

An analytical framework for the cross-country comparison of higher education governance

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Abstract In this article we provide an integrated framework for the analysis of higher education governance which allows us to more systematically trace the changes that European higher education systems are currently undergoing. We argue that, despite highly insightful previous analyses, there is a need for more specific empirically observable indicators of policy change and inertia. We therefore propose a systematic classification of empirical indicators of higher education governance. To do so, we look at three historically entrenched and still highly relevant European models of higher education—academic self-governance, the state-centered model and the market-oriented model. Based on these broader overarching models which reflect the tensions between the state, market and academia, we develop three ideal-types that take internal university governance as well as the role of the state and external stakeholders into account. Against this background, we derive empirical indicators with regard to the institutional balance of power, financial governance, personnel autonomy and substantive matters. Our analytical contribution shall enable scholars, and in particular political and social scientists, to trace ongoing patterns of change and convergence as well as persistence and inertia in higher education governance arrangements.

Keywords Higher education governance · Marketization · Analytical framework · Indicators

Introduction

Around the globe higher education (HE) is currently subject to profound changes. The emergence of the knowledge society (Delanty 2001; Arthur 2006; Gornitzka et al. 2007), demographic developments, sluggish economic growth and increased competitive pressures from globalization have stimulated an array of reforms to contemporary HE systems. In view of convergence-promoting processes such as the Bologna Process and the spread of

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New Public Management, domestic HE institutions are increasingly subject to competing visions of how university systems and institutions of higher education should be governed (see Vaira 2004; Olsen 2007; Krücken et al. 2007). At the same time, individual national HE systems are still also anchored in country-specific regulatory and coordinative regimes, which to a great extent reflect national historical and institutional developments (see Neave 2003).

Previous research has shown that, amid demands for universities to “do more with less”, national education policy makers are designing and embracing new models of governance and frequently transforming individual HE institutions, the role of the state, as well as the socio-economic role and function of HE (see Gornitzka and Maassen 2000). Many of the ongoing reforms in Europe, in particular, have been subsumed under the banner of “marketization”, ranging from the partial retreat of the state as a financier, to the allocation of strategic authority to university management, and to an increasing focus on the economic utility of teaching and research (see Meek 2000; Phillip 2000; Neave 2003).

In Europe and beyond, the Bologna Process has also played a key role in stoking national reforms of HE and there are strong reasons to believe that Bologna is likely to foster changes in national governance structures. Various analyses have shown that the Bologna Process has enabled domestic actors to shore up support for a range of only loosely related HE agendas, e.g. tuition, privatization (see Dobbins and Knill 2009; Bieber 2010; Niemann 2010). At the same time, the European Commission has put forward a clear vision for the governance of European universities, which includes, among other things, a diversification of funding sources, an intensification of ties between universities and industries and a closer match between the supply of qualifications and labour market demands (see European Commission 2003, 2006). As a result of transnational pressures and domestic exigencies, national systems of HE governance are—to a greater or lesser degree—being reshaped, transformed, modernized and in many cases “marketized”. These changes have reshaped the role of the state, heralded new paradigms for university management, and contributed to new forms of university-industrial relations.

In the following we address the current state-of-the-art on the analysis of higher education governance by examining the literature on both internal university governance as well as the state’s involvement in higher education. We then argue that, despite much progress in the past decade, there still is a need for more specific comparative empirical indicators to grasp the complexity and diversity of governance arrangements. Against this background, we propose a systematic classification of governance indicators based on three historically entrenched models of higher education in Europe. We contend that such indicators will enable scholars to more systematically trace and compare current system- and university-level developments, in particular in research-oriented universities in Europe.¹

Higher education governance—the state of the art

In recent years, scholars have aimed to grasp the phenomenon of higher education governance and changes within it. One frequent starting point to address the institutional origins and balance of power in modern higher education systems is Clark’s triangle (1983), which distinguishes between a state-control model, a Humboldtian model of

¹ With regard to governance regimes in polytechnic, non-research higher education, see Kyvik (2009).

