

# Market-Based Policies and Higher Education: Assuring and improving efficiency and academic quality in the university sector<sup>1</sup>

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**Abstract.** The expansion of opportunity in higher education and the recognition of the influence of academic research on economic development have motivated policy reforms in many national systems of higher education including Japan. Many of these national reforms involve facilitating market forces in higher education, which is a new context for many universities. What has been learned about the impacts of these policies on the university sector? This paper will review research on the three primary policy instruments for creating market competition in a sector: policies altering the basic conditions of a market – the framework laws and values within which universities operate; policies affecting market structure – the number of buyers and sellers, the pricing of goods and services, freeing and simulating markets; and policies directly affecting the conduct of buyers and sellers – government regulation and the provision of information. Given the recent regulatory developments in Japanese higher education, the paper will particularly focus on the design of quality assurance policies in the university sector.

**Keywords:** market mechanisms, regulation, quality assurance, learning indicators, academic collective action

## Introduction<sup>2</sup>

A market is best understood as a means of organizing the exchange of goods and services based upon price, rather than factors such as tradition or political choice. For higher education there is not a single national market, but rather multiple and interrelated markets (Dill, 1997). These include the different markets for university products such as academic degrees, for academic research, and in

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many countries for university public services such as continuing education, consulting, and technology transfer. Universities also compete in separate markets for public and private funding. Furthermore, in many countries there are separate markets for universities and for other types of higher education institutions such as polytechnics and vocational colleges. A critical factor in the design of effective market-based public policies is careful delineation of the relevant market and players (Becker & Round, 2009). Therefore, the focus here is on the markets relevant to the university sector.

Theoretically the encouragement of “perfect competition” in the relevant higher education market lessens the probability that society will over-invest or under-invest in higher education relative to the social benefits actually produced, but the achievement of “perfect competition” requires a number of assumptions. It assumes a sufficient number of both buyers and sellers to assure competition will provide discipline to university decisions about costs, prices, and product quality. It assumes purchasers have sufficient information about both price and the qualitative characteristics of goods and services to make economically “rational” choices. Finally, it assumes the prices of relevant goods and services effectively capture all the costs of production as well as the private benefits to be derived by consumers. However, current research on market-related national higher education policies suggests these conditions for perfect competition are rarely achieved (Teixeira et al., 2004; Ehrenberg, 2012). Instead, poorly designed markets for higher education can often create incentives which distort academic behavior and decrease the economic efficiency of the sector.

Generic policy instruments have been identified for creating market competition in any sector (Weimer & Vining, 2016). First, public policies can influence the basic conditions of a market by altering the framework of laws and values within which institutions operate. Second, public policies can affect market structure, principally by influencing the number of buyers and sellers, the pricing of goods and services, as well as by freeing and simulating markets. Third, public policies directly affect the conduct of buyers and sellers in a market, primarily by regulation and the provision of information.

## **Framework rules**

Public policies frame or shape the basic conditions within which competitive markets operate. For example, the United Kingdom Education Reform Act of 1988 altered the framework rules of universities by eliminating academic tenure (Williams, 1997). This introduced greater competition into the United Kingdom academic labor market and helped foster a growing proportion of academic staff on fixed term contracts, an impact also observed in the higher education systems of other countries that have emphasized market mechanisms. But in the well-established market-based American system a similar growth in fixed term academic staff is associated with declines in first degree student persistence and graduation rates (Ehrenberg, 2012).

Another framework rule defined by government is private property. The much imitated American Bayh-Dole legislation of 1980 was originally motivated by a desire to speed academic knowledge to market (Dill, 2010). Therefore, the right to patent and license government-funded academic research was allocated by the law to universities as a means of increasing university incentives for the transfer of technology to businesses. This policy was not expected to create a major new source of funding for higher education, but the adoption of similar policies in other countries has motivated many universities around the world to invest in technology transfer offices and activities as a means of “cashing in” on their research outcomes. The majority of universities in the Organization for Economic Cooperation and Development (OECD) countries (Dill & van Vught, 2010) are at best breaking even in these efforts, but many are suffering net losses from these investments.

