore academics’
priorities with respect to knowledge exchange and their requirements for
meeting them, the focus was squarely on the academics best placed to reflect
on this, i.e. those already generating research impact. Each case was identified
through referral by either an existing contact or a university’s research
services department.

This multi-level approach enabled policy at the national level to be
compared with that at the level of the higher education institution, as well as
with the practices of individual academics engaged in knowledge exchange
activity. A particular tension between government policy and academic
practice emerged from this comparison. Academics’ perceptions of the value
of knowledge exchange activity were found to be markedly different from the
values identified in, and hence promoted by, government policy. It is to this
tension, and to its implications for the maximisation of research impact, that
the remainder of this paper is addressed.

Academic research and the purpose of knowledge exchange

I shall not dare to think my self a true naturalist till my skill can make my
garden yield better herbs and flowers, or my orchard better fruit, or my
field better corn, or my dairy better cheese, than theirs that are strangers
to physiology. (Robert Boyle [1627-91], quoted in Hunter, 1981)

If Boyle’s emphasis on the importance not simply of acquiring but of
applying new knowledge was a common one in its day (and Livingstone’s
[1992] assertion that, during the “Scientific Revolution” of the 16th and
17th centuries, “there was among many a concern to demonstrate ... the
public value of apparently esoteric science” suggests that it was), then it is
certainly no less mainstream today.

The Research Excellence Framework (REF), successor to the Research
Assessment Exercise (RAE) will, for the first time in the assessment of higher
education institutions, give significant weighting to the impact of research.
Set against weightings of 65% for outputs (the traditional measure of academic
“success”) and 15% for the “vitality and sustainability” of the research
environment, impact will account for 20% of the REF assessment (HEFCE et al.,
2011, p. 6). Within this, case studies submitted by individual academics will
receive an 80% weighting, with a 20% weighting for an overarching statement
describing the approach to facilitating impact across a whole unit of
assessment (HEFCE et al., 2012). Undoubtedly the intention is that “impact”
will incorporate the widest possible range of outcomes: in 2010 the chairs of the impact pilot panels stated that it is “essential that impact in the REF should be defined broadly to include social, economic, cultural, environmental, health and quality of life benefits” (HEFCE et al., 2010).

However, although the allocation of funding by the UK’s higher education funding councils will now rely partly on assessment of broad-based research impact, “submissions will not be expected to provide impact case studies that are representative of the spread of research activity across the whole submitted unit. Institutions should select the strongest examples of impact ...” (HEFCE et al., 2011, p. 28). Individual units of assessment (UoAs) will be judged on a minimum of two impact case studies, one per UoA plus one per ten full-time equivalent staff. Whilst the UoA’s overall interaction with research users will be judged by the additional impact statement, it is not yet clear that the incentive for all staff to engage in high impact research – and for their departments to support them in that endeavour – will be particularly strong. The most recent guidance released by the four main subject-area panels (under whose guidance REF assessments will be made) also suggests that little, if any, distinction will be made between different types of impact (HEFCE et al., 2012). As a consequence, there will be no incentive to engage in more complex, interactive or long-term forms of knowledge exchange over less complex and more readily achieved forms.

If the incentives for knowledge exchange as a whole are unclear, they are still less clear for knowledge exchange leading to non-economic ends. Writing about what he perceives as the failure of the profit motive to create a sustainable future for society and the natural world, Lux (2003, p. 4) notes that he is “led to realize just how much we are held in a beguiled trance by the profit motive, so that even those who are considered sustainability theorists are not able to challenge its hold on their thinking”. A similar charge might be levelled against knowledge exchange theorists. It is a striking feature of the predominance of neoliberal ideology that both proponents and critics of university knowledge exchange tend to focus on the economic value generated by research.

A survey of literature on the subject shows three principal rationales for university knowledge exchange activity. The first is characterised as an economic imperative for universities which, in the United Kingdom, Beveridge (1991) traces back to funding cuts in the early 1980s which prompted industrial liaison and technology transfer to gain a new momentum. The second is the so-called “regional booster” effect (Florax, 1992) that derives from the adoption of university-generated innovation. A simple technology-push model having been widely discredited (as, for example, by Florax, 1992; Florida, 1999; Maskell and Tornqvist, 2003), universities are now seen more subtly as “mechanisms for generating and harnessing talent” (Florida, 1999,
The third reason advanced for universities engaging in knowledge exchange is that, as it becomes more complex, research increasingly needs to be a collaborative process (Bok, 2003) and that partnerships with third parties can result in useful synergies. In each of these rationales, what we repeatedly see is knowledge exchange discussed within the context of its economic value.

Successive governments have, as Monbiot (2001) has demonstrated, been instrumental in tying higher education to economic goals, increasingly making “economic instrumentalism” (David, 2002) the prevailing rationale for public funding of research. This outcome is perhaps unsurprising if we consider these same governments’ rationale for their own existence. As Scottish First Minister Alex Salmond (Scottish Government, 2007) has stated, “The Purpose of the Government I lead is to create a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. Sustainable economic growth is the one central Purpose to which all else in government is directed and contributes”. There is no sign of impending change in this state of affairs. In fact, the 2010 Independent Review of Higher Education Funding and Student Finance (Browne et al., 2010), which precipitated the 2012 increase in the annual tuition fee cap to GBP 9,000, has served to shift the balance of the debate further towards a view of higher education as a private and economic, rather than public and social, good.

Nevertheless, there is no reason to suppose that knowledge exchange will inevitably have economic ends. Ozga and Jones (2006) have described how knowledge can be used not only as a means of advancing globalisation and competitiveness agendas but also, if the bonds that link “knowledge to the economy within a wholly commercializing framework” are broken, to promote “reciprocity, mutuality and cooperation beyond the calculus of pure exchange” (id., p. 14). If we hold that non-economic outcomes of knowledge exchange are of equal value in their own right to society, a narrow emphasis on economic growth as the pre-eminent goal of research and knowledge exchange must be regarded as unnecessarily limiting.

**Government policy on knowledge exchange: rhetoric and reality**

Critics of this position would tell us that we need look no further than the various government white papers on the subject to determine that a broader understanding of the value of research is, in fact, prevalent. Yet a close reading of those papers serves only to further convince us of the predominance of economic valuation. A typical example would be the 2003 English White Paper on The Future of Higher Education, published by the then Department for Education and Skills (DfES).
Discussion of the role of social, scientific, arts and humanities research begins promisingly enough, being described not only as benefiting the economy but as “enriching our culture more widely” (DfES, 2003, p. 23). This balance between economic benefit and enrichment of our culture is echoed in a later reference to universities as “key drivers for their regions, both economically and in terms of the social and cultural contribution they make to their communities” (id., p. 36). The implication is that the research-sharing role of universities is of potential benefit in a variety of fields and to a variety of actors. Yet of the eight “key points and proposals” for knowledge sharing announced in the White Paper, four have a skills focus and a further three deal with interactions between academia and business. Only one key proposal is to support and “celebrate” the cultural and social contributions made by universities in their role as “community leaders” (id., p. 37).