academic self-rule and an Anglo-American market-oriented model (see also Neave 2003). Drawing on Clark's work, other authors have more recently provided highly instructive classifications of various types of HE governance (see van Vught 1995; Braun 2001; Niklasson 1996; McDaniel 1996), while other scholars have developed typologies for specific dimensions (see e.g. Jongbloed 2003 for financial governance). For example, Van Vught (1989) and Goedegebuure et al. (1993) distinguish between "state control" models and "state supervising" models, the latter of which saw the role of the state not as guardian and designer of higher education systems, rather as that of a "referee", "mediator", and "activator" of widely autonomous systems. Other authors such as Neave (1998a, b) and De Boer et al. (2007) have also demonstrated that a shift in the form of state influence from *ex ante* to *ex post* control has taken place, the latter of which involves a stronger focus on institutional output and comparative performance indicators (see Neave 1998a, b).

Other scholars have addressed the diversity of governance patterns emerging in the course of the HE reforms in Europe in the last 15–20 years. Sporn (1999), for example, described the concept of *shared governance*, which focuses on negotiations, the role of external stakeholders and the participation and integration of all groups and objectives relevant to higher education. Braun (2001) discussed the model of *corporate governance*, with an emphasis on the entrepreneurial character of HE institutions and their strategic planning efforts. Here, universities are regarded as highly proactive and reactive organizations with strong academic participation in decision-making bodies. Braun distinguished the corporation model from a different type of university governance defined as the "entrepreneurial model" (see also Clark 1998), which focuses on the links between universities, markets and society and emphasizes universities' efforts to acquire industrial capital through applied research (ibid. 2001: 256). Braun and Merrien (1999) and Braun (2001) also assert that New Managerialism has emerged as a key principle for steering the HE systems of many OECD countries. Among other things, New Managerialism entails policies based on decentralization, the definition of quantitative and qualitative aims, institutional autonomy, cooperation with the private sector, while incorporating principles such as institutional evaluation, continuous learning and performance contracts (ibid. 1999; 2001).²

Such analyses have greatly enhanced our understanding of current phenomena at higher education institutions and the shift towards more flexible, competitive and managerial structures. However, we believe that the current discussion on governance patterns could also greatly benefit from the development of more systematic empirical indicators that enable us to measure the degree and direction of change, both in individual countries as well as across different countries. For example, social scientists may be interested in the degree to which a given country has departed from its historical state-centered model towards the entrepreneurial or new public management model or to what extent the HE systems of several countries have become "marketized". However, a critical prerequisite for doing so—a broad scheme of empirically observable indicators for various sub-dimensions of HE governance and policy change within them—is still lacking.

In recent years though, various studies have made significant contributions towards achieving this objective. For example, the recent volume *University Governance: Western European Comparative Perspectives* (Paradeise et al. 2009b) renders particularly instructive comparative accounts of the current changes in HE governance in Europe, while deriving a series of indicators to reflect them. Similarly to Clark, the authors distinguish

² See also Gornitzka and Maasen (2000), who distinguish between a *sovereign state steering model*, an *institutional steering model*, a *corporate-pluralist steering model* and a *supermarket steering model*.

between the Napoleonic HE models of France and southern Europe, which are marked by top-down ministerial law making, and the northern European Humboldtian tradition of a self-governing community of scholars. The individual country reports highlight shifts at the national level away from these historical models towards more managerial, competition-oriented approaches in HE governance. This is reflected by indicators such as increasing university autonomy amid greater accountability towards stakeholders, a trend towards strategic planning and university missions, diversification of funding sources, greater personnel autonomy, lump-sum budgeting and *ex post* quality audits (Paradeise et al. 2009a, b). However, the authors point out that each national system bears its own nuances due to historical peculiarities and path dependencies, often leading to contradictory development patterns and hybrid forms of governance.

In their analysis of the organizational transformation of Dutch universities, De Boer et al. (2007) also present very specific indicators to grasp the trend towards state steering at a distance and, in particular, the emergence of universities as corporate actors. The authors contend that the governance reforms of the past 20 years have led to the construction of new forms of identity, hierarchy and rationality in universities. The proposed indicators of this transformation span from financial discretion and setting own employment conditions (*constructing identity*), to an authoritative center directing action, managers as chief executives (*constructing hierarchy*), on to management by objectives, performance agreements and monitoring (*constructing rationality*).

