Assuring the Public Good in Higher Education: Essential Framework Conditions and Academic Values

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Abstract

A critical challenge for all researchers studying the public good in higher education is to clarify “which public” and “for whose good?” The focus of the present paper, based upon empirical research on higher education from the UK and other countries, is how best to regulate universities...
to assure the provision of education, research, and public service that contributes to the public
good.

Nicholas Barr provides a valuable national framework of policies to assure the overall efficiency of
university education in competitive markets and these serve as the basis for the discussion of
needed education policy. The analysis focuses on the challenge of designing and implementing
effective policies to promote variable fees through tuition caps, the provision of information to
guide student choice, and quality assurance policy. Successful tuition policies need to recognize that
universities compete in different markets, and that while information for students can contribute to
socially beneficial subject choice, first degree students are “myopic consumers” whose academic
choices may be insufficient for assuring academic quality. Given the contribution of market
competition to the “privatization” of academic work as well as the increasingly powerful incentives
for research, the evidence suggests academic quality assessments need to be clearly focused on the
validity, reliability, and effectiveness of each university’s evidence-based processes for assuring and
improving academic standards (i.e., “human capital”) in each of its subjects.

National policies on research have increased the productivity of universities, but poorly
designed incentives for “technology transfer” may be inefficient for many universities and negatively
impact the social benefits of “open science.” Doctoral students are more mature consumers and
therefore research doctoral education may be improved by the provision of valid quality rankings.
Research evaluations in the Netherlands, collegially designed by academic staff and not linked to
university funding, appear to have had comparable positive impacts upon research productivity as
the UK RAE.

Evidence suggests most universities contribute to local and regional economic development,
not through patenting and licensing, but primarily through traditional publications, the provision of
skilled S&T graduates, and technical problem solving with local business and industry. A “one size fits
all” national policy for public service may therefore diminish socially beneficial institutional diversity.

The paper concludes, consistent with principal-agent theory, that the complexity and uncertainty
of academic work may distort the efficiency of higher education markets and compromise direct
government efforts to assure the public good in higher education. The most effective institutional
framework for assuring the public good in higher education therefore appears to be providing
incentives to reform and strengthen the collegial mechanisms by which the members of the
academic profession monitor, socialize, and reinforce the values essential to effective university
teaching, research, and public service.

Paper

Introduction

An important concern in contemporary debates about higher education policy is that of the
“public good.” The concept of the public good is articulated in different ways. In the first instance
some argue that higher education is itself a public good that must be supported by the state. By this
definition the currently observed decline of state support for public sector higher education in many countries is injurious to the public good. In the second instance some argue that institutions of higher education make distinctive contributions to the “public good” and that these contributions are being undermined by the growing “privatization” of universities and reliance on competitive markets to distribute higher education. I wish to suggest that these differing conceptions of the “public good” tend to obscure rather than illuminate the most important challenges now confronting higher education around the world. I will argue that the public interest will best be served by the framework conditions designed to assure the academic integrity of all forms of higher education, whether public, private, or for-profit.

Economists have long distinguished “public” from “private” goods. Private goods are excludable, that is those who own the good can exercise private property rights, preventing those who have not paid for the good from using it or consuming its benefits. Private goods are also rivalrous, that is consumption by one consumer prevents simultaneous consumption by other consumers. In contrast a “public good” or service is neither rivalrous in consumption, nor excludable in ownership, and is available to all. Such goods – national defense being the classic example -- will thus either not be provided or provided in insufficient quantities by the private (market) sector and therefore must be provided or subsidized by the state.

Traditionally education, particularly higher education, has been considered by economists to provide both private and public benefits and goods (OECD, 2008; McMahon, 2009). The private benefits of higher education, which many students are willing to pay for, include post-graduate employment opportunities, higher wages, and increased income over a lifetime. Evidence suggests that even when one calculates the private internal rate of return, which considers the opportunity cost of a university degree including the foregone earnings during the time used to obtain it, higher education is financially beneficial. In addition to monetary benefits, higher education has been discovered to produce non-monetary private benefits: direct benefits experienced in the process of consuming higher education, and over time better health, improved cognitive development for one’s children, higher returns on financial assets, and greater job satisfaction. In addition to these private benefits there are clearly social benefits provided by university graduates: higher taxes paid, less frequent incidence of smoking/poverty/incarceration (and therefore also less consumption by university graduates of public support), as well as more frequent participation by university graduates in volunteer activities, blood donations, and voting. In addition, investments in higher education are positively associated with social benefits such as industrial innovation and economic growth. It is worth noting that these private and social benefits exist in all OECD countries and with the recent massification and expansion of access to higher education in many countries, including the UK, the levels of these benefits have generally been enhanced (OECD, 2010).

In contrast to this economic research there has recently been an upsurge of writing on the public good in higher education by sociologists, political scientists, educationists, and others, which is largely critical (Calhoun, 2006; Tierney, 2006; Marginson, 2007; Bigalke and Neubauer, 2009; Brown, 2010; Molesworth, Scullion, and Nixon, 2011; Rhoten and Calhoun, 2011). This literature tends to argue that the policy reforms of the last several decades, which have introduced greater “privatization” and market competition into higher education systems (i.e., so-called “neo-liberal reforms”), have lessened the “public goods” provided by higher education institutions and are
compromising academic activity within universities. This literature, which is written primarily by those who work within higher education institutions, makes valuable contributions, but has several limitations. First, it is largely rhetorical and qualitative, rather than empirical. When this literature is empirical, it is often focused on the views of academics themselves rather than on indicators of the outputs or outcomes of universities. Furthermore, in critiquing the impact of current policies, many of these studies do not cite, examine, or assess the economic research on the increasing private and public returns produced by higher education noted above. While the impacts upon those actively involved in the production of higher education should certainly be included in any calculation of the public good and/or the social benefits derived from higher education, focusing primarily on the impacts upon producers may not provide a totally objective assessment of the public good. An important question researchers must confront is “which public” and “for whose good” (Powell and Clemens, 1998).