This is by no means an isolated case. The document A Framework for Higher Education in Scotland (Scottish Executive, 2003) contains ten commitments on knowledge exchange, eight of which describe the need to develop knowledge commercialisation or business links. The remaining two refer – only in the most general terms – to ensuring that academics remain outward looking, in particular towards an international audience. Wales, meanwhile, produced seven economic and innovation strategies in the six years from 2002 onwards. Of these, A Science Policy for Wales takes the broadest focus, concentrating on “key priority” areas of health, the low carbon economy and sustained social and economic renewal. A Science Policy makes the case early on for the role of universities in meeting these priorities (Welsh Assembly Government, 2006):

Knowledge from the natural sciences, social sciences and the arts and humanities can be brought to bear in helping to meet these aspirations, by creating or facilitating:

- better, more influential, communications
- better jobs
- better health/education
- greater and lower-cost access to, and participation in, cultural and sporting activity
- improvements in the efficiency of resource utilisation
- capacity building and cultural changes within communities.

Yet the only chapter which discusses in any detail the contribution to be made by universities focuses narrowly on the commercial exploitation of scientific knowledge. Once again, there is a clear distinction between a wide-ranging vision and specific goals and commitments which fail to fulfil the breadth of that vision.
Throughout these documents the spectre of ambiguous use of terminology also stalks. In The Future of Higher Education, for example, a chapter entitled “Higher education and business – exchanging and developing knowledge and skills” (DfES, 2003, p. 36, emphasis added) makes mention of universities’ engagement in “community capacity building and regeneration” and of their “important contribution to civil society” (id., p. 40). Of a series of interviews conducted with senior civil servants and funding council officials during 2007-08, one in particular threw such ambiguity into sharp relief. Referring to definitions of terms such as “the science base” and “economic”, an English civil servant observed that “I think a lot of this is historic, and I think we’re quite schizophrenic in what we mean by things, and we often end up saying what we think the other person wants to hear, not necessarily in a deliberate way because we want to dissemble, but just because we have a sort of loose interpretation”.

Confusion surrounding the meaning of “economic” has in turn led to ambiguity about the meaning of “business” and about distinctions between “economy and society” and “business and the wider community”. As the civil servant noted, “sometimes we say ‘business’, but we use it as a shorthand. Clearly when you say ‘business and the wider community’ you don’t mean it as a shorthand”. The key term here is “sometimes”: without a clear indication of when these times are, it is not possible to determine when shorthand is being used and when reference is being made to a term’s more traditional, narrower meaning.

Even among those most conversant with knowledge exchange terminology, confusion was apparent. For example, whilst one Scottish Government respondent argued that “I think it’s taken for granted that the term ‘economic’ is now a shorthand for economic, social and environmental impact”, he also noted that it is “always important that we keep reminding everybody that it’s more than economic impact, that it is social and environmental impact as well”, thus undermining his first statement. Meanwhile, the fact that, in practice, “nobody uses all the terminology consistently” was reinforced by one funding council respondent, and another – also an academic – expressed concern about a research council requirement to consider only “economic impact” in the knowledge transfer section of grant proposals, suggesting that he did not share the view of “economic” as a shorthand.

There are two potential consequences of this ambiguity that are problematic for knowledge exchange. The first, and more benign, of the two is that, confronted with economic and business-related terminology, and in the belief that what is valued is income-generating activity, those academics not engaged in research which has wealth-creating potential will believe that knowledge exchange is not for them. There is therefore potential for external
engagement opportunities to be missed because certain academics have not even engaged themselves in the knowledge exchange process.

The second problem arising from this ambiguity is potentially more damaging to a broad-based knowledge exchange system. In using phrases that can be, and more usually are, defined more narrowly, but have been adopted as all-encompassing terms, there is always the potential to revert to a narrow definition. As argued below, this reversion, resulting either from a passive failure to promote the broader definition or from an active attempt by economically driven departments to foreground the narrower meaning, can stifle efforts by academics who are already attempting to engage in knowledge exchange with broader goals. The ambiguity of meaning allows policy makers to say that knowledge exchange is about a broad range of outcomes – social and environmental as well as economic – but equally creates a slipperiness that makes it difficult to determine when particular outcomes are being privileged.

**Academics’ motivations for knowledge exchange**

But what of the academics themselves? To what extent, if any, are they beguiled by the profit motive? Evidence gathered from six case studies in the three British research-intensive universities of Cardiff, Edinburgh and Leeds suggests that they are not. An overwhelming correspondence of motivations – between the sciences and humanities and between institutions – suggests an altogether different set of rationales for knowledge exchange among academics. From academic respondents’ discussion of their reasons for undertaking knowledge exchange, four main rationales emerged: having the opportunity to undertake interesting or exciting new work; making a difference to the collaborating partner or to society at large; increasing personal or institutional kudos; and making money. We turn to the last of these first, since the underlying rationale for its importance marks it out as of secondary, rather than primary, importance to academics.

Respondents from all six of the projects under investigation made mention of the financial aspects of knowledge exchange, although references by those engaged in scientific research were far more numerous. Only one-third of respondents interviewed in relation to the social research projects mentioned the commercial angle of knowledge exchange. Of these, none referred to making money as a personal motivation for engaging with non-academic parties; instead, they discussed financial rewards in the context of their university’s motivations, and those of the government.

Scientific researchers’ greater tendency to reference financial gain might be expected, since their work is more traditionally regarded as suitable for commercialisation. This indeed proves to be the case for the projects studied
here, but the context in which the references are made reveals some potentially surprising attitudes. For example, although respondents from one Cardiff University medical spin-out company mentioned financial gain as a motivating factor, they regarded it as of secondary importance. Although they would welcome a financial payback, ultimately “education was the driving force” for establishing the company. Indeed, one founder conceded that monetary reward was a “less clear” outcome. Instead, he had become involved for “the experience”.

In other cases financial success was seen neither as personal motivation nor as hoped-for secondary benefit, but rather as an imperative. One Edinburgh University computing research centre, for example, was described by academic staff as “not focused on” profit; rather, the centre engaged with industry “to balance the books”. This position was echoed at Leeds. Academics in one health-based research centre drew 50% of their income from knowledge exchange activity. Although the academics recognised the importance of making money, it was as a means of pursuing their other motivations, rather than as an end in its own right.

It is worthy of note that it is not only academics who regard financial gain as a secondary benefit. Collaborating partners can be equally relaxed about making gains in purely monetary terms. Companies engaging with the Edinburgh computing research centre range from small start-ups to multinationals. For the former, the commercial reality is that the venture has to be profitable but it emerged that, even where this has not occurred, learning about new technologies and generating marketing collateral were regarded as highly beneficial outcomes. For the latter, there was leeway for the relationship to be more explicitly about more than merely financial considerations: “Hard cash is okay, but ... it’s much more fun to come up with new ways of doing things.”

The data suggest that the draw for academics of interesting or exciting research and knowledge-sharing activities cannot be underestimated. Three-quarters of those surveyed directly or indirectly highlighted its importance to them. It became apparent that, whenever possible within the confines of financial considerations, these academics sought engagements that interested and stimulated them. One of the partners in Cardiff University’s medical spin-out, for instance, became involved with the project because he was attracted by the composition of the fledgling team; he would not have joined them had they not been doing something “interesting and inherently quite challenging”. For two respondents working in the social sciences at Edinburgh University, their decision to become involved in researching mental health policy also stemmed from it being “an area of interesting, vibrant activity”.