Many of the national policies increasing the incentives for academic technology transfer are prompted by a political desire to increase technical innovation as a means of fostering economic growth. However, again, carefully defining the nature of the relevant university market and players is crucial. A “one size fits all” national technology transfer policy may diminish the contribution many universities have traditionally made to fostering economic development in their region (Lester, 2007).

Some “world class” universities produce patentable technology which could be transferred or sold to any relevant producer in the world. But comparative research in OECD countries revealed the knowledge transfer processes favored by many national innovation policies – patenting, licensing, and new business formation – were often not the most influential means by which universities contribute to local and regional development (Lester, 2007). Universities do contribute to the creation of new businesses. But more commonly they help upgrade mature industries, support the diversification of existing businesses into new fields, and assist in the transplantation of industrial sectors. In these roles traditional publications, the provision of skilled science and technology graduates, and technical problem-solving with local businesses through consulting and contract research are much more significant channels for fostering technical innovation than are patents and licenses (Cohen, Nelson, & Walsh, 2002).

This contribution to regional development is a role all universities with scientific and/or technical faculties, not just “world class” institutions, can perform. National policies for this university market should focus less on incentives for patenting and licensing, and more on motivating development of each university’s academic strategy for encouraging innovation in the local region. The Finnish Center of Expertise Program offers one well-regarded national example of this approach, developing universities as nodal points in regional networks of innovation by helping them better integrate their research expertise with local industry and business (OECD, 2007).

## Taxes and subsidies

In contrast to framework rules taxes and subsidies affect the structure of markets. United States Federal tax policy has played a significant, if largely invisible, role in subsidizing higher education by providing incentives for families to invest in their children's education and for individuals and corporations to make gifts to both private and public institutions (Geiger, 2004). Two particular forms of tax and subsidy, tuition fees and vouchers, directly affect the competitive structure of markets by altering the relative price of academic programs.

Tuition fees for public sector institutions are a form of tax designed to limit the over-consumption of publicly subsidized academic programs. Tuition fees are often justified as economically efficient because of the private benefits higher education conveys upon students in the form of increased lifetime earnings; improved career opportunities; and enhanced life chances (McMahon, 2009). Tuition fees may also be more socially equitable. Because students in higher education in many countries come disproportionately from middle and upper class elites, low or no tuition policies subsidize higher income students with the taxes of those of lower income.

Tuition fees also provide an explicit price for higher education. This price can create greater cost consciousness on the part of both students and universities, potentially encouraging institutions to be more efficient and sensitive to students' needs. Tuition also provides opportunities for the emergence of private sector higher education and thereby can contribute to the potential responsiveness and diversity of the overall system. The evidence from recent national policies introducing tuition fees suggests they do not appear to depress overall student participation rates, but do increase administrative costs for universities, for example for marketing, and increase institutional incentives to attract full-cost paying international students (Williams, 1997). But a major policy problem is assuring an economically efficient level of tuition as well as publicly defensible increases in fees.

The converse of taxes on the supply side are public subsidies on the demand side, such as voucher systems which permit students to purchase academic programs at reduced prices. The voucher may be in the form of a government grant; a government subsidized conventional loan; an income contingent loan; or graduate tax (Barr, 2009). However, to work effectively voucher systems must be coupled with a policy implementing tuition pricing.