Ferlie et al. (2009) also incorporate the role of the state into their three narratives of public sector reforming, for which they identify distinct “signs and systems” applicable to HE systems. For example, according to the *network governance* narrative, higher education systems are understood as multi-level self-steering and self-organizing networks between societal and academic actors, which facilitate joint problem solving and the diffusion of best practice. Together with regional and local actors, the state thereby plays an indirect shaping role and ensures that HE institutions operate in accordance with the public interest. The so-called *Neo-Weberian narrative* is characterized by the reassertion of Weberian principles such as administrative law and due process as well as professionalized public service, which now focuses on meeting citizens’ needs by means of outward-oriented service planning and quality assurance. In recent years, the state has emerged as a vehicle of modernization through the legal framework, for example facilitating a shift from *ex ante* to *ex post* control and a strong result orientation (2008: 339). According to the authors, the *new public management narrative* is characterized by market-based features such as competition for students and research funding, for which the state develops a HE market. Other indicators are student fees, performance-based funding, as well as entrepreneurial operating rectorates in highly autonomous HE institutions.

In their recent exploratory study, Estermann and Nokkala (2009) deal with one very crucial aspect of governance, university autonomy, and make the very significant contribution of breaking autonomy down into its component parts (see also Berdahl 1990). Based on empirical data from 33 countries, they outline a trend towards greater autonomy in the *organizational structures* of universities, which covers aspects such as governing bodies, executive leadership and internal administration, as well as *staffing matters*, which involves the recruitment and appointment of staff, setting salary levels, and civil servant status of academics. This greater autonomy also applies to *academic matters*, which involves universities’ ability to define their own institutional strategies and academic profiles and freely regulate student admissions. The authors also map out various facets of financial autonomy and determine a trend towards competition-oriented funding policies such as student fees, block-grant funding, and third-party funding.

In the present analysis we aim to pull together and further systematize the previous work on HE governance and university autonomy. In doing so, we develop three ideal-type models which encompass not only internal university governance, but also the role of the state and other stakeholders. On the one hand, we wish to move the debate on higher education governance forward by developing a more systematic set of indicators to measure the degree and direction of policy change. On the other hand, we believe that systematic indicators of higher education governance must not only render current trends (e.g. marketization, universities as corporate actors), but also reflect historical foundations of (European) universities, and in particular Humboldtian and Napoleonic traditions (see Clark 1983; Neave 2003). Hence, indicators of HE governance should enable us to better contrast the *status quo ante* with present trends and thus identify historically rooted path dependencies amid recent developments. Our objective is therefore not to refute previously developed indicators of various forms of governance (see above), rather to further systematize them and bring them in line with the historical visions of the university in which European HE systems are still rooted.

To do so, we deliberately seek to build on the recent study by Olsen (2007), who himself draws on earlier work of Clark (1983) and Neave (2003) to describe different historical visions on which European HE systems are based. Following Olsen (2007), we develop three overarching models defined as “the market-oriented model”, the “state centered-model” and the “academic self-rule model”. Fully aware of the static nature of comparative indicators and the peculiarities of national systems, we nevertheless believe that our broader models and the indicators will be a useful tool for future studies on changing HE systems. Moreover, they provide an added value for measuring and comparing the depth of change and can also be streamlined into more nuanced models of governance presented above (Sporn 1999; Braun 2001; de Boer et al. 2007).

Proposed ideal-type models

To arrive at an encompassing picture of policy developments over time, we deliberately lay down a broad and multifaceted definition of contemporary HE governance, which comprises patterns of control, coordination and the allocation of autonomy between three levels—the state, professoriate, and university management—while preserving Clark’s tripartite distinction between the state, academia and the market, which in turn reflects the Humboldtian, Napoleonic and British traditions of HE prevalent in Europe. Thus we seek to integrate into our analytical framework (1) the organizational structure of universities including personnel and funding issues (2) the state’s regulatory approach, and (3) relations between universities, external stakeholders and society (McDaniel 1996). Of crucial importance to our classification is the allocation of autonomy, which accounts for how order in the academic sphere is attained, i.e. through centralized management, all-embracing control or through the differentiation of spheres of influence vested with self-regulatory powers. Similarly to Estermann and Nokkala (2009) and Berdahl (1990), we break down the notion of autonomy into its major component parts. We restructure what Berdahl (1990) defined as *procedural autonomy*, i.e. the means and resources which universities have to put their goals and programs into practice, into a broader category which we label ‘the institutional balance of power of the university system’, as well as two further sub-dimensions of this which we define as ‘personnel autonomy’ and ‘financial governance’. The category ‘institutional balance of power’ pertains to general state-university-society relations, decision-making structures, quality control arrangements as