In addition, concerns have been raised that studies based primarily upon the views of academic staff may be biased by their private interests. For example Gläser, Spurling, and Butler (2004), commenting on interview studies of the impacts of the UK Research Assessment Exercise (RAE), reported that such studies were often not scrupulous about reporting sampling procedures, investigating bias due to nonresponse, or constructing questions carefully to avoid passing on negative assumptions about the RAE to the respondents. The known fact that processes like the RAE reduce researcher autonomy can create in respondents a negative bias in answering questions regarding the effect of the RAE on research performance. Nor do these studies always systematically control for factors that may shape respondents’ replies such as type of university, field, gender, or seniority.

With regard the study of the public good in higher education the sociologist Craig Calhoun (2006, 34-36), in an article largely critical of recent higher education policy reforms, nevertheless clearly articulates the challenge for academic researchers:

“Professors tend to think universities exist naturally, or as a gift of history, in order to employ them. ... Most academics in other words, believe they deserve their university jobs on the basis of their previously demonstrated merit....

[But academic] ...productivity... depends on the larger social institutions, not simply the brilliance or other merits of individuals. It depends on a variety of support systems, of course, and also on collaboration....

My point is not to castigate professors for the self-interested misrecognition common in their understanding of academic institutions. Nor is it to support all the claims of those who think universities should exist mainly to support only marginally intellectual ends from economic development to narrow job-skills training. Rather what I want to suggest is that the academic self understanding -- the class consciousness of
professors -- has inhibited adequate recognition of major transformations in universities, higher education, and the production of knowledge, and has stood in the way of focusing attention on the public purposes of universities.”

The recent literature on the public good in higher education does however raise important and challenging questions regarding the potential impacts of national policies on the academic integrity of universities. For example this literature often argues that recent policies have adversely influenced academic culture as well as the internal processes of universities and thereby may be influencing negatively the future outcomes of higher education. In the sections that follow therefore these issues will be explored.

Concerns regarding the negative impacts of market-based higher education policies on the “public good” have been particularly acute in the UK, where enrollments in the university system have substantially increased over the last thirty years (i.e., “massification”) and public funding per student has been substantially reduced (Locke, 2010). However, research on “nonprofits”¹ in every sector and society (Powell and Clemens, 1998) suggests that as the nonprofit sector expands there are strong pressures to become more like governmental and for–profit organizations, inevitably challenging traditional social goals. While issues of institutional control have therefore predictably absorbed much of the oxygen in current UK debates about higher education, the research on nonprofit organizations (Schlesinger, 1998) also suggests that the public good is less impacted by questions of ownership and more influenced by the institutional framework affecting nonprofit, governmental, and for-profit institutions alike. The primary focus of this paper therefore is how best to regulate universities to assure the public good.

In contrast to the UK the institutional framework for colleges and universities in the US has long been characterized by a market-based approach. Contemporary “neo-liberal” or market-based university reforms in other countries have therefore sometimes been described -- unflatteringly -- as the “Americanization” of higher education. However, US policies on higher education still differ markedly from those currently guiding universities in the UK and in other OECD countries.²

¹ Note that universities in the UK, while they historically received the majority of their funding from the national government, are autonomous, property-owning institutions whose independence is guaranteed by Royal Charter or by Parliamentary Statute (Williams, 2004). In this sense, their governance is more similar to non-profit, private universities in the US than to the state-controlled universities of many other countries including the US.

² For example, the US higher education system consists of about 4,300 degree-granting institutions (NCES, 2008) enrolling over 17 million students. But while 60% of these institution are truly independent, nonprofit colleges and universities (some world renowned), they enroll only 4.5 million students, while the 40% of the institutions that educate over 13 million of the enrolled students are state-supported colleges and universities historically subject to much greater public regulation than traditional UK universities. There is also a rapidly growing for-profit sector. Generally each institution sets its own admissions standards, but while the nonprofit and for-profit institutions can set their own tuition and fees, only a minority of the state-supported institutions can do so. About 250 of these degree-granting institutions offer PhD degrees and all colleges and universities provide 4-year bachelor degree programs. Institutions compete for students for their offered degrees (bachelors, masters, and PhD), albeit as in the UK, in different submarkets. Student financial aid (including
Furthermore, despite the envious glances of EU policymakers towards the “world-class” reputation of many American research universities, recent research has raised questions about possible distortions in the current market-based US system of higher education (Dill, 2010). For example, there is concern that the efficiency of the overall US academic research enterprise is declining, that the proportion of the relevant age group graduating from colleges and universities is shrinking rather than increasing and has now been surpassed by a number of other nations including the UK, and that the per-student costs of higher education -- already the highest in the world -- are continually increasing, outpacing inflation. Indeed, in contrast to this latter cost curve, a recent and much discussed study of a national sample of US college and university students suggests American academic standards are deteriorating (Arum and Roksa, 2011). The studied US college students reported minimal classwork expectations and spent less time on academic work than comparable EU university students. Furthermore, over a third of the sampled US college graduates failed to demonstrate significant improvement in learning over their four years of college.