Barr (2009) has developed a comprehensive tax and voucher model for financing higher education, which attempts to meet the economic test of efficiency as well as social equity. Barr's model requires: implementing variable university fees with a tuition fee cap; an income contingent loan system covering student fees and living costs, which utilizes an interest rate broadly equal to the government's cost of borrowing; and loan repayments calculated as a percentage of a graduate's earnings and collected alongside her or his income tax. Barr's model suggests why market-based financing policies for universities in numerous countries have proven ineffective. In some countries

loan systems do not cover both tuition and living costs, loans may not be income contingent nor collected with income taxes, and loan interest may not be pegged to the government's cost of borrowing. The United Kingdom's adoption of tuition fees and income contingent loans, for example, repeated the mistake of treating all universities as a single market. Therefore, the initial government cap on tuition proved too low, requiring more public subsidy than was economically efficient, while the later increased cap has proved too high, inducing less prestigious universities to charge the maximum fee in an ill-conceived effort to spend their way to a global reputation. Again, for these reasons a fixed tuition cap for all universities is unlikely to promote effective price competition or provide an incentive for socially beneficial institutional diversity.

### **Freeing and simulating markets**

Many government efforts to introduce market structures into higher education are motivated by a desire to correct perceived failures in existing top-down government regulation (Weimer & Vining, 2016). Such efforts therefore attempt to free currently regulated markets or simulate markets through various mechanisms.

Freeing higher education markets in publicly supported higher education usually involves relaxing regulations governing university finances, personnel, and curriculum, essentially devolving control over these decisions to the institutions. This type of deregulation permits universities to set and recover their own fees; to develop their own personnel classification systems (effectively eliminating civil service regulations); to negotiate their own contracts; and to approve their own academic programs.

Aghion et al. (2010) studied the effects of market competition and state regulation on the research performance of public universities in the United States. The study focused on university outputs influencing technical innovation, which contributes to economic development. Output measures therefore included research publications as well as the university's impact on the inventive capacity of a state as measured by the number of patents generated. Most public research universities in the United States possess "substantive" academic autonomy: freedom to select students, set curriculum, and appoint professors. But there is much greater variation across the states in "procedural autonomy:" a public university's freedom from centralized purchasing; from required approval of its budget by the state; and from government controls over the hiring and pay of academic personnel and staff or the need to follow civil service pay rules. The degree of market competition experienced by public research universities also varies, influenced by the presence in a state of competing private research universities as well as by the proportion of a university's budget derived from competitively awarded federal research grants.

Aghion et al. (2010) concluded research universities are more productive when they have greater autonomy and face increased competition. Because producing "frontier research" is such a complex

activity, universities can effectively pursue it only if accorded the discretion to direct resources and researchers towards the most promising paths. Therefore, the most efficient system of external regulation permits research universities to control the use of their budgets; to independently choose the compensation for their faculty; and to hire whichever academic staff they most prefer. Also universities will more efficiently manage their resources if research funds are allocated through merit-based competition, via research councils rather than by university block grants.

When competition within a particular market cannot be guaranteed, government may attempt to simulate a market through adoption of internal or “quasi-markets” (Glennerster, 1991). In contrast to the “perfect market” condition of multiple providers and consumers, a quasi-market utilizes a monopsonistic government agency to contract on the behalf of public consumers. Government research councils offering competitive grants are essentially operating as quasi-markets, and increasing numbers of countries are directing more of their research support for universities through such competitive processes (Dill & van Vught, 2010). The United Kingdom Research Excellence Framework (formally known as the Research Assessment Exercise) is a competitive quasi-market system which bases government funding of “block grants” for university research on evaluations of research quality including measures such as publications and citations.

Consistent with Aghion et al.’s findings, research suggests the competitive funding of research proposals via research councils 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 (Dill & van Vught, 2010). In this type of context universities also reported adopting more strategic approaches to their research efforts with marked improvements in the internal organization and management of research programs and activities.

However, the positive benefits of competitive funding of university block grants for research via quasi-market mechanisms, such as the former United Kingdom Research Assessment Exercise (RAE), are more debatable (Hicks, 2008). The RAE focus on peer reviewed publications as the performance measure may suppress excellence, inducing a certain homogenization of research at the upper levels. The emphasis on publication counts also encourages some researchers to become more calculating in their publication patterns, slicing their research into smaller topics and more numerous articles. The benefits of competitive allocations of university block grants for research also appear to be discontinuous. The competition creates 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 (Beerrens, 2013). Quasi-market funding of university research also contributed to the observed stratification of universities, concentrating research in those institutions with richer resources, larger numbers of internationally recognized academic staff, and established reputations.