well as the management approach. ‘Financial governance’ addresses the procurement, allocation and management of funds. For example, does university management have the autonomy to implement performance-based management and funding and what personnel matters does the state influence? ‘Personnel autonomy’ pertains to the authority of institutions to freely set conditions for staff, e.g. appointments, salaries, and even work hours, and the role and status of rectors and/or university leadership. We also incorporate matters of substantive autonomy (Berdahl 1990), which comprises the overall possibilities for academic institutions to regulate programs without state intervention (see van Wageningen 2003). The concept addresses whether decision-making authority over goals, programs, the research profile and curriculum is delegated to the level of the universities and/or faculties. Do universities have the means to set their own content of curricula and standards for granting academic degrees? Substantive autonomy thus comprises the freedom to review and eliminate academic programs and control institutional and research activities.

The state-centered model

Drawing on Clark’s (1983) and Olsen’s classifications (2007),³ this model conceives universities as state-operated institutions. The state directly coordinates all or most aspects of HE, such as admission requirements, curricula, exams, nomination of academic personnel, etc. Universities are subject to the formal administrative control of the state and granted relatively little autonomy. The state plays the role of a “guardian” (see Neave 1996, 2004) and actively influences internal matters, most notably quality assurance, efficiency and university-business relations (see also Neave and van Vught 1991: xi–xxii). This notion has profoundly shaped HE in France (Kaiser 2007), Spain, Portugal, and the Soviet Union and its satellites, albeit within the bounds of the Marxist-Leninist doctrine (see Dobbins 2011).

According to Olsen (2007), the constitutive logic of a state-centred HE system is the implementation of pre-determined national objectives. Universities are understood as rational instruments employed to meet national priorities. Research and education are core national production factors contributing to industrial and technological competitiveness. As a consequence, ties between universities and industry and commerce should be mediated or filtered through national government (see Neave 2003: 145), while external stakeholders provide for additional control over academic activities.

The state generally exercises strong oversight over study content, while finances are allocated by the state in itemized fashion. The strong leverage of the state/ministry is reflected in the high degree of hierarchy and the fact that administrative staff is often appointed, not elected. Uniform legislation in combination with nationally standardized procedures—e.g. conditions of access and employment, pay scales—bonds universities to the central government. Although not entirely buffered from external forces, HE systems tend to change as a result of changing government coalitions. Despite trends away from the state-centered model, very strong traces of its legacy can be identified in France (see Kaiser

³ Olsen (2007) also puts forward a notion of the university as representative democracy, which falls back on the work of Habermas (1967) and de Boer et al. (1999). Here the university is linked to enhancing democracy at large in society and bears components of direct democracy and student sovereignty. However, elements of student sovereignty, egalitarianism, and democracy can also be found in other models in various ways. Moreover, the concept of the university as a direct democracy has proven to impact the reform efforts after 1968 and influence other governance systems without fully establishing itself as a broadly practiced model.

2007), Turkey (Mizikaci 2006) and post-communist Romania (see Dobbins and Knill 2009) and Russia (see Meister 2007).