The economist Nicholas Barr has provided one of the more systematic efforts to define the public good of higher education and articulated a national framework of policies and/or regulation to assure the public interest (Barr, 2001, 2004, 2009, 2010). While acknowledging the impacts or social benefits of higher education mentioned above, Barr suggests that our understanding of these impacts is necessarily limited or rendered uncertain by the nature of the measures employed. Therefore he bases his suggested higher education framework not on policies designed to measure or estimate the social benefits of higher education, but on an analysis of the information assumptions necessary for a truly efficient and competitive market to function in higher education. I therefore begin my analysis of the institutional framework necessary for higher education by a discussion of a number of the policies suggested by Barr. However, Barr limits his analysis to the educational impacts of universities. While the social benefits of university research and public service are, as noted, arguably significant, Barr’s recommended policies do not address these outcomes or the possible interactions between university research or public service activity and education activity. However, recent national policies for higher education have not been limited to education, but have included efforts to influence or steer university research and public service as illustrated by the Research Assessment Exercise and the “3rd Sector” program in the UK (Dill and Van Vught, 2010). Therefore my analysis to follow will discuss not only the institutional framework for maximizing the public good of university education, but also that required for university research.
and public service. In my discussion I present research on higher education from the UK, and other countries, including the US.

**Education Policy**

Barr’s (2009) institutional framework for assuring the public good in higher education calls for the following types of policies:

- Universities should be financed from a mix of taxation and variable tuition fees. Universities should set their own fees, but the fees should be regulated by a maximum or “tuition cap.”

- Government should support the provision of student loans for students with income contingent repayments. The loan entitlement should be large enough to cover fees and living costs and should carry an interest rate broadly equal to the government’s cost of borrowing.

- Government should promote access by: 1) strengthening pre-university education; 2) providing relevant information; 3) raising expectations through relevant programs such as university students mentoring school children, visit days, and Saturday, summer, and winter schools; and 4) need-based grants and scholarships to cover some or all of the costs of universities as well as financial incentives to universities to widen participation and provide additional intellectual support for students from disadvantaged backgrounds.

- Government should provide subsidies for socially beneficial (and under-enrolled) subjects.

- Government should ensure that universities possess effective academic quality assurance.

In a number of publications Barr (2001, 2004, 2009, 2010) has provided detailed arguments and evidence in support of the above institutional framework for universities, with particular attention to needed reforms in UK policy. In the above points and his supporting analyses he also addresses a number of the criticisms previously noted by those who perceive a decline of the public good in higher education, including the decrease in student diversity caused by rising tuition fees.
and/or student debt, the need for greater institutional diversity, and concerns regarding the weakening of academic standards. As noted he also supports government subsidies of socially valuable subjects, although some critics of the current public good in higher education may challenge government selection of the fields to subsidize.

My own reading of the research in higher education policy is largely supportive of Barr’s institutional framework. However, with regard to education I believe there are some issues concerning the design of his proposed policy on variable fees and tuition caps as well as on the design and implementation of the regulations for academic quality assurance. Therefore, I will explore these issues below. As noted earlier I also believe arguments can be made consistent with the public good for the design of policies regarding university research and public service and address these issues in subsequent sections.

Variable Fees and Tuition Caps

As part of a needed regulatory framework Barr has supported variable fees as well as government caps on university tuition and fees. However under the existing cap in the UK nearly all the universities have attempted to charge the maximum permitted fee, thus undercutting the supposed efficiency and diversity of a competitive market.\(^3\) Admittedly UK public support for higher education is substantially below the OECD average and as noted above public funding per student has been cut substantially over the last decade. Therefore universities often argue that the need to sustain academic quality provides the rationale for nearly all institutions charging the maximum permitted under the national fees cap.

But the observed lack of fee -- and institutional -- diversity may also be due to market distortions encouraged by the current institutional framework for universities in the UK. First, all universities try to increase their expenditures for research, since it is a primary determiner of university reputation and helps attract the best scholars and students. Therefore a major dynamic driving all universities is an increasingly costly and inefficient “reputation race” (Brewer, Gates, and Goldman 2002; Van Vught 2008), which prompts a permanent hunger for financial revenues (and higher fees). In this sense Bowen’s famous law of higher education still holds: “in quest of excellence, reputation and influence . . . each institution raises all the money it can . . . [and] spends all it raises” (Bowen, 1980, 20).

Second, universities offer an “associative good” in which potential students choose their university based in part upon the intellectual aptitudes, previous accomplishments, wealth, and family connections of the university’s other students (Hansmann, 1999). The potential student understands that these and other attributes of future classmates have a strong influence on the quality of ones’ education and social experiences as well as on ones’ future personal and professional reputation. When nonprofit firms produce “associative goods” there is a strong

\(^3\) When the tuition cap was £3,000 nearly all UK universities charged this amount. Parliament has now raised the cap to £9,000 in “exceptional cases” and the vast majority of universities -- “unexpectedly” -- have raised their tuition and fees to this new level.
tendency for customers to become “stratified” across firms according to their individual characteristics. Moreover, this stratification provides market power to all competing universities. That is when the top ranked university has secured all the best students and is charging them a monopoly price the second best university has every incentive to charge its students the same price without fear of losing students to the best institution. And so on down the line.⁴

For these reasons a fixed tuition cap for all universities is unlikely to promote effective price competition and provide incentives for socially beneficial institutional diversity. Economists have therefore suggested a number of alternative university fee regulations to tuition caps (Douglass and Keeling, 2008). One approach, proposed by the Carnegie Commission in the US, is for government to estimate the proportion of public and private benefits generated by universities and to finance universities on this basis. The Commission proposed a division of costs among students and their families, state government, and institutional sources, including federal financial aid support. At the time of the proposal around 15 percent of all operating expenses at US four-year public institutions were covered by fees, while today it is around 20 percent. As Barr notes, measuring effectively the proportion of public and private benefits of higher education is challenging and uncertain, but a recent thoughtful economic analysis (McMahon, 2009) suggests a systematic approach to this problem.⁵

A second approach attempts to peg university tuition to the economy by setting fees as a percentage of a general economic index such as the consumer price index (CPI) or gross domestic product (GDP) per capita. Fees would therefore supposedly rise only in relation to what people could afford. However such percentage limits ignore the realities of the actual revenue needs of higher education and particularly the effects of significant declines in state subsidies.