The problems experienced with quasi-market mechanisms for funding research could have been predicted with the principal-agent model in economics, but were generally ignored by policymakers (Weimer & Vining, 1996). In the case of the RAE policy (Henkel & Kogan, 2010) for example, the

complexities of measuring academic research have required continual adjustments in the output indicators; the costs of regular peer monitoring university research performance have proven high; and there have been ongoing concerns about controlling inefficient cross-subsidies among the universities, because of reports financial resources traditionally expended on instruction were being transferred to research.

In addition, a comparative study of research funding and performance in selected OECD countries (Himanen, Auranen & Puuska, 2009) has raised questions about the supposed economic efficiency of the RAE policy. The study noted overall higher education R&D expenditures (HERD) in the United Kingdom more than doubled from 1990-2005. Over this period it did experience moderate growth in its share of OECD research publications, but no growth in its proportion of OECD research citations. More significantly during this period three RAEs were conducted, but the ratio of research publications to HERD actually declined. In comparison during this same time period the Dutch HERD hardly grew. But Dutch universities showed a constant increase in both publication output and citation impact and also exhibited continued growth in the ratio of publications to HERD. In fact, the Netherlands showed the greatest output for the least input of the compared countries, which included Australia, Finland, and Norway.

The Netherlands also had a research evaluation policy in place during the time period measured by the study (Jongbloed, 2010). But in contrast to the RAE in the United Kingdom the research assessments in the Netherlands do not focus on assessments of research publications and are not tied to university funding. Instead, every six years each university must conduct an external peer review of its research programs involving internationally respected researchers, which follows a Standard Evaluation Protocol (SEP) developed by the collective Dutch universities. The SEPs focus on the academic quality, scientific productivity, and long term vitality of each research program utilizing a variety of information sources including on site interviews, university self-reports, as well as bibliometric evidence. These evaluations are made public.

Research (Westerheijden, 2007) suggests that these more formative evaluations adopted in the Netherlands have had as positive an impact on research productivity, research quality, and improvements in each university's strategic management of research as the much more highly publicized competitive block grant performance funding system in the United Kingdom. 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 United Kingdom.<sup>3</sup> Furthermore, in contrast to the RAE, the system in the Netherlands has been more stable in design; likely less costly

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<sup>3</sup> However, unlike the United Kingdom the Netherlands has retained a binary system of higher education featuring polytechnic institutions, which offer bachelor programs closely tied to professional fields and businesses in the local region and which are not permitted to engage in research doctoral education. This binary line lessens the need for stratification within the university system. The Netherlands also has a smaller system of higher education and possibly a more consensual culture than the United Kingdom.

to run; and potentially provides more nuanced and useful information to each university on means of improving its research activities. As such these research evaluations can continue to make over time an effective contribution to improving the academic research enterprise.

## **Regulation**

Regulations seek to alter the conduct of market behavior, primarily of sellers. Government regulation designed to influence the conduct of universities may be implemented in a number of areas such as academic governance, finance and budgeting, university personnel policy, even behavior in academic research as in the national policies affecting research on human subjects. But over the last twenty-five years, as access to higher education expanded and became a larger part of national budgets in many countries, national regulations designed to assure academic quality in teaching and student learning have frequently been adopted (Dill & Beerkens 2013; Williams & Harvey 2015). Given the recent emphasis on this issue in Japan; therefore the focus below is on market-oriented regulation in higher education on the design and impacts of national quality assurance (QA) policies for universities.