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Their colleagues in computing research are, whilst having to balance their books, most concerned to bring in projects that “enthuse, engage and give our staff interesting jobs to do”. Respondents repeatedly stressed that they were more motivated by projects that interested them, as were the staff for whom they had responsibility. Indeed, one researcher reported that being able to do “a lot of interesting things” was “one of the big things that everyone here says they enjoy”, and that the varied and interesting nature of the work was responsible for attracting and retaining the best software engineers. For these respondents, the interest value of their knowledge exchange activities was described not as an added bonus, but as a critical part of their – and others’ – rationale for working within the Centre.

The centrality of enthusiasm as a motivating force for engagement was also evident amongst the social research projects. One Welsh researcher went so far as to describe dissemination as “the exciting bit” of research, whilst in England the project team leader was not only “passionate” about making a difference through knowledge exchange herself, but had also formed the impression that “there are a lot of really passionate people around the University ... who want to get out there and be involved”. Both of these responses demonstrate that enthusiasm for knowledge exchange itself can be a driving force, but engagement with others also serves to reinforce that enthusiasm and further drive engagement. Just as Cardiff University’s medical spin-out emerged from one academic’s passion for engagement with other enthusiasts, so at Leeds University a series of events organised to connect the public with cutting-edge research on the human body had brought the organiser into contact with “wildly different departments” and their “amazing” research, an experience she described as an “extreme privilege”.

Respondents from all six study projects claimed that making a difference was part of their rationale for undertaking knowledge exchange. For some, this represented their primary motivation: as one Cardiff University respondent explained, “what drives me is making a difference”. For others, it represented one of several motivating factors. Those respondents who described making money as of secondary importance, or as an imperative for the continuance of their work, also described: “on an altruistic level ... trying to help the people out there”; “doing good by working with the companies”; and making the customer happy as important aspects of their work. Members of Edinburgh’s computing centre described working with small businesses as more rewarding because they were more likely than larger firms to value the outcomes.

It is notable that even those respondents engaged in commercial interactions with external parties defined their role in terms of “helping” or “doing good”. Although in a commercial environment this in practice will tend to mean helping to increase profit, it is having provided an effective product or piece of knowledge to do that which motivated them: “... if you can [make a
difference to a company], that really gives you the buzz. You say ‘that’s why
I’m doing this. Now I remember why the hell we’re here!’.” Even for the Cardiff
University medical company which, as a spin-out, appears to be a classic
vehicle for commercial knowledge transfer, improving ultrasound training in
the NHS and globally was the primary goal. The principal reasons for creating
a spin-out from the underlying research were to allow the inventor to retain
control of it and to ensure that sufficient money could be found for
development.

Although it was intended that there would be benefits for external parties
from all of the studied projects, academics were not only motivated by
altruism. Two-thirds of respondents claimed that increasing their or their
institution’s kudos was a rationale for conducting knowledge exchange. They
identified a reputational benefit to their institution, internationally and in
higher education rankings, from knowledge exchange activity, as well as
improved standing of their own faculty or research centre either within their
institution or outside it.

Most importantly, however, respondents identified enhancing their own
or their university’s reputation as not just an institutional but a personal
motivator. Respondents from all three scientific projects and from the social
knowledge exchange project at the University of Leeds identified positive
feedback on their work as a sign that it was a success. As one Edinburgh-based
respondent reported, “what really makes us all glow is ... to go into typically a
small company that has a real problem that’s affecting their business, to solve
it for them, to give them a piece of software which they use and come back
and say ‘this is really good, it’s improved our business ... we use this all the
time’. That’s the best project.”

Helping to give their university world standing in their discipline,
publishing in journals read by every practitioner in a particular field, or
receiving feedback from satisfied customers all contribute to the “glow” that
keeps the respondent academics motivated. One partner in the Cardiff
medical spin-out summed up precisely how important kudos is when asked
what one measure of success would, if achieved, make him happiest.
Describing the ultimate indicator of academic esteem in two words, he replied
“Personal Chair”.

In spite of rhetoric to the contrary, government policy and the measures
set in place to measure knowledge activity remain biased, whether
deliberately or otherwise, towards those activities that generate income. Given
the factors listed by academic respondents as motivating them to engage in
knowledge exchange, it is therefore apparent that a mismatch exists between
the policy drivers and academic motivations for knowledge exchange.
Necessary factors for knowledge exchange

Further investigation of academics’ engagement in knowledge exchange activity sought to understand what they would need in order to conduct it more effectively. Three things emerged as desirable, if largely lacking. These were more resources (most commonly described in monetary terms), better communication and more time. Since they provide further insight into what knowledge exchange drivers should focus on to be most effective, each of these is treated in turn below.

Lack of resources was cited by half of the academic respondents as a limiting factor on their ability to conduct knowledge exchange. Its effect was felt on, but certainly not limited to, several of the case study activities. In one instance a project was prevented from reaching satisfactory completion because it ran out of money whilst, in another, a series of public awareness events was curtailed – in spite of overwhelmingly positive audience feedback – by the failure to secure follow-on funding.

Speaking in more general terms, one Cardiff-based academic argued that, in the United Kingdom, “nobody’s got the resources to do these two things [research and knowledge exchange] properly. So you end up with a sort of hybrid that’s nothing at all”. He compared this situation unfavourably with the Germans’ use of Fraunhofer Institutes to facilitate a distinction between university-based pure research and practically-oriented research and development. This, he said, both allows academics to work on interesting and innovative ideas at one remove from industrial need and ensures that separate resources are allocated for research and knowledge exchange.

The paucity of resources available for knowledge exchange has not only impacted on existing projects but has also affected the future direction of research. One Scottish respondent demonstrated the power of resource constraints to affect decision-making when he noted that the interest value of a potential project, although important, was always secondary to the need to “pay the bills”. Perhaps most worryingly of all, a Welsh counterpart described the relatively low financial status of knowledge exchange as a contributory factor to his feeling that he should “leave [his] ambitions behind”.

A second factor that emerged as important was communication, most particularly with those responsible for university knowledge exchange policy and its implementation. This was also cited by half of the academic respondents, all of whom were located at the Universities of Cardiff and Leeds. Although described in more positive terms than was the availability of resources, opinion remained split on the effectiveness of communication channels. The importance of communication as a means of establishing a sense of shared ownership of knowledge exchange activities was best described by one academic at the University of Leeds: “There’s real open
communication going on, so it's very positive. I feel like I know what's going on in the University and I feel quite a sense of ownership by the University of what I'm doing, and [by] me of what the University is doing as well."

Shared ownership in turn contributes to the development of trust between academics and university managers and administrators. Communication is thus important, not only because it is directly through dialogue that consensus on the future direction of knowledge exchange can be reached, but also because, indirectly, it helps to establish the relationships through which that consensus can be turned into action.

Not all respondents, however, were as positive about existing levels of communication on knowledge exchange. Whilst a particularly strong communication deficit was apparent in respondents' lack of knowledge of government policy, evidence also emerged of internal failings. This ranged from a general belief that a morale-sapping spread of misinformation was filling the void left by poor communication of a university’s strategic direction, to disillusionment and disengagement arising from a specific instance in which technological disclosures made to one institution had not been followed up.