University as a self-governing community of scholars (the Humboldt model)

Founded upon Humboldt's principle of *Lern- und Lehrfreiheit* (freedom of teaching and learning), this model has shaped and still shapes HE in Germany, Austria and much of pre- and post-communist central Europe (Scott 2002: 140–141; Nybom 2003; Dobbins and Knill 2009). Its guiding organizational principle is described by some as 'academic self-governance' and by more skeptical observers as 'academic oligarchy', implying thus weak university management, strong self-regulation, and collegial control by the professoriate, in particular as regards study and research profiles (see de Boer and Goedegebuure 2003: 215). In its ideal form, the model is based on a state-university partnership, governed by principles of corporatism and collective agreement. On the one hand, academic "oligarchy" is synonymous with the self-regulation of academic affairs by the academic and scientific community via academic senates at the institutional level in concert with external self-governing bodies such as the German or Austrian *Hochschulrektorenkonferenz* and *Wissenschaftsrat* (Clark 1983: 140). On the other hand, the state remains a potent actor thanks to diverse planning and financial laws limiting the scope of self-governance. Thus, the supreme degree of autonomy called for by Humboldt is now constricted by universities' political affiliation with and financial dependency on the state, which creates a necessity for collective agreement. However, the protection of academic freedom and funding by the state enables universities to establish normative and constitutive principles and rules of their own without being subject to external design (Olsen 2007).

Compared with state-authority models, this understanding of HE is marked by the lack of institutional coordination between university strategies and industrial and/or political goals. In other words, there is a lack of anything resembling manpower plans, which would streamline socio-economic needs into academic activities and student placement. Instead, the purest and indeed utopian version of the Humboldt model is founded upon free scholarly enquiry and the inseparable link between research and teaching. Hence, the self-perception of the university is tantamount to the shared commitment to the search for truth through intellectual freedom—regardless of the utility, applicability, economic benefit or political convenience of scientific results (Olsen 2007).

Of paramount importance to the academic self-rule model is the chair system, in which each professorial chair functions as a core organizational unit vested with a supreme degree of autonomy (see Schimank 2002: 8). Once appointed, the occupants of professorial chairs constitute bastions of authority at the micro-level, or as Clark put it "small monopolies in thousand parts" (1983: 140). When several chairs act in concert or as a "federation" of chairs (Sadlak 1995), they possess a formidable power to block initiatives of the government. On the one hand, the university still operates in the service of society and science as a whole. On the other hand, universities and their specialized sub-systems, the professorial chairs, are traditionally more in tune with the dynamics of their scientific disciplines than socio-economic pressures. Resulting from this, a system of decentralized collegial organization emerges at the faculty and chair level, in which appointments are made on a collegial basis and on the basis of scientific merit. Nevertheless, self-governance takes place within state-defined constraints, as universities remain under the auspices of the state (or in the German case *Länder*) and professors hold the status of civil servants.

However, the strong emphasis on scientific demands and detachment from socio-economic needs is frequently described with catchwords such as the "Republic of Science"

or “Ivory Towers” (Olsen 2007; Neave 2003), which are further marked by the frequent lack of comprehensive performance-based criteria as regards, for example, the quality of teaching, the selection of students, and pay scales. These circumstances still characterize, to a large extent, contemporary German higher education, for example (see Schimank 2005; Niemann 2010).

The market-oriented model

Instead of Humboldt’s ideals of unfettered scholarly enquiry, academic self-governing models have frequently become synonymous with the deterioration of teaching, mass bureaucratization, and mistrust between the state, universities, and society. Market-oriented models, by contrast, contend that universities function more effectively when operating as economic enterprises within and for regional or global markets (see Marginson and Considine 2000), while entrepreneurial tactics are regarded as legitimate organizational principles (see Clark 1998). Jongbloed (2003: 113), for instance, defines marketization policies as “policies that are aimed at strengthening student choice and liberalizing markets in order to increase quality and variety of services offered.” In this framework, universities compete for students and financial resources. University management sees itself in the role of a producer and entrepreneur, which offers academic services to students. Thus, the *institutional leadership* demonstrated by HE institutions is a core feature. Subsequently, the “entrepreneurial” university and related notions of corporate governance have come to dominate current discourse (Clark 1998; Felt 2003). Ideas based on New Public Management and private enterprises (e.g. performance-based funding) enjoy a high status as governance mechanisms at the university level, while the forces of competition are intended to enable rapid adaptation to new constraints and opportunities (see Ferlie et al. 1996, 2009). This is reflected, for example, by the alleged capacity to add and subtract fields of knowledge. Thus, unlike in Humboldt systems, information and knowledge are not an end in themselves. Nor are they a public good. HE is instead viewed as a commodity, investment, and strategic resource (see Olsen 2007).