My own view is that an effective regulatory framework would control fees, not as now by institutional category or title, but rather by recognizing existing differences in the market contexts of universities.⁶ For example those universities that are successfully competing in the global market (e.g., as indicated by their ranking in a designated world league table, or by stated measures of their research reputation such as research with international impact, high-quality research doctoral education, and attracting significant numbers of competitive research grants) would be awarded the autonomy to set their own tuition and fees.⁷ As in UK soccer leagues, access to this level of autonomy would be permeable, based upon public measures of current performance (i.e.,

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⁴ Note that in the market-based US system the average increase in tuition fees for all institutions over the last thirty years has consistently been in excess of the general rate of inflation. In the US system independent colleges and universities also exhibit market power. For example, Harvard University in Cambridge, Massachusetts, which is the top-ranked university in the US, currently charges $38,416 for tuition and fees, while Hampshire College, which also is in Massachusetts and is ranked 119th among nationally known selective liberal arts colleges, currently charges $41,604 in tuition and fees (http://www.usnews.com/education).

⁵ Based upon his analysis of public and private benefits McMahon (2009) estimates that in the OECD nations 52% of total investment in universities (including institutional support and student foregone earnings, which in the US he estimates as roughly equivalent to student expenses for room and board) needs to be supported by government funding and institutional endowments, while 48% should be covered privately by tuition and fees.

⁶ Note that the adoption of differential fees based upon global markets has already been endorsed in the UK for MBA programs at Oxford, Cambridge, and the London Business School (Douglass and Keeling, 2008).

⁷ Japan has adopted a similar logic for awarding managerial autonomy among its public universities.
universities could be “promoted” and “relegated”) and therefore over time other institutions could become eligible for this authority. This type of fee differential is more equitable as students attending “world-class” universities generally gain higher lifetime earnings than those attending institutions of a more local reputation. Furthermore, as in the UK, universities awarded the autonomy to set fees could be required to recruit a certain proportion of their students from lower class backgrounds and/or, as in the US, to fund a certain proportion of need-based aid for admitted students.

A fee cap could be retained for the more teaching-oriented universities that do not initially qualify for the fee autonomy outlined above. As suggested this fee cap might be based upon estimates of the public and private benefits generated by higher education and/or guided by economic indicators such as the rate of inflation.

“Perfect” Information for Student Choice

A standard assumption for an efficient market is that both consumers and producers have “perfect” information -- rational choice requires that economic agents are well informed about both price and quality (Teixeira, et al., 2004). Consequently Barr (2001) argues because university applicants (and their parents) are more mature and better informed than those making K-12 decisions, relying on market competition in the higher education sector is a feasible national policy. Similarly, many UK and US policy makers believe that if student consumers have sufficient information on the quality of university academic programs their choices will provide a powerful incentive for universities to improve those programs, thereby increasing the human capital that benefits society.

However the many university guides and league tables that have proliferated around the world do not effectively address the expected information deficiencies in the higher education market (Dill and Soo, 2005). The justification for the publication of most university quality rankings is the economic argument that better informed students will be able to make more effective educational choices, that competition for these better informed students will in turn lead universities to improve academic quality, and these overall efforts will increase the efficiency of the higher education system (Teixeira et al., 2004). But information provision is likely to positively influence academic standards only if quality rankings utilize measures linked with societally-valued educational outcomes, students use this information in their choice of subjects, and institutions respond to student choices by improving relevant academic programs (Gormley and Weimer, 1999).

However, the cost and complexity of developing valid indicators of academic program quality to inform student choice are significant. Furthermore, the for-profit publications that produce many university league tables already enjoy substantial sales and influence among opinion leaders, higher achieving students and even university personnel by producing institutional rankings utilizing indicators of academic prestige, which have questionable validity as predictors of effective
student learning (Pascarella and Terenzini, 2005). But in addition the focus on institutional prestige in many league tables distorts the assumed constructive link between information on academic quality and university efforts to improve academic programs. Influenced by institutional rankings, many universities including those in the UK (Rolfe, 2003; Dill, 2007), have responded to market competition primarily by emphasizing admissions marketing, “cream skimming” of high achieving student applicants, making vocational courses more appealing given the visible shift in student interests from academic to career concerns, and as noted above increasing investment in research reputation. In this process less time may be devoted to actually assuring and improving the academic standards of programs in which recruited students enroll.

The students most influenced by national university rankings are those of high ambition, achievement, and social class (Dill and Soo, 2005) many of whom are most interested in obtaining the private benefits of higher education and therefore may be satisfied with reputational ratings rather than valid measures of societally-valued educational outcomes. While there is evidence that some UK universities have been motivated by the existing national academic quality rankings to improve their internal data gathering (Locke et al., 2008), since the commercial league tables are not based on any testable theory or model of university educational performance it is not clear this investment in information leads to institutional actions that actually improve the educational quality of academic programs.

While the empirical evidence to date seems to support the view that many first degree students are “myopic consumers,” whose university choices are unlikely to provide strong incentives for the assurance and improvement of academic standards, there is evidence particularly in the US (Romer, 2000) and some other developed countries of a significant market failure in student choice. That is students are choosing in societally insufficient numbers demanding academic fields such as the sciences and engineering that clearly provide substantial private and social benefits. Therefore, independent of its impacts on academic quality, there may be substantial social benefit from a national policy requiring the provision of valid information to guide student choice, similar to that in the UK. Such a policy likely should be designed to require publication of data on student retention, student progression, and graduate outcomes (i.e., including the nature of graduates’ employment, their average salaries, and their further education) by subject field for all institutions of higher education (OECD, 2008).