As previously noted a critical assumption for socially beneficial efficient markets is consumers and producers have “perfect” information. That is rational choice for producers and consumers requires economic agents who are well informed about both price and quality (Teixeira et al., 2004). This necessary condition for efficiency has motivated the adoption of new policies on “transparency” in higher education. These policies assume better informed prospective students will be able to make more effective educational choices; competition for these better informed students will in turn lead universities to improve the quality of teaching and student learning in academic programs; and these overall efforts will increase the efficiency of the higher education system (Teixeira et al., 2004). However, research on the impact of information provided by commercial university rankings, as well as by relevant government and not-for profit publications designed for student consumers in many countries, suggests they do not effectively address the expected information deficiencies in the higher education market (Dill & Soo, 2005; Hazelkorn, 2011). Information provision is likely to positively influence academic programs 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 & Weimer, 1999). But the cost and complexity of developing valid indicators of academic program quality to inform student choice are significant. Furthermore, for-profit publications already enjoy substantial sales and influence among opinion leaders, higher achieving students, and even university personnel by producing rankings emphasizing as noted indicators of academic prestige, which have questionable validity as predictors of effective student learning (Pascarella, 2001).

In addition, university rankings base their “prestige” assessments disproportionately on measures of the quality of enrolled students and faculty research (Dill & Soo, 2005). Therefore, many universities have responded to market competition, not by improving the quality of student learning in academic programs, but by expending greater amounts of time and resources in marketing student admissions; developing facilities attractive to students; and “cream skimming” students by selecting the highest-achieving applicants, as well as investing in activities designed to enhance university research reputation (Dill & Beerkens, 2010). Some universities have been motivated by academic quality rankings to improve their internal data gathering (Locke et al., 2008), but since the commercial league tables are not based on any testable theory or model of university educational performance this emphasis on information seldom leads to institutional actions which actually improve the educational quality of academic programs (Ganseuer & Pistor, in press).

The failure of the market to provide useful consumer information about academic quality has inspired several non-profit efforts to provide more valid and socially beneficial academic rankings. These include the carefully designed academic program rankings developed by the Center for Higher Education in Germany (Beerkens & Dill, 2010). These rankings provide classifications by academic subjects rather than whole institutions; information more relevant to student choice in many countries including Japan; and were systematically developed by knowledgeable professionals based upon relevant research as well as studies of student needs. But while these rankings are superior to most commercial rankings of universities, they also have weaknesses for informing student choice. For example, the student surveys used to construct these rankings have limited reliability because of the low and/or highly variable student response rates in different academic fields. Also, a positive association has been discovered between rankings scores and university size.

The stated differences among subjects or institutions are often insignificant and stable over time, thereby providing limited guidance to student decision-making.

Finally, the international research to date on student choice in mass systems of higher education suggests many university applicants are “naïve consumers.” That is their university choices are influenced by a wide variety of educational, social, and personal factors, including the proximity of the university to their place of residence as well as the consumption benefits of education. A national study, which examined limited student learning in the United States market-oriented first degree system, concluded: “(t)here is no reason to expect that students and parents as consumers will prioritize undergraduate learning as an outcome” (Arum & Roksa, 2011, p.137).

A second means by which national regulations on academic quality attempt to use information to improve consumer influence is by requiring universities to adopt student evaluations of university instruction. For example, standardized student satisfaction surveys of teaching, which have been commonly employed in United States higher education for many years, are now being mandated for the evaluation of academic staff by national policies in other nations. But recent research in the United States and France on standardized student surveys (Stark & Freishtat, 2014; Boring, Ottoboni

& Stark, 2016) suggests the results of these surveys are biased by discriminatory evaluations of women and minorities; positively associated with the award of inflated student grades; and negatively related to direct evidence of student learning. Student comments on their learning experiences in a course in which they are enrolled can be of genuine value in improving university instruction. But student observations will be more useful if collected by course instructors with relevant qualitative methods and tools (Ganseuer & Pistor, in press). To better monitor and improve university instruction, direct assessments of teaching behavior are more effective, such as classroom observations by academic peers as well as systematic university appraisals of instructor teaching materials. However, these types of evaluations are much less commonly employed than student satisfaction surveys (Stark & Freishtat, 2014).