Instead of shaping and designing the system, the state tends to promote competition, while ensuring quality and transparency (Phillip 2000: 78; Ferlie et al. 2009). Accordingly, competition among buyers (students) and sellers (HE institutions) is assumed to assure greater discipline in institutional decisions regarding expenditures and the ‘education product’, as it is believed to facilitate institutional adaptation and innovation. HE marketization may include privatization, although this is not invariably the case.

At the same time, market-oriented systems may offer governments an array of policy instruments to enhance competition such as regulations on subsidies and instruments affecting pricing structure and enrolment (e.g. competitive admissions, price ceilings). The American system, in particular, is known for taxation incentives for families who invest in children’s education or for corporations who make donations to HE institutions. Hence, government involvement entails regulation and incentives for competition and quality, rather than directives, legislative decrees, or manpower-based planning (Olsen 2007; Niklasson 1995). However, institutions remain financially dependent on external stakeholders such as private and business donors as well as students, the ultimate beneficiaries of HE. As a result, research and teaching are “sold” for competitive prices on the market (Marginson and Considine 2000).

Along the same lines, universities are likely to be more susceptible to special interests as they find themselves in a delicate position of dual accountability towards the state/public sector and market demands. In other words, public authorities penetrate vertically into HE

systems to assert leverage over the structure of academic markets, while market forces horizontally “inject” consumer demands into the system (see t’Veld et al. 1996: 32), leading to increased conflict potential.

Empirically observable dimensions

Following these distinctions, we break down systems of university governance into empirically observable dimensions. The classification of governance types is aimed at integrating key insights and categorizations from the abovementioned studies, most notably Clark (1983), Neave (1998a, 2003), Olsen (2007), Estermann and Nokkala (2009) and Jongbloed (2003) for financial governance. However, it must be first emphasized that all higher education systems mix elements of hierarchical state control, market competition and academic self-rule (see Niklasson 1995). Therefore none of the ideal-types outlined above is likely to be observed in its purest form. Nevertheless, they bear significant tangible differences with respect to the degree and scope of autonomy granted to institutions and the nature of governance.

Institutional balance of power of the university system

Our classification begins by addressing the institutional balance of power, which is based to a great extent on the allocation of procedural autonomy (Berdahl 1990), relations to the state and society as well as controlling functions (Table 1).

In view of the division of authority, it would be faulty to assume that the rejection of state control automatically implies the unconditional acceptance of the principles of market regulation. Patterns of mutual peer control among the community of scholars can compensate for the lack of state authority over quality evaluation, for example. The predominance of market principles also by no means implies the complete absence of the state, as quasi-governmental accreditation or evaluation bodies generally have a stronger hand in quality evaluation of teaching and research in market-based constellations (see Johnson and Anderson 1998: 17; Neave 1998a, b; Dill 1997). Hence, the state can be regarded as a stimulator of competition and quality in market-like systems (Dill 1997).

This is best reflected by the distinction between *process control* inherent to state-based models, which concentrates on shaping or regulating the disciplinary profile, duration of studies, accession conditions, and expended resources, and *product control* in market-driven models which entails the development of a more sophisticated system of evaluation and quality surveillance (see Neave and van Vught 1991: 251–252). And while *peer review* rests on the notion that only academic peers are qualified to judge the quality of performance and most notably research and publication output (de Boer and Goedegebuure 2003: 216), increased ‘product’ or quality controlling mechanisms imply greater involvement of (state or quasi-governmental) evaluation bodies in monitoring teaching and research output as well as student satisfaction.