Quality Assurance Policy

As noted Barr also supports the need for academic quality regulation, but certainly in the UK and in many countries around the globe the design of university quality assurance has been a “contested field” between universities and the state (Dill and Beerkens, 2010). The term quality assurance in higher education is used increasingly to denote the practices whereby university academic standards, i.e., the level of academic achievement attained by higher education graduates, are maintained and improved (Brennan and Shah, 2000). This definition of academic quality is consistent with a human capital perspective on the efficiency of universities, which combines estimates of university costs with assessments of learning outcomes, particularly the specific levels of knowledge, skills, and attributes that students
achieve as a consequence of their engagement in a particular education program (McMahon, 2009).

Much of the critical analysis in the recent literature on the public good in higher education addresses issues related to academic quality assurance. These criticisms suggest that neo-liberal reforms may be “privatizing” academic life, altering in a negative manner the academic relationship between students and academic staff, and lowering academic standards (Calhoun, 2006; Barnett, 2011). For example, the noted increased investments in academic research by members of academic staff and institutions may be driven more by the desire to enjoy additional individual career benefits and advance the prestige of the university than by the opportunity to benefit others. But this increased investment in research and academic specialization also comes at a cost, which includes less time by academic staff to devote to improving student learning in their individual teaching, as well as less time and inclination to collectively assure and improve academic standards in subject programs. Furthermore the academic processes often accompanying massification, including modular teaching, continuous assessment, student surveys of instruction, program funding based upon enrollment, and university funding based upon student graduation all provide greater incentives for the inflation of grades or marks as well as the relaxation of academic standards. In the new context of increased privatization for both academic staff and students, we likely need to achieve a better balance between individual and program autonomy and the collegial control of academic work. As Calhoun (2006, 35) suggests in his conclusions regarding the public good in higher education:

Not least of all the productivity of academe depends upon the extent to which it is internally organized as a public sphere – with a set of nested and sometimes overlapping public discussions providing for the continual critique and correction of new arguments and tentatively stabilized truths…. The answer must lie in the organization of academic institutions and academic work in fields which provide plausible boundaries to these critical debates, but boundaries which never allow for more than partial autonomy. There must also be boundary – crossing: physicists must sometimes question chemists, sociologists must sometimes question economists.

Our analyses of effective national academic quality assurance processes provide some support for this view (Dill and Beerkens, 2010). First, these analyses make clear that developing a stronger culture of quality for teaching and student learning and creating conditions for the continual assurance and improvement of academic standards within universities will require actively engaging both the collegial leadership of an institution as well as academic staff in departments and programs. The positive impacts of studied subject assessments, accreditations, and academic audits were most clearly visible in the increased discussions about academic quality as well as changes in curricula organization, student assessment, and modes of instruction that took place within academic programs. It is after all at the subject level that academic standards are assured and improved. At the same time an effective external quality assurance process must create conditions in which the collective university assumes ongoing responsibility for maintaining academic standards and implements rigorous and effective collegial processes for assuring and improving academic quality in all the institution’s academic programs. For this to occur, the university’s core academic processes for assuring academic standards must be externally evaluated by competent peer reviewers and the effectiveness of these processes must be confirmed by assessing their influence
and impact on the quality of teaching and student learning in a representative sample of study programs within each institution -- what in the UK are termed “audit trails.”

A second design principal that can be deduced from these instruments is the core academic processes that must be evaluated. As in the Hong Kong Academic Audit process (Massy, 2010), this requires a laser-like focus on the essential processes universities employ for assuring academic standards: the design and approval of new course modules and programs of study; procedures for reviewing academic programs; procedures governing grading and marking standards; procedures influencing the evaluation of teaching; procedures affecting student assessments; as well as the university’s processes for identifying and sharing best practices in assuring academic standards among its academic programs. Given the increasing emphasis in many nations, including the UK, on higher education policies stressing research productivity, university rankings, bibliometric measures, and economic development, most countries are discovering that the greatest challenge is how to create effective institutional incentives for the assurance and improvement of academic standards in degree programs. In short, how to develop a robust academic culture of quality in teaching and student learning at all three degree levels within universities. Some academic audit and accreditation processes, such as the academic audit process in the UK, cast such a wide net that they may limit the rigor and impact of the external evaluations.

A third design consideration is therefore the administration of these external reviews. The most effective and legitimate instruments in the views of academic staff possess characteristics similar to those exhibited by the Teacher Education Accreditation Council (TEAC) in the USA (El-Khawas, 2010), the accreditation and quality processes of the General Medical Council in the UK (Harvey, 2010), and the ABET international accreditation process in applied science, computing, engineering, and technology (Prados, Peterson, and Lattuca, 2005; Volkwein, Lattuca, Harper, and Domingo, 2007). These external reviews all strongly emphasize a culture of evidence-based decision-making within institutions directly applied to the improvement of teaching, student learning, and academic programs. Accordingly they place much weight on assessing the validity and reliability of institutional measures and mechanisms for assuring the quality of teaching and student learning. Peer reviewers are trained, supported during the review process by professional staff, and employ systematic, standardized procedures and protocols. A feasible goal for such external reviews would be to make university internal processes for assuring academic standards at least as rigorous,

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8 The issue of evaluating academic subjects as part of academic audits has been a particularly contentious issue in the UK, but the failure to do so undermines the effectiveness of the external audits. Logically the only effective means for assessing the effectiveness of teaching or instruction is to evaluate their impact upon student learning. Similarly, the only feasible means of evaluating the effectiveness of a university’s processes for assuring academic standards is to investigate their impact upon and the responses by academic subjects or programs. This is the approach taken in the academic audit process in Hong Kong.