Universities have always had internal processes by which the collective academic staff attempt to assure academic standards. These core processes include: the institution's processes for developing, approving, and evaluating academic courses and programs; the processes for evaluating and improving instruction; and the institutional processes for assuring both the integrity of grading standards across subject fields and the validity of means for assessing student learning outcomes.

But as Sir Eric Ashby so trenchantly observed almost fifty years ago:

All over the country these groups of scholars, who would not make a decision about the shape of a leaf or the derivation of a word or the author of a manuscript without painstakingly assembling the evidence, make decisions about admission policy, size of universities, staff-student ratios, content of courses, and similar issues, based on dubious assumptions, scrappy data, and mere hunch. (Ashby, 1963, p.93)

As the limitations of the frequently required student satisfaction surveys illustrate, contemporary core university processes for maintaining academic quality and standards may still fail to employ rigorous evaluation methodologies conforming to social scientific standards of evidence. Contemporary studies of university academic quality assurance processes stress what is most lacking is the implementation of a "culture of evidence" for improving teaching and student learning (Shavelson, 2010).

### **Developing valid and reliable information for improving university education**

The statement "if you can't measure it, you can't improve it" does have relevance to academic work, certainly with regard to the progress made in academic research over the last century. The challenge of developing more valid and useful measures for assuring academic quality in teaching and student learning has motivated experiments with standardized tests of general knowledge and skill such as the Graduate Skills Assessment (GSA)<sup>4</sup> in Australia and the Collegiate Learning Assessment (CLA)<sup>5</sup> in

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<sup>4</sup> Graduate Skills Assessment (GSA): <https://www.acer.edu.au/gsa> (accessed 5/2016)

the United States. But similar to student satisfaction surveys, there are significant issues regarding the validity and reliability of these types of standardized instruments as a means of differentiating the educational quality of universities (Dill & Beerkens, 2013).

Instead of relying on standardized university measures a more effective approach to academic quality assurance would be providing incentives and support for collective actions by the academic staff *within* each program or department to develop valid, direct measures of learning outcomes *at the subject level* (Shavelson, 2010). As Pascarella and Terenzini (2005, p.648) concluded in their exhaustive review of the available empirical research on teaching and learning in higher education:

Assessment of department-specific learning outcomes can be a useful vehicle for change. *Assessment plans and activities developed and approved by faculty* can provide an empirical foundation of systematic and ongoing rethinking, redesigning, and restructuring programs and curricula. For faculty members, trained to be skeptical about claims, evidence is the gold standard in the academy, and they are unlikely to adopt new ways of thinking or behaving without first being convinced that the new pedagogies and organizational structures are better than the old. In addition, *the findings of assessment studies specific to faculty members' academic units will generate more interest and action than general or institution-wide evidence* (emphasis added).

Tests such as the mentioned Graduate Skills Assessment and the Collegiate Learning Assessment, however, as well as United States measures of the student experience such as the National Survey of Student Engagement (NSSE)<sup>6</sup> and The *University of California Undergraduate Experience Survey (UCUES)*<sup>7</sup> could be valuable as *diagnostic* tools within universities. For example, they could be used to help identify academic programs or departments doing particularly well or poorly in assuring academic quality. Such “evidence” could be influential in motivating the academic staff of a low scoring program to collectively address needed improvements in instruction and student learning. These measures could also help the academic institution identify effective practices and tools from high scoring programs that could be usefully transferred to programs with educational limitations.

This focus on supporting and motivating collective actions by the faculty of each academic program to re-design their curriculum and courses to maximize the effectiveness of instruction and student learning is consistent with recent research on university education. Research in northern Europe (Hovdhaugen, 2011) confirms the positive influence of the structure or “cohesion” of an academic program on student progression and degree completion. Similar research in the United

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<sup>5</sup> Collegiate Learning Assessment: <http://cae.org/participating-institutions/cla-references/cla-supporting-materials/> (accessed 5/2016)

<sup>6</sup> National Survey of Student Engagement (NSSE): <http://nsse.indiana.edu/> (accessed 5/2016)

<sup>7</sup> The University of California Undergraduate Experience Survey (UCUES): <http://studentsurvey.universityofcalifornia.edu/> (accessed 5/2016)

States (Pascarella & Terenzini, 1991) indicates students' learning of academic content and their cognitive development are most significantly associated with the pattern and sequence of the courses in which they enroll; by program requirements that integrate learning from separate courses; and by the frequency of communication and interaction among faculty members in the subject field.