The final, and most frequently mentioned, barrier to greater engagement in knowledge exchange activities was lack of time. Finding time, on a day-to-day basis, to run their spin-out company was reported by respondents from Cardiff University to be a “real challenge”. To meet the commitments of this new venture alongside those of their full-time jobs meant that they frequently held company meetings during the evenings. Insufficient available time proved to be a limiting factor not only for those involved in running spin-out companies. A desire, thwarted only by lack of time, to undertake further engagement and knowledge exchange activities was also highlighted by those engaged in professional partnerships and public engagement activities. The demands of teaching and research had led at least two academics to deem undertaking knowledge exchange one commitment too many. That academics can be compelled to choose where their priorities lie or, like the academics running the Cardiff spin-out, must devote their free time to their knowledge exchange activities, demonstrates the singular importance of making time available if knowledge exchange is to take place.

The allocation of time for knowledge exchange is, for those activities reliant on long-term partnerships, also critical to the development of relationships. Thus one Leeds-based researcher highlighted the time needed to develop research and dissemination networks, while her colleague reported that activities currently being undertaken within those networks could not have been contemplated at their inception. Inevitably the long-term nature of these relationships means that obvious outputs will not be identifiable from
the outset. In a climate where outputs are increasingly being monitored so that universities and funders can demonstrate value for money, this must clearly be borne in mind.

Making space for knowledge exchange

The evidence presented here suggests that government policy across the United Kingdom does not yet actively and equally support a full range of knowledge exchange activities, the tendency being to privilege economic ends. It also shows that academics across a range of disciplines in research-intensive universities are remarkably consistent in what motivates them to undertake potentially high-impact research. Respondents did not value income generation first and foremost and, to the extent that it was valued at all, it was as a facilitator of further research and not as an end in its own right. Thus it would appear that the existing policy focus is poorly aligned with academic motivations.

At first sight, it might seem that the gulf between academic and government valuation of knowledge and its potential impacts is not problematic. From the academic respondents' responses, it is apparent that they are able to pursue a wide range of knowledge exchange activities, not all of which generate economic returns, in spite of a bias in the measurement and funding mechanisms towards economic knowledge exchange. If academics can engage in non-economic knowledge exchange in spite of a bias against it, then is this bias really a problem?

To answer this, an understanding of what we might term the “spaces of academic activity” is necessary. Figure 1 shows the four principal activities of an academic – research, teaching, knowledge exchange and administration. This is, of course, an idealised diagramme in which research, teaching and knowledge exchange receive equal weight and administrative tasks are pushed back into the interstices. Although it is often claimed that seeing knowledge exchange as a distinct, third activity can be damaging because it fails to allow for overlap between each activity, it can be helpful to recognise it as such.

Here, we see that the three spheres of research, teaching and knowledge exchange have areas of overlap, but also exist separately from one another. Together, all four spaces of academic activity sit within a single bounded space; this can be understood as the total available resources, including time, money and institutional support, for all activities. Given that these resources are limited, an increase in the amount of a resource (for instance, time) allocated to one activity results in a reduction in the amount of that resource available elsewhere, and hence a squeeze on the other activities.
It is important to recognise knowledge exchange as a distinct activity because, in doing so, it can be understood as something that doesn’t just “happen”, but must be “done” by academics. Although this seems like an obvious point, in fact it is all too easily forgotten. In order to engage in knowledge exchange, academics need resources, often in addition to those needed for teaching and research. In other words, space needs to be created for knowledge exchange to happen. If it is not, then the demands of research, teaching and administration will tend to squeeze knowledge exchange activity. In emphasising a lack of time, financial resources and communication as a barrier to their knowledge exchange activities, the comments of the academic respondents confirm this view. They are well characterised by the observation that “nobody’s got the resources to do these two things [research and knowledge exchange] properly. So you end up with a sort of hybrid that’s nothing at all”.

The UK, Welsh Assembly and Scottish governments all make claims in their policy documents for the broad-based nature of knowledge exchange. If knowledge sharing activities of any kind – whether for financial gain or not – are to take place in universities, it is therefore agreed that they will occur under the heading, and thus within the space, of “knowledge exchange”. However, it has been shown that, in practice, government policies tend to favour activities with income-generating potential. This manifests itself in the
resources (both financial and, in structures such as university knowledge transfer offices, administrative) made available for income-generating activities and in the kudos awarded to those engaged in them. Selective provision of these resources serves to enlarge the space available for economic knowledge exchange relative to that available for non-economic exchange activities.

Concluding remarks

The implication is clear. A narrow definition of the purpose of knowledge exchange can have a real impact on academics’ ability to engage outside the confines of that definition. At best, knowledge exchange activity will not be optimised, especially in those disciplines which fit least well with an economic model of knowledge exchange, because the space available for it – the financial resources and other rewards, the time, the good communication which creates a supportive environment – is insufficient. Indeed, given the stated motivations of the academics interviewed here, it would seem that a narrow focus on income generation is unlikely to provide sufficient motivation even for those academics for whom it is a serious consideration. The possibility of knowledge exchange taking place will not be entirely precluded and, because academics will want to engage, some knowledge exchange will undoubtedly take place. However, its quality and quantity will not be as great as if more space was made available.

Individual academics’ commitment to knowledge exchange and the flexibility which they exhibit in striving to engage in it are both notable, but not all academics can, or will, go to these lengths. Benyon and David’s (2008) finding that the RAE has left academics “so tied up in pursuing ratings ... that they have been unable to commit time and energy for other important elements of their work” (Fearn, 2008) is of particular note. In this case, the research space has been expanded at the expense of other activities: the money and kudos associated with a good RAE performance have resulted in academics spending time on research outputs that is consequently not available for other activities. Although academics from only a small sample of research-intensive universities were questioned, their views showed a high level of correspondence. For impact to become as important a part of their activity as generating high-quality outputs, they must see it as interesting, of potential benefit to others and likely to enhance their own or their institution’s kudos. The evidence shows that over-emphasis of the financial aspects of knowledge exchange is not an effective way to engage academic attention.

Academics also detailed the factors that they considered necessary to support their knowledge exchange activity. The recognition that the REF will
give to research impact is, in its potential to increase the kudos and resources awarded for such activity, to be welcomed. In its turn, this increase could be expected to make it easier for academics to devote greater time to knowledge exchange. But for knowledge exchange to be maximised for societal gain, two further conditions will be necessary. First, kudos must be more widely available to all academics, as is the case in the assessment of research outputs, rather than simply to one academic in ten, as is proposed for the assessment of impact. Second, it must translate into academics being given, within their own institutions, the space that will enable knowledge exchange to occur. As Goddard and Kempton (2011) have observed, “certain types of intervention may be preferred simply because it is relatively easy to count the outputs such as patents registered or new business spun out as a result of university research as compared with interventions that support capacity to build long-term outcomes and which are more difficult to measure”. A narrowly instrumentalist agenda that values immediate outputs, and associated financial gain, over future potential must not be allowed to stifle longer-term research and relationship building that might ultimately lead to significant impact.