9 Note that the two universities in the US that have made the strongest commitment to -- and established major public projects for -- an evidence-based approach to improving student learning and lowering instructional costs are the independent, engineering-based, Carnegie-Mellon University (CMU) and Rensselaer Polytechnic Institute (RPI). CMU has created the Open-Learning Imitative (http://oli.web.cmu.edu/openlearning/) providing web-based, publicly available courses (modules) designed by teams composed of learning scientists and content experts that are continuously evaluated with data from student use and learning. RPI similarly has created the National Center for Academic Transformation (http://www.thenccat.org/index.html), which is dedicated to the effective use of information technology to redesign academic courses, both to improve student learning outcomes and reduce the cost of higher education.
valid, and evidence-based as existing institutional processes for assuring and improving the quality of research.

A final problem with academic quality assurance regulation is the known issue of “regulatory capture” (Laffont and Tirole, 1991) in which those whose interests are affected by the relevant regulation gain influence over the regulatory agency and promote their private interests over those of the public. Simply stated “who guards the guardians?” (Blackmur 2008) and the typical policy response to this question is to require a public evaluation of the academic quality agencies themselves as a means of protecting the public interest in effective regulation. However, the adopted process for actually evaluating national academic quality assurance agencies provides evidence of regulatory capture (Dill, in press). The design and conduct of these evaluations tends to replicate the limitations of professional self-regulation in that it is often controlled by the agencies themselves in cooperation with associations of agency professionals and/or selected representatives of those regulated. As Blackmur (2008) argues in his critical analysis of the external review of the Australian Universities Quality Agency, this type of evaluation lacks independence, fails to employ a suitably relevant and robust method of validation, and generally ignores the critical issue of value for money. This type of evaluation may therefore provide inadequate evidence for improving the efficiency of external quality assurance regulations, which as discovered in our analyses (Dill and Beerkens, 2010) of academic audit, subject assessment, and accreditation processes, seem to exhibit substantial variation in objectivity and rigor. The public interest is therefore likely better served if the effectiveness and efficiency of academic quality assurance agencies are evaluated by established, respected, and independent national evaluation or audit agencies similar to the Government Accountability Office in the US and the United Kingdom National Audit Office.

University Research Policy

The policies employed by national governments including the UK appear to have had direct effects on the research behavior of universities (Dill and van Vught, 2010). The combination of financial policies for research and evaluation instruments as the RAE are leading universities to develop more specific institutional strategies in the three basic segments of their research mission: research, research doctoral training, and knowledge transfer. International forces and the market competition introduced by these new policy instruments have also led to major reforms in the organization of academic research. The typical reaction of individual universities to the national research policies is to increase the quality and size of their successful research fields and hence toward “focus and mass,” toward specialization and concentration in research.

The European Network for Quality Assurance (ENQA) in their a report to the Bologna Ministerial Conference in 2010 stresses the diversity among political systems, higher education systems, and national cultures and argues that “this makes a single monolithic approach to quality, standards and quality assurance in higher education inappropriate” (Dill, in press). As ENQA then makes plain its primary concern is legitimizing fellow professional agencies: “There is little point in adopting a ‘hard line’ position in respect of compliance with the ESG if, by doing so trustworthy and credible agencies are prevented in gaining Full membership of ENQA....”
The new policies also appear to be making universities in nearly all OECD countries, more productive in their output of publications and research doctoral graduates as well as in their patenting and licensing activities. In the United Kingdom, this improvement has also occurred in universities newly designated after the abolition of the binary line, but evidence suggests that any closing of the performance gap between the old and the new universities brought about by these new policies has now slowed if not ended (Crespi and Geuna 2004). This analysis also suggests that the adoption of the RAE created a one-time shock to the overall system, which initially motivates increased research productivity in all universities eligible for the funding but over time is most likely to lead to an increased concentration of research in those institutions with richer resources, larger numbers of internationally recognized academic staff, and established reputations.

Marked improvements in the organization and management of university research activities and programs were also reported in most of our cases. It is likely that this improvement in university research programs is due not only to the recently implemented policy instruments mentioned above, but also to the general reductions in funding for publicly supported universities that have occurred in conjunction with the massification and expansion of higher education in many countries including the UK (Williams, 2004). As a consequence, universities in some of our case-study countries have necessarily become highly motivated to pursue alternative sources of revenue for their research programs and therefore have been required to develop the research centers and internal research management processes necessary to survive in this more competitive market.

Finally, the increased emphasis on research performance and productivity reflected in our case studies is frequently accompanied by expressed concerns about the possible effects of these policies on the nature of the research conducted. Several of our case studies note that the increased incentives for applied research and knowledge transfer may reduce the amount of basic research and over the longer run actually retard or diminish innovation by reducing the number of significant discoveries in fundamental knowledge. However studies in both the United Kingdom and the United States, where national research funding has become increasingly competitive, do not yet indicate a reduction in the proportion of basic research being conducted (Dill, 2010; Henkel and Kogan, 2010).

However, the policy of allocating the majority of academic research monies through competitive government research proposals, which is the current practice in the US, requires the investment of time by researchers applying for and administering these research grants. US academic scientists now report spending 42 percent of their research time filling out forms and in meetings required for pre- and post-grant work (Kean, 2006). This suggests that an appropriately balanced dual funding model for universities may still be most efficient for society.