### **University regulation of academic quality**

In addition to the aforementioned information-based regulatory efforts to improve academic quality in higher education, some countries such as Germany have implemented national assessments or accreditations of each subject field within a university (Kehm, 2010). These accreditations have encouraged greater faculty attention to improving program instruction, but over time these external reviews also have proven expensive, wearying to program faculty, and appear to result in diminishing returns and decreasing faculty support. A recent study in a Germany university (Ganseuer & Pistor, in press) regarding faculty attitudes toward these external study program accreditations described them as being "bureaucratic," "pseudo-objective," and even "absolute nonsense." External subject accreditations also lessen the incentive for universities themselves to develop collective actions by the overall academic staff to improve academic quality in all programs.

Because many of the national regulatory efforts have had limited success in actually assuring and improving academic standards in the university sector, national QA policies in The European Union now appear to be shifting from the earlier market and externally oriented approaches to a "development oriented" approach focused on the institution level (Hopbach, 2014). For example, Germany is now offering "system accreditation," the option of accrediting a university's internal quality assurance system as a replacement for the external accreditation of each study program (Ganseuer & Pistor, in press).

The general point about the need for more effective university self-regulation of academic quality can be made with a very informative case study of the experiences of the University of Duisburg-Essen (UDE) in Germany (Ganseuer & Pistor, in press). UDE is located in the North-Rhine Westphalia region and is one of the ten largest universities in Germany. It is a comprehensive university with over 230 courses of study in eleven faculties including the humanities, social sciences, and natural sciences, as well as business studies, engineering, and medicine. However, because of the recent "massification" of higher education in Germany, more than half of UDE's enrollment is composed of non-traditional students whose parents did not enter higher education. Furthermore, a quarter of the student population are either first or second generation migrants. Consequently, many of UDE's students have educational needs in terms of language qualifications or preparedness for academic study, which make UDE's efforts at institutional quality assurance of particular interest.

While German universities regularly stress the need for institutional and faculty autonomy, the UDE study noted the required external subject accreditations were an important factor in motivating faculty support and engagement in the development of effective institutional quality assurance. Because all study programs had previously undergone external accreditation, these experiences provided an informative base for criticisms of existing institutional quality assurance tools, the development of new ones especially at the study program level, as well as the implementation of a coherent university quality assurance system. Indeed, external accreditation processes helped sensitize the institution and its staff to the demands of external stakeholders and prompted internal university discussions about the quality of its study programs.

Generally, the evolution of quality assurance in a university starts with the implementation of tools for collecting information and data. The development of effective processes to apply what has been learned from the acquired data usually only happens as a second step. In the course of UDE preparing an application for German “system accreditation,” it became clear the number of quality assurance tools at the university had to be reduced to ensure data really were of use for assuring and improving academic standards.

UDE’s internal quality assurance was fostered by an emphasis on evidence based decision-making, i.e. measurable facts, numbers, and figures to serve as a basis for valid strategic decisions. The more autonomous universities become, the more institutional decision makers themselves require valid data on which to base decisions. The underlying rationale of UDE’s quality assurance system was a balanced interconnection of decentralized and central governance as well as evidence-based decision-making processes. These evidence-based processes included:

- Module evaluations applied when course evaluation results indicate problems in a particular module. The make-up and structure of the module, the modalities and organization of the module examinations, and the targeted qualifications and learning outcomes achieved by module students are assessed.
- Workload recording is an optional tool used whenever the results of student course evaluation indicate the need for a thorough check of the students’ academic workload. Utilizing a simple on-line survey, UDE collects study-related workload data from a sample of students over an entire semester, including lecture-free periods.
- The student panel is a longitudinal, cross-sectional student study, assessing individual and institutional determinants of study success. Students who participate in the panel are questioned several times with an aim of tracking their individual study progress, as well as analyzing the specific problems of particular student cohorts. The survey pays particular attention to the daily study routine, study conditions, and the problems and needs of the students.
- Graduate tracer studies are used to obtain information about the subsequent life and career trajectories of UDE graduates.