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Institutional strategies in response to higher skills policy in England

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Higher education institutions take strategic decisions regarding their engagement with government policy, with choice of strategy structured by the character of the national system and notions of what is appropriate in given contexts for the institution. In this study a series of factors influencing institutional strategy in response to the higher skills policy of the New Labour government in England during the period 2006-10 are briefly examined. How the policy was interpreted by institutions is discussed, in the context of the various forces that impact on strategic decision making at the institutional level, in addition to the influence of sectoral, regional and employer links. The significance of cultural change within institutions is highlighted, and the paper concludes with a suggestion as to why strategic engagement with this policy particularly suited certain institutions.
Stratégies institutionnelles en réponse à la politique du renforcement des niveaux de compétences en Angleterre

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Les établissements d’enseignement supérieur adoptent des décisions stratégiques quant à leur participation à la politique gouvernementale, avec le choix d’une stratégie articulée autour de la spécificité du système national et des notions de ce qui est approprié dans des contextes donnés pour l’institution. Cette étude présente brièvement une série de facteurs influant sur la stratégie des établissements en réponse à la politique de renforcement des niveaux de compétences du gouvernement du Parti travailliste anglais au cours de la période 2006-10. Il est examiné comment la politique a été interprétée par les établissements, dans le cadre de divers facteurs qui influent sur la prise de décision stratégique au niveau institutionnel, et l’influence des liens avec les secteurs, régions et l’employeur. L’importance du changement culturel au sein des institutions est mise en lumière. L’article se termine par une suggestion indiquant pourquoi l’engagement stratégique avec cette politique a été particulièrement adapté pour certains établissements.
Introduction

In national systems where publicly funded higher education institutions exercise a degree of autonomy from the state, institutional strategy can be influenced by factors relating to institutional mission, financial stability and demographic change, and structured both by the historical context of the national system and the institution itself, as well as the dynamics of the societal sector (Scott and Meyer, 1991) in which the institution operates. In some systems, for example in the United Kingdom, a complex relationship between higher education, the state and society, reliance on government funding, and the persistence of ideologies of “institutional autonomy” and “public service” structures institutional responses to government-sponsored initiatives (Kogan and Hanney, 2000; Stevens, 2004; Tapper and Salter, 1995). When faced with a new initiative or government policy, institutions may respond with various strategies, including enthusiastic or partial adoption, various modes of resistance or inaction. The extent to which each institution is able to contemplate different responses can depend on reputational position within the sector and the feasibility of maintaining financial stability if a policy is not adhered to, but may also reflect the attitude of institutional leadership towards risk, and the existence of viable alternative strategies.

This article explores a series of factors that influenced the strategic responses of higher education institutions to the higher skills initiative in England between 2006-10, a policy that emerged in response to the Leitch Review of Skills (HM Treasury, 2006), was outlined in the policy document “Higher Education at Work” (DIUS, 2008a) and involved the development of a series of funded workforce development projects at higher education institutions.

“Appropriate” institutional strategies

In their discussion of sociological institutionalism, DiMaggio and Powell (1991) stress the significance of taken-for-granted cognitive constructs in structuring decision making within professional environments. From this perspective, an interpretative discussion of strategy in higher education must seek to understand the socio-cultural influences which structure how decision makers conceive of possible futures for institutions. In an environment rich in tradition and held in high esteem by powerful groups within society, it is important not to underestimate the strength of notions of “appropriateness”
In higher education, the notion of appropriateness may vary with the differing contexts in which institutions are situated. It is likely that notions of appropriateness may also be actively contested within some institutions, as groups struggle for the dominance of their preferred conception of the appropriate means and ends of higher education. There are ongoing debates in national and international fora regarding the nature and purpose of higher education (Delanty, 2001) and this has been further accentuated in the United Kingdom in the current period of radical policy change.

Relations with government also impact on notions of appropriateness. Although institutional autonomy is characteristic of the UK system (Estermann et al., 2011; Tapper and Salter, 1995), the evolution of mass UK higher education has involved greater governmental activity and intervention (Kogan and Hanney, 2000; Stevens, 2004) including policy initiatives that encourage “private aspects of the public sector” (Kerr, 1990) acceptable to government, and new forms of control and dependence. These initiatives have been applied across a sector that contains institutions with varied origins such as public and private bodies and varied levels of resistance to external control (Kerr, 1990; Stevens, 2004), leading to a range of implementation outcomes at the institutional level. Furthermore, the degree of diversity and differentiation in the system, and the extent to which governments and institutions support further differentiation, impact on decision making at the institutional level (Vught, 2008). In such circumstances, interpretations of the policy context within institutions and in the wider higher education community have a powerful impact on notions of what is strategically appropriate. The interplay between conceptions of appropriateness at the institutional level, and the forces of academia, government, the market and societal objectives (Becher and Kogan, 1992; Clark, 1983; Kogan and Marton, 2006, p. 73) therefore provide a lens through which institutional strategy can be understood.

DiMaggio and Powell (1983) also argue that, in conditions of ambiguity and lack of clarity over the relationship between means and ends, organisations will tend to model themselves on those organisations within the field or sector that are considered successful, resulting in isomorphic trends. This standardisation of institutional form is likely to increase standardisation of aspiration within the sector or field, with institutions referencing the activity of others considered comparators or competitors. Decisions relating to government policy may also be guided by peer activity and the perception within an institution that there is an imperative to adapt to the changing environment in order to maintain institutional position (Vught, 2008), leading potentially to isomorphism at a peer group level. These isomorphic pressures interact with innovations at the institutional level (Stensaker and Norgard, 2001) as institutions attempt to reconcile external sectoral pressures with imperatives to make internal change coherent. In higher education sectors
there are often powerful concepts of what a “university” is or should be, with commitments to notions of disinterested truth seeking and individual academic autonomy, values and stewardship (Watson, 2007; Stevens, 2004), in addition to “entrepreneurial” models that are aligned with a discourse that views the university as increasingly embedded in a web of industrial knowledge co-production (Bleiklie and Kogan, 2007; Gibbons et al., 1994). These concepts also share the higher education landscape with the traditions of professional development for “higher vocations” (Delany, 2001) and a broader pragmatic “vocationalism”, which for most of the 20th century in England was primarily associated with the technical institutes, technological universities and the polytechnics (Burgess and Pratt, 1970; Pratt, 1997; Pratt and Burgess, 1974).

Since the 1980s a politically driven vocationalism, often described as a “new vocationalism” (Symes and McIntyre, 2000; Grubb and Lazerson, 2004), has gained strength in the United Kingdom. This has influenced understandings of the vocational mission of the former polytechnics, many of which have also been subject to the influence of “academic drift” (Pratt, 1997; Pratt and Burgess, 1974) which can be perceived as a response both to government activity and part of a tendency towards institutional isomorphism within the sector. Governments have often lent the new vocationalism a strongly instrumentalist invigoration, which can obscure some of the complexities of the notions of vocation, professionalism and the relationship between disciplinary knowledge and more “practical” knowledge arising outside established structures (Bernstein, 1999). These vocationalist strands co-exist with aspects of “comprehensiveness” (Larsen and Langfeldt, 2005; Kingston University, 2008) which, in the case of the former polytechnics, has echoes of the “service tradition” of higher education (Pratt, 1997). The blending of a vocationalist commitment to preparedness for work and a comprehensive commitment to increased levels of participation in higher education for the good of the economy and society permeated New Labour government thinking from 1997 onwards (Stedward, 2003), reflecting the alignment of the forces of government, society and the market in ways that were acceptable to notions of appropriateness in those institutions with vocational and service traditions.