Technology Transfer Policy

A much debated topic are national policies on intellectual property rights (IPR). The original changes in the IPR legislation in the United States -- the Bayh-Dole Act -- were motivated by a desire to speed knowledge to market. Patent and licensing rights were reallocated to universities through new laws designed to increase university incentives for knowledge transfer. The policy was never
expected to create a major new source of funding for universities. However, with the growing competition for academic research monies in the United States and around the world, universities are more aggressively seeking research revenues from other sources and, in many instances, have interpreted new IPR legislation as an exhortation to “cash in” on their research outcomes. The evidence suggests that the majority of universities in the OECD countries are at best breaking even, and many are suffering net losses from their investments in technology transfer offices and affiliated activities. While many universities see their technology transfer expenses as a necessary investment that they expect to bear significant fruit over time, research in the United States (Geiger and Sa, 2009) suggests that over the longer term, the institutions that do reap some financial benefit from patenting and licensing are the most highly ranked and best-known research universities. But even in these institutions, there tends to be a natural “ceiling” or limit to the amount of such revenue that can be earned (Geiger and Sa, 2009), because patents and licenses are influential on innovation and profits in a relatively small number of industries and technical fields, biotech being the most prominent example (Cohen, Nelson, and Walsh, 2002).

One unintended impact of public policies that emphasize IPR as a means of stimulating academic knowledge transfer is their influence upon the core processes of academic science. Because of increased incentives for universities to patent and license their discoveries as a means of raising revenues, some theoretical results and research tools that have traditionally been freely available to other scholars and researchers are now being restricted. This constriction of open science may in fact lessen the economically beneficial “spillovers” that are a primary rationale for the public support of basic academic research. Policy instruments intended to provide incentives for knowledge transfer, therefore, have to be designed with particular care to maintain the benefits of open science.

Research Doctoral Program Policy

There is also some evidence from the United States (Dill, 2009) that well-designed research doctoral rankings may be particularly influential instruments for improving PhD programs in the increasingly competitive global market for doctoral training. The research doctoral rankings of the National Academy of Sciences, which are supported by the National Science Foundation and the National Institutes of Health, are in fact the only government supported university rankings in the United States. These rankings have been designed by leading social scientists in the US and in international comparison are noteworthy for the attention to the validity and reliability of their measures. As a consequence these rankings have had a measurable impact on the improvement of research and research doctoral programs at the leading US universities. The surveys conducted as part of these ranking are now contributing to the development of a national data base on research graduate programs that can help develop doctoral programs in all US universities. It is quite likely that a similarly responsible effort at ranking research doctoral program supported by the European Commission could help strengthen doctoral education in the European Union as well.
In contrast to the mentioned market for first degree-level education where the orientation and maturity of student applicants may limit the potential for user information to improve academic programs, there is also some evidence from the United States (Dill 2009) that well-designed research doctoral rankings may be particularly influential instruments for improving PhD programs in the increasingly competitive global market for doctoral training. The international market for research doctoral students appears to behave in accordance with classic economic assumptions. Many universities now provide full financial support to the best doctoral applicants in an effort to compete aggressively for the most able international students. Doctoral applicants are an older, more educationally experienced set of consumers, who are pursuing advanced degrees primarily for vocational reasons. Doctoral applicants therefore are less likely to be swayed by consumption benefits, social factors, geographical considerations, and institutional reputation in their choice of academic programs and more likely to be influenced by valid information on doctoral program quality. In this more perfectly competitive market the research doctoral rankings of the US National Academy of Sciences, which are the only government supported university rankings in the United States, have been designed by leading social scientists and in international comparison are noteworthy for their attention to the validity and reliability of their measures. These research doctoral rankings are not only highly influential on student choice, but also have motivated demonstrable improvements in US PhD programs in a number of the leading universities (Dill, 2009). Given the acknowledged positive influence of research doctoral graduates on economic growth in the developed countries (Aghion, 2006), government support for doctoral quality rankings appears to be a particularly well-justified policy and one worthy of greater attention in the UK (Van Bouwel and Veugelers, 2010).

Research Evaluations

Performance-based funding of research has increasingly been emphasized in many OECD countries including the UK both by increasing the proportion of research monies allocated competitively by research councils and by basing institutional funding of research on evaluations of research quality including measures such as publications and citations. The most prominent example of the latter approach is the Research Assessment Exercise (RAE) in the UK. The evidence suggests that performance-based funding of UK research has increased the productivity of the academic research enterprise and possibly also its quality, stimulating latent capacities for research that had not been previously effectively mobilized (Henkel and Kogan, 2010; Hicks, 2008). UK universities are reported as adopting a more strategic approach to their research efforts with marked improvements in the internal organization and management of research programs and activities.

However, performance-based funding has other impacts on university research (Hicks, 2008). There is concern that the focus on peer reviewed publications may suppress excellence, inducing a certain homogenization of research at the upper levels. Furthermore the emphasis on publication counts encourages some researchers to become more calculating in their publication patterns, slicing their research into smaller topics and more numerous articles. The benefits of
performance-based funding also appear to be discontinuous, as in the UK for example creating a one-time shock to the overall system, which initially motivates increased research productivity in all universities eligible for the funding, but tends to dissipate over time (Crespi and Geuna, 2004). Performance funding also further contributes to the mentioned stratification of universities, concentrating research in those institutions with richer resources, larger numbers of internationally recognized academic staff, and established reputations.

The challenges of effectively applying the RAE to university research also reveal a number of complications predicted by the principal-agent model (Weimer and Vining, 1996). These include the need to continually adjust the output indicators in order to address the complexities of academic research, the high costs of monitoring university research performance, and the difficulties of controlling cross-subsidies in an organization like the university, which possesses the multiple outputs of teaching, research, and public service.

In addition the attention awarded to the RAE has distracted policy makers and analysts from attending to alternative research assessment approaches. For example the Netherlands has implemented a research assessment system for its universities, but it is not focused primarily on indicators of research publication and is not tied to university funding. Instead, every six years each university conducts an external peer review of its research programs involving internationally respected researchers (Jongbloed, 2010). These reviews follow a Standard Evaluation Protocol (SEP) designed by the universities themselves in concert with national research organizations. The SEPs focus on the academic quality, scientific productivity, and long term vitality of each research program and utilize a variety of information sources including on site interviews, university self-reports and bibliometric evidence. The evaluations are made public, but do not inform government funding.