Because of the tradition of highly autonomous faculties and departments within UDE, it is no surprise that respect for autonomy was emphasized in the case study as one of the most important factors for the success of the university's reform of internal quality assurance. UDE allows a significant amount of freedom for organizational sub-units to manage their own strategic development. Therefore, the UDE experience suggests institutional quality assurance policy should leave space for the demands of faculties and departments to be as adaptable as possible within the framework of a given institutional quality culture and only as standardized as is strictly necessary.

This means the degree of standardization of internal quality assurance processes within a university – both large and small – needs to be thoroughly considered. For example, at UDE relevant data on course evaluations, module evaluations, student workload evaluations, the student panel, and tracer studies are reported to the relevant faculties every year. Each faculty is required to conduct yearly a “quality conference,” a forum at which participants reflect on the quality of teaching and learning at both department and study program level. However, the faculties can use their own discretion in deciding the format of their quality conference. Whatever format they choose, faculties must prepare a report once the quality conference has taken place. With regard to teaching evaluations UDE has become convinced, as suggested previously, standardized course evaluation have significant limitations. Standardized paper-based questionnaires, in which students report their level of satisfaction with their courses, have been utilized at UDE since 2004 when the state required them as part of new quality assurance policies. Because of their limitations UDE has recently implemented qualitative tools for evaluating teaching. The “teaching analysis poll” (TAP) is a mid-term evaluation method providing lecturers with detailed, activity-oriented student feedback. “Course evaluation via student representatives” (CESR), like TAP, is aimed at promoting dialogue between lecturer and students as to how teaching can be developed and improved. With CESR two to five representatives are elected by the students on a course and meet the lecturer three times during the semester to discuss course content, the study environment, and potential problems.

UDE also discovered providing extensive and continuous information is essential when establishing internal quality assurance tools and procedures in order to respect the diverse structures, demands, and cultures of its sub-units. Information on quality assurance activities, as well as the revision of UDE's quality assurance system to achieve System Accreditation, was channeled to members of the university community through a project steering committee and an advisory board comprising members of all faculties. Since quality assurance particularly affects staff members working in teaching and research, additional efforts were made to inform staff who were not directly involved in strategic decision-making.

Finally, UDE's institutional quality assurance system links internal quality assurance with other processes of organizational change. The linkages made with curriculum design, human resource development, organizational development, institutional planning, and data management are important

for the creation of an interconnected and coherent system addressing continuous quality enhancement. Favorable mention was also given to the importance of establishing a support unit, which can advocate the creation of internal quality assurance structures, support the faculties in their quality work, as well as do the groundwork on quality development for the rectorate and faculties.

## Conclusion

In her Economics Nobel Prize lecture Elinor Ostrom (2010) argued neither the regulatory rules of the state nor market forces are the most effective institutional arrangements for governing, managing, and providing complex public goods in self-governing organizations similar to universities. Thoughtfully designed deregulation and competitive mechanisms for research funding could contribute to improving university performance and efficiency as suggested above. But crudely defined markets, the imposition of simplistic output measures for instruction, research, and public service, as well as national policies encouraging centralized decision making in universities – i.e., “managerialism” – can distort the professional incentives, ethical values, and equitable distribution of authority within universities which have traditionally motivated academic work in the public interest. The solution is to recognize that competitive markets are not naturally occurring phenomena, but creations of government, and therefore require careful design, implementation, and regulation if market failures are to be avoided.

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