The higher skills agenda

Elements of the new vocationalism can be seen in the recommendations for higher education set out in response to the Leitch Review, commissioned by the UK government in order to propose change to skills policy (DIUS, 2007; HM Treasury, 2006) and “Higher Education at Work” (DIUS, 2008a), documents which assert that increases in skills levels are the key priority in ensuring future national competitiveness. The Leitch report states that “skills is the most important lever within our control to create wealth” and that “institutional
change and simplification are necessary” (HM Treasury, 2006, p. 7) to bring this about. The government’s implementation plan pledged a “demand-led approach” that expects “the colleges, universities and training providers that supply education and training to be increasingly responsive to what learners and employers actually want” (DIUS, 2007, p. 10). It also set a number of qualification-related targets, including ensuring that “more than 40 per cent of all adults have a higher education qualification” by 2020 (DIUS, 2007, p. 12). However, the logic of this approach has been substantially undermined by research that has questioned the priority status given to supply-side reform in driving economic productivity (Keep, 2008), the reductive equating of “skills” with “qualifications” that pervades policy rhetoric (Davis, 2007) and the assumed dividend accruing to individual investment in higher education in the context of globalisation (Brown, 2003; Brown et al., 2010). The United Kingdom Commission for Employment and Skills, an organisation which arose as a consequence of a recommendation of the Leitch Review in an attempt to “depoliticise” the skills agenda (HM Treasury, 2006), has suggested that productivity increases are not possible without changes in employer practices simultaneous to provider reform (UKCES, 2009), an argument that is subtly different from the unilateral focus on supply-side changes to bring about greater employer involvement in the specification of educational provision set out in the Leitch Review. In terms of higher education, the case for a “culture shift” (DIUS, 2008a, p. 4) so that institutions deliver “the higher level skills that a particular business needs in a particular sector in a particular place” (id., p. 7) is absent from the policy rhetoric of the new UK coalition government, in an environment subject to substantial funding uncertainties and political and economic change.

Craig and Gunn (2010) discuss the strategies that higher education institutions could potentially adopt in the face of the fragmentation of assumptions underlying the knowledge economy, upon which much recent industrial policy in the United Kingdom has been constructed. The three approaches they identify include decoupling institutional strategy from overtly economic imperatives, an internationalisation strategy that could mirror the “offshoring” which they perceive is occurring within the global economy and, finally, the potential for even greater emphasis on alignment with perceived industrial skills needs so as to ensure that the national economy is as well placed as possible to compete on the global stage. Craig and Gunn (2010) identify the higher skills strategy of the United Kingdom government over the recent period as a vehicle through which the final option could be enacted. Indeed, the existence of considerable “capacity building” funding (over GBP 100 million) made available by the Higher Education Funding Council for England (HEFCE) over the period 2006-10 to enable greater numbers of those in work to gain a higher education qualification appears to
have been designed as an opportunity for institutions to re-orientate their educational provision and structural capital (Garnett et al., 2008), including their internal processes and institutional infrastructure, towards the emerging agenda. It is also an attempt to draw higher education institutions into supporting the Leitch objective of ensuring that 40% of the adult population have a higher education qualification by 2020 (HM Treasury, 2006).

In the remainder of this article we briefly examine five key strategic questions that have influenced institutional responses to this policy. The discussion is based on an analysis of relevant policy documentation, responses to the Higher Education Business Community Interaction Survey (HEBCI-S), the oral and written proceedings of the Innovation Universities Science and Skills (IUSS) Select Committee inquiry into the implementation of the Leitch recommendations, and a series of semi-structured interviews carried out during 2009-10 with a small sample of managers of workforce development (WD) projects funded under this initiative.

Is this a policy for our institution?

Policy initiatives that contain an implicit expectation that all higher education institutions will participate, for example, the widening participation or access policies in England, and those where engagement may be more appropriate for institutions of a certain type, are likely to engender differing institutional responses (Brennan and Little, 2006). In relation to higher skills policy, it appears the latter was the case. Institutions were encouraged to submit proposals for WD project funds (HEFCE, 2006) and, of proposals that proceeded, the majority were from post-92 institutions, including former polytechnics and colleges of further and higher education. Certain institutions may feel it is part of their duty to respond positively to a government policy, in a spirit of public service. This attitude is epitomised by the “public duty” commitments reported from some vice-chancellors (Frean, 2008), reflecting an enduring aspect of the “service tradition” of the polytechnics (Pratt, 1997). It is perhaps also demonstrated in the comments made by the then Chief Executive of HEFCE, Professor Eastwood, to the “After Leitch: Implementing Skills and Training Policies” Select Committee inquiry, which include the suggestion that institutions “will deliver the priority of the day” (Eastwood, 2008). In contrast, at a similar time, the Vice-Chancellor of Cambridge, Alison Richard, was openly critical of government attempts to use higher education as a vehicle for the government’s policy objectives (Shephard, 2008).

Strategically, it is clear that research-intensive institutions have greater opportunities to choose which elements of government policy to satisfy. Many of these institutions are engaged in research partnerships with industry,
which can be perceived as meeting the objectives of the Innovation Nation White Paper (DIUS, 2008b), and may prefer initially to extend this activity rather than engage in upskilling those currently in work who have not had access to higher education previously. In 2005-06, the majority of the United Kingdom’s top 20 institutions in terms of income generation from continuing professional development (CPD) and continuing education were research intensive pre-92 universities (CBI/UUK/HEFCE, 2008), often delivering CPD through durable linkages with professional bodies or large employers. These institutions can therefore claim that they are already engaged in development of the national workforce, albeit usually at a postgraduate professional level. On the other hand, institutions with weaker research infrastructure may have limited scope to extend industrial research partnerships into areas of CPD. They may feel under greater pressure from the government to further develop provision for those in work at undergraduate level in accordance with their “culture, strengths and mission” (Wedgewood, 2008) and to work particularly with industries with lower qualification profiles. Decision makers in institutions are also likely to be sensitive to how a new initiative will be perceived internally, with regard to the cultural norms that pervade the institution, levels of confidence or “belief” in institutional leaders and the institution itself (Tierney, 1988) and the mode and pace of internal change or cultural re-orientation.

Is this the most appropriate strategy for our financial and market position?

Experimenting with new forms of employer demand-led higher education carries reputational and financial risk. This point is made by both Universities UK, who stated that employers must “share the cost and risk where student demand is untested” (Universities UK, 2008a) and Million+, the think-tank primarily associated with some of the former polytechnics, who noted that “the cost to institutions of work-based provision are often underestimated” (Million+, 2008). This was also acknowledged by the Department for Innovation, Universities and Skills with regard to higher skills activity, in stressing the imposition of “significant upfront risks and costs on an institution” in the creation of a new programme, particularly where there is a “risk of being unable to recoup the costs from the fees employers are prepared to pay” (DIUS, 2008a, p. 26). Engaging employers in the design, development and delivery of educational provision for their staff and then accrediting this as higher education may also be anathema to some academic staff, indicating that investment in institutional capacity may be necessary to ensure the requisite skills and knowledge are readily available.