Research suggests that these evaluations have had similar positive impacts on research productivity, research quality, and improvements in each university’s strategic management of research as the much more highly publicized performance funding system in the UK (Jongbloed, 2010). But the more qualitative and collegial research evaluation process developed in the Netherlands has not produced the same amount of rancor and divisiveness among the members of the academic profession, nor contributed to the same degree of research stratification as in the UK. However an important difference between the Netherlands and the UK is that the former has retained a binary system of higher education featuring polytechnic institutions, which do not receive funding for basic research and research doctoral education. The maintenance of this binary line arguably helps sustain institutional differentiation in the overall system, encouraging the polytechnics to be more efficient and more fully focused on their educational mission. In contrast, the elimination of the binary line in the UK and Australia increased incentives for the above-noted “reputation race” based upon research among all the newly named universities, which has likely also contributed to cost inflation and possibly to less emphasis on effective teaching and learning in these universities. The abolition of the binary line in the UK also has required greater emphasis on selectivity in the RAE in order to promote the research concentration believed necessary for effective research productivity in universities.
A growing emphasis of national policies on higher education, in response to empirical evidence on the positive role university research can play in economic development, is to increase the incentives for universities to engage in technology transfer. There are legitimate concerns that this emphasis on technology may reduce the important but difficult to measure role universities have traditionally played in enriching their regions socially and culturally. But research also suggests that a “one size fits all” national technology transfer policy may in fact diminish the contribution universities make to fostering regional economic development (Lester, 2007).

Comparative research on a number of OECD countries, including the United Kingdom, has revealed that the knowledge transfer processes -- patenting, licensing, and new business formation - - favored by national innovation policies were often not the most important contributors to local and regional development (Lester, 2007). While some “global” universities produce technology artifacts that are transferable worldwide, effective knowledge transfer for most universities is a more local process and depends upon the nature of industrial development occurring in the regional economy. Universities do in fact contribute to the creation of new businesses, but much more commonly they help to upgrade mature industries, support the diversification of existing businesses into new fields, and assist in the transplantation of industries. In these roles traditional publications, the provision of skilled S&T graduates for the regional economy, and technical problem-solving with local business and industry through consulting and contract research are much more significant channels for influencing technical innovation than are patents and licenses (Agarwal and Henderson, 2002; Cohen, Nelson, and Walsh, 2002). Universities also play a crucial role by providing a “public space” (Lester, 2007) in which, through meetings, research conferences, and industrial liaison programs, local business practitioners can discuss the future direction of technologies, markets, and regional industrial development in a non-collusive manner.

This contribution to regional development is potentially a role all universities with scientific and/or technical faculties, not just “world class” institutions, can perform. National policies encouraging this type of local and regional focus would therefore also help promote the development of socially beneficial diversity in higher education systems. Such policies should provide incentives for universities to focus less on their possibly inefficient investments in conventional technology transfer and more on developing a strategy for encouraging innovation in their region. This approach would encourage universities to systematically assess the circumstances and development of local industry, the research strengths of the institution, and the most appropriate channels for aligning the university’s capabilities with the needs of the local economy (Lester, 2007). The Finnish National Centres of Expertise Programme provides one well-regarded national model for developing universities as nodal points in regional networks of innovation by helping them better integrate their research expertise with local industry and business along the lines suggested here (Dill and Van Vught, 2010).
In his writings Nicholas Barr (2001, 2004) has consistently argued that the welfare state will endure and adapt to social change because it not only offers poverty relief but also provides means of addressing the intractable economic problems of imperfect information, risk, and uncertainty. Similarly I conclude that, consistent with principal-agent theory (Weimer and Vining, 2006), the self-regulating aspects of universities will endure and adapt to social change because the complexity and uncertainty of academic work distort the efficiency of higher education markets and compromise direct government efforts to assure the public good in higher education.

In a recent study on controlling public services, the New Public Management scholar Christopher Hood (2004) outlined three primary means of governmental control: “oversight,” or controlling individuals through government regulation; “competition,” or controlling individuals through market rivalry; and “mutuality,” or controlling individuals through the horizontal influence of peers. In higher education we would define “mutuality” as collegial control. Hood’s comparative study, which included current national policies on academic research, led him to challenge the prevailing view that government reforms have caused a decline in the academic profession’s control of universities. Rather he suggests that collegial control of universities may have actually increased over time, but in a different form. That is, a move away from “mere coexistence – peaceful or otherwise – among autonomous scholars,” and a shift toward greater collegial control of the individual in the form of “more peer review of performance in teaching and research” (Hood, 2004: 197-198).

One danger of inadequately regulated market competition in higher education appears to be in providing incentives for the privatization of academic work, understood as the pursuit of autonomy for individual teaching and research, for program development, and for institutional prestige, less to better serve the public, and more to maximize private benefit. My analysis suggests that the most effective institutional framework for assuring the public good in higher education is one that will provide incentives to reform and strengthen the collegial mechanisms by which the members of the academic profession monitor, socialize, and reinforce the values essential to effective university teaching, research, and public service. As suggested the form of these collegial mechanisms must necessarily change over time in response to new circumstances and new technologies. But one reason the university, which first emerged in the 12th century, has continued to be a vital institution for society and if anything is of greater importance today, is that it has the capacity as a collective community to assure the integrity of its core processes. Contemporary examples such as the academic audit process in Hong Kong, the research assessment process in the Netherlands, the research doctoral rankings in the US, and the regional development initiative in Finland suggest how well designed public policies can provide incentives for universities to develop the collegial processes necessary for assuring the public good in the changing environment of higher education.