Higher education for those in work is heralded as a new source of recruitment, which would serve to mitigate the impact of demographic
changes on higher education institutions and meet the need to re-skill or upskill the existing workforce (CBI/UUK/HEFCE, 2008; HM Treasury, 2006; Sastry and Bekhradnia, 2007; Universities UK, 2008b). This non-traditional form of higher education “is seen by some institutions as vital to ensuring their financial viability and sustainable growth” (CBI/UUK/HEFCE, 2008). However, implementing processes to develop such provision at an institutional level entails up-front capacity building and programme design costs, in addition to tapping an uncertain level of demand. Those institutions unused to active recruitment within non-traditional markets may see this type of activity as an unnecessary risk, which they have neither the appetite nor the experience to undertake. Furthermore, such institutions may prefer to concentrate on increasing international recruitment, a potentially more lucrative and prestigious strategy, although it also carries significant risks (Bone, 2008; Vickers and Bekhradnia, 2007).

Non-engagement in higher skills policy is a plausible course of action for many institutions, if the risks are deemed too great or the cost of foregoing alternative strategies considered too high. Concern regarding rankings, league tables and measures of performance may also result in non-engagement, particularly for those institutions in a strong position relative to competitors. However, it is also plausible that institutions are prepared to contemplate engaging in multiple initiatives and strategies to reduce longer-term risk, particularly in an increasingly uncertain environment where strategies are not necessarily mutually exclusive. A “multiversity” (Kerr, 2001) may see such an approach as entirely appropriate, husbanding a variety of operations offering distinctive services to different markets while maintaining core traditional research and teaching activities. Those institutions less concerned about their association with traditional or elite higher education may view engagement positively, particularly given the offer of up-front capacity building funds to cover much of the initial outlay (HEFCE, 2006).

There were 34 HEFCE-funded workforce development (WD) projects in March 2009 (HEFCE, 2009). Of these, 7 were based at pre-92 institutions, with 23 based in post-92 universities and the remaining 3 either consortia collaborations or based at a university college. The 7 pre-92 institutions included 3 former Colleges of Advanced Technology (CATs) located in industrial areas of the North and Midlands, with origins as technical colleges serving local populations, and therefore institutions that historically have a strong vocational aspect to their mission. Significant HEFCE-funded investment in supporting new types of provision for those in work may be attractive to these institutions as a means of maintaining steady growth and as an alternative to scenarios of increasingly intensive competition for local (or national) “traditional” students as a consequence of demographic change. A strategic decision to broaden revenue
streams in the face of the perceived risks of over-reliance on one source of funding was demonstrated in an interview with a WD project manager.

It’s about not being over-reliant on one source … and I think we do have a disproportionately high international student population … but that can make the institution vulnerable if something happens overseas that’s outside of our control … there are clearly opportunities there but it’s not a good idea to be overly dependent on that. (Interviewee 1)

At an institution with fewer international students, a WD project manager spoke of the need for the institution to have a broader range of revenue options, with “most universities working on international recruitment and increasing full-time undergraduates … we are so pleased we got this from the HEFCE workforce development fund”. However, the strategic importance of the initiative should not be over-emphasised, as the interviewee went on to say “I don’t think it’s going to be one of the principal areas for the university.” (Interviewee 3)

Opportunities for business development through employer engagement are clearly recognised, as demonstrated by explicit objectives to build “longer term relationships … that might offer opportunities for research, knowledge transfer, IP exploitation, use of facilities and resources in ways that are mutually beneficial”, although “there are not always a lot of incentives for employers to invest in HE” (Interviewee 2). Entrepreneurialism may also accentuate competition with other institutions locally, resulting in tensions if institutions are simultaneously trying to collaborate as part of a wider skills or economic development initiative and compete for traditional undergraduates. An example of such a development was outlined by Interviewee 2, who spoke of organising an event to support awareness of higher education at an employer-facing government agency. This would involve “bringing other HEIs on board” who are “competitors as well so we have to manage that”.

As institutions increasingly place a greater emphasis on (re)engagement with employers and enter markets previously dominated by training providers, the field of competitors could broaden, with a concomitant necessity to analyse potential markets in greater detail, in addition to more sophisticated relationship management. In some cases there may be moves towards partnering with training providers with an acknowledgement that higher education institutions can benefit from a co-operative arrangement. In the words of one institutional project manager, “instead of competing with a training provider we’ll work with you and accredit what you’re delivering” (Interviewee 3), in this case offering institutional quality assurance as added value to the provision offered.
Do we have relevant sectoral, local and regional links?

The government intended that institutions deliver “the higher level skills that a particular business needs in a particular sector in a particular place” (DIUS, 2008a, p. 7). There is strong evidence that institutional strategy regarding new and potentially risky provision is usually focused on key sectors which institutions believe they have the structural capacity to provide for, based on their existing departmental or research capabilities. Institutions claim that “key strategic themes” at an institutional level are “aligned to key sectors” and workforce development activity “naturally reflects the strengths of the institution” (Interviewee 2). This process of alignment may be partly a result of rebalancing the portfolio of institutional activity towards less risky sectors, within the constraints of institutional infrastructure.

The Higher Education Business Community Interaction (HEBCI) survey 2006/07 was undertaken at a similar time to the circulation of the letter which announced the availability of funding for workforce development projects (HEFCE, 2006). Data from the survey would seem to indicate that the notion of sectoral engagement has salience, although engagement with a large proportion of the sector skills councils (the bodies charged with representing employers across industrial sectors) appears to be weak. For example, 105 institutions were involved with the construction sector and yet only 52 had engaged with Construction Skills, the relevant sector skills council, and 114 institutions were involved in financial services sectoral work and yet only 39 had engaged with the Financial Services Skills Council (HEFCE, 2008). Over 100 institutions engage with some of the largest industrial sectors of the economy (i.e. education, health, public administration, manufacturing and financial services) (id.) and these are primarily sectors with established patterns of recruiting graduates and working in partnership with higher education.

Question 3 of the HEBCI survey, which asks how institutions determine which sectors they work with, indicates that 93 institutions took their cue from the priorities outlined in government-influenced regional strategies, but this is lower than those responses which suggest that decisions are taken with reference to “best fit” with strategy (137), direct response to demand from companies (122), or the identification of business clusters by the institution (96). In response to question 6, which asks institutions which geographical unit has most relevance to the institutional mission, only 51 institutions consider the region, for example the South West or Yorkshire and Humber, to be a priority, with a higher proportion (79/160) preferring an area defined by the institution (HEFCE, 2008).

The erosion of linkages between local and regional bodies which arose as a result of incorporation and the removal of the polytechnics and colleges from local control in 1988 with the Education Reform Act, followed by the
ending of the binary line between universities and polytechnics in 1992, has enabled a situation to develop where institutional strategy need not be bound by any local or regional concerns (Pratt, 1997; Stevens, 2004). As a result, many institutions may have taken strategic decisions regarding infrastructure, investment and recruitment over the last 15 years that may not necessarily have accorded with the economic interests of their region or local area. On the other hand, the liberation from local control could have allowed some institutions to be at the forefront of the diversification of the industrial base of their local areas, both proactively producing knowledge and reacting to the specific needs of individual employers in an organic fashion. However, long-term dependence on government funding may have reduced the likelihood of this happening. Low investment in expensive institutional infrastructure, for example in the sciences or engineering, which may have come about as a result of strategic institutional responses to the policy context and financial realities, is difficult to reverse quickly and thus may reduce the capacity of institutions to respond effectively to certain local employers.

**How can we make best use of our existing links with employers?**

Those institutions with strong links with employers, whether through current workforce development, student placements, research or knowledge transfer, can choose to invest time and resources into sustaining, deepening and broadening those links. All institutions will have links with employers, but in many cases these relationships may be one-dimensional, i.e. focused only on one aspect of university activity. However, developing and managing relationships with employers requires resources and consideration of how this “third space” function interrelates with what are often termed the core academic activities of teaching and research (Bolden and Petrov, 2008). At least 11 institutions funded through HEFCE workforce development projects have moved towards “front desk” operations that seek to provide a relationship management service and a first point of contact for employers (HEFCE, 2009) across all spheres of university activity. However, an effective front desk relies on supportive institutional processes or “structural capital” (Garnett et al., 2008, Voorhees and Harvey, 2005); otherwise commitments to employers may not be realised.

One WD project manager emphasised the necessity for “dialogue with research and knowledge transfer within the institution, ... how the website works in terms of the front face and how employers navigate through the website, but also how we work as people, how we communicate the totality of the university’s offer” (Interviewee 1). This notion of corporate communication, promoting the “offer” to prospective clients through a corporate identity, may run counter to the cultural dynamic prevalent in particular institutions and thus prove problematic to implement (Tierney, 1988). The project manager
identified “variation in practice across the university” and considered “getting more consistency across the piece and developing what characterises a (University Name) experience” (Interviewee 1) a strategic institutional objective. Such an approach, while streamlining the processes necessary for managing employer and student engagement, might result in a loss of flexibility and initiative at the individual level.

**How can we maximise the entrepreneurial culture? Is this desirable?**

A contrasting, and perhaps more challenging, approach that institutions might prioritise is that of rewarding or recruiting academic staff on the basis of their entrepreneurial qualities. The strategy here would be to more explicitly encourage academic staff to devote greater amounts of time to developing more profitable links with employers. Relying on entrepreneurialism may suit those academic staff who are already entrepreneurial, in that they may be able to retain control of their existing relationship with the employer in question, although it may also result in increased resistance if the approach includes any stipulations as to how this work should be carried out. However, the notion of the “entrepreneurial university” also encounters more general resistance. As suggested by Timlin et al. (2010), Garnett et al. (2008) and the relevant HEFCE, HEA and government documents (HEA, 2008; HEFCE, 2006; DIUS 2008a), the realisation of the objectives of higher skills policy are just as much about cultural change as the availability of funding or the delivery of appropriate activity. “Higher Education at Work” draws attention to the potential of a culture clash between employers and institutions on the basis that “the cultures and norms in the different sectors are different” (DIUS, 2008a, p. 27), a recognition of the salience of perspectives that view greater industrial involvement as a threat to academic freedom and the pursuit of knowledge for its own sake (Delanty, 2001; Giroux, 2003).

There is some evidence of internal culture change proving problematic, in the context of the persistence of what is termed a “traditional ... content or knowledge-based view of HE” (Interviewee 1), and resistance to the premise set out by Gibbons et al. (1994) that the relationship between knowledge, research and education has changed irrevocably. Amongst higher skills enthusiasts, traditional higher education is sometimes criticised for its top-down “transfer of knowledge base from expert to student” (Interviewee 1), without acknowledgement of the role of the student in contributing to disciplinary knowledge (Delanty, 2001). This can be presented in opposition to what is often portrayed as the “virtuous” and more democratic approach of “acknowledging that there is expertise in the workplace” (Interviewee 1). The acceptance that there is tension around culture change and the nature of higher education is evident in the suggestion by a workforce development
manager that the funded projects are partly about “exploring those different views of what HE is ... and how it can transform individuals and workforces” (Interviewee 1). Strategies aiming to entrepreneurialise the culture within institutions may also fall victim to persistent disconnect between centrally driven initiatives and the rest of the staff (McNay, 2005), or even accentuate fragmenting relations within the institutional community.

Without considerable institutional commitment and a resolution amongst senior staff to recognise employer engagement activity as a valued part of the academic role there are likely to be constraints on the evolution of workforce development activity. The 2006 version of the Higher Education Academy's Professional Standards Framework (HEA, 2006) made no explicit mention of a need for employer engagement skills or the professionalism needed to negotiate learning and programme outcomes with third parties. A workforce development project manager involved in trying to engage academic staff in greater levels of workforce development activity observed that “there is a real need for staff development in this area” suggesting the possibility of “embedding it in our Postgraduate Certificate” and delivering “a more detailed in-depth suite of programmes around work-based learning, quality assurance, assessment” (Interviewee 2). Equally important, from the point of view of increasing staff interest in developing greater skills in this area, are the criteria by which staff are recognised in terms of promotion to more senior academic positions. Timlin et al. (2009) identified 48 institutions planning to make investments in professional development for staff in this area, but also perceived a sector-wide lack of awareness amongst staff of the skills required for effective employer engagement.

Conclusion

Institutional strategy is constrained by the context in which institutions exist and operate, disciplinary profile, infrastructure and structural capital (Garnett et al., 2008; Voorhees and Harvey, 2005), in addition to some of the contrasting conceptions of higher education that form notions of appropriateness within the sector. It is noticeable that many of the funded WD projects aimed to address issues of culture and institutional processes (HEFCE, 2009), but these projects were also hosted at institutions where one could reasonably expect the persistence of a public service ethos as an institutional norm. The projects can be seen as evidence of the belief that higher education institutions have a continuing role in participating in the policy initiatives of the state, particularly where these can, at least in appearance, cohere with welfarism and beliefs in social justice. Indeed, higher skills policy and the WD projects of 2006-10 can be seen to have the significant advantage of addressing three of the forces in Becher and Kogan’s (1992) adaptation of Clark’s triangle, those of government, the market and welfarism, in addition to supporting the possible expansion of
new modes of provision. Both the policy and the projects therefore proved particularly attractive to post-92 universities and one part of the pre-92 sector, and this may have made for greater acceptance across institutions.

Furthermore, with the increasing dominance of the “multiversity” model (Kerr, 2001), institutions can be perceived as fragmented sets of business units pursuing specific objectives with devolved budgets, cultures and practices held together by a strategic managerialist core (Bleiklie and Kogan, 2007; Deem et al., 2007). This enables disparate activity to co-exist simultaneously, which is particularly useful if there are “traditionalist” reservations. However, with a new UK government intent on using different mechanisms to challenge the higher education system and less convinced of the need for a centrally driven skills policy, it appears that opportunities to “deliver the priority of the day” (Eastwood, 2008) in this policy area may be harder to find over the next period.

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