When examining ties to business and industry, clearly different perceptions are also evident. In market-based models, business and commerce directly penetrate into HE, frequently manifested by the existence of technology centers, knowledge networks with industry/commerce, and other multi-faceted forms of joint cooperation generally coordinated by university management. In state-centered models, such forms of regional and economic cooperation also exist, but tend to be designed, promoted or coordinated by the state (Neave 2003: 145). Such is the case, for example, with Finland and the state’s efforts

Table 1 The institutional balance of power of the university system

	State-centered model	Market-oriented model	Academic self-governance
<i>Institutional structures of the university</i>			
Dominant decision-making actors	State	University management	Community of scholars/professional chairs
Organizational structure	State agency	Enterprise	(Corporatist) state-university partnership
Dominant management approach	Bureaucratic	Entrepreneurial	Collegial, federation of chairs
Primary mission of the university	Satisfying state socio-economic objectives	Provision of services to “academic consumers” and satisfying market demands	Academic freedom and long-term commitment to the production of knowledge
<i>Patterns of control and quality evaluation</i>			
Who controls/evaluates?	Ministry	(State or quasi- governmental) accreditation/evaluation bodies	Self-evaluation by university, academic peers (within broad regulatory framework set by the state)
What is controlled?	Academic processes	Quality of academic products	Quality of research output, publications
When does evaluation take place?	<i>Ex ante</i>	<i>Ex post</i>	Not systematized; university-dependent
Focus of quality evaluation	National/state objectives	Local, regional, global economic demands; efficiency, flexibility	Meeting scientific/research objectives
<i>Relations to the state and society</i>			
State control instruments	Manpower planning system design	Incentives for competition, quality improvements	Financial, legal framework
Orientation and utility of teaching and research	State defined	Market demands	Scientific advancement
Economic and employer stakeholders			
Function	Control	Marketing	Limited (potentially: external defenders of the institution)
Appointed by	State	University management	Academia

to intertwine university activities with regional economic activity (see Vartiainen and Viiri 2002) as well as state piloted programs in France such as U3M (*université du troisième millénaire*) and *université 2002*, which elevated the universities to decisive actors in regional economic development (see Aust 2007). In Humboldt-oriented models, universities are relatively insulated from external pressures and business and commerce have only established themselves as stakeholders during the more recent reforms (see Herrschel 1999; Neave 2003; Trow 1990). If consulted at all, external stakeholders (employer, industrial representatives) are usually approached by individual academics for the sake of non-binding advice and small-scale joint cooperation initiatives. Hence, the role of

socio-economic stakeholders is relatively restricted, although they at times may emerge as external defenders of higher education institutions. This pattern is also reflected in the overall orientation and utility of teaching and research. Although the provided distinction is *admittedly highly generalized*, in entrepreneurial models there is a stronger orientation towards market needs and professional interests of students—and away from the Humboldtian “ivory towers”.

Financial governance

Funding issues also are part of the overall institutional balance of power, but are worthy of a separate classification due to their broad ramifications for the overall functioning of institutions. Funding is a core component of planning and control cycle and directly impacts matters of quality and access. According to Jongbloed (2003), funding has an immediate impact on the quality of services offered while the number of student places impacts the opportunities available for prospective students. In the same vein, quality determines the ability of institutions to generate additional funding from non-governmental sources.

The analysis by Jongbloed (2003) is a useful starting point. He makes distinctions between centralized (regulated) and decentralized (market) systems and between input and output orientation (2003: 123). Input-based systems generally link funding to indicators such as staff and student numbers. Output-based systems pursue a more incentive-oriented approach by adjusting funding according to institutional performance, accreditation, and rankings, etc. At the same time, marketization is synonymous not only with greater competition over funding, but also with the fragmentation of the funding base, in which the government's share of system funding is reduced and funding sources diversified (de Boer and Goedegebuure 2003: 212). Systems of academic self-rule generally are state funded and to a large extent input-based (e.g. student numbers), but grant universities broader discretion in the allocation of funds. In most cases, some funds are for specific purposes, and others are left to the discretion of institutions.⁴

In state-managed systems the state maintains control over funds and allocates itemized or earmarked funding at its discretion. In other words, in state-driven systems institutions have little freedom to use funds according to preferences. Hence, funds are used for state-specified objectives. However, it would be faulty to assume that funding is entirely input-based, i.e. based exclusively on figures such as student numbers or predetermined formulas. More recently, there has been a trend towards output-oriented, contract-based funding in various traditionally state-centered higher education systems. The most prominent example is the development and implementation of 4-year negotiated contracts (*contrats quadriennaux*) in France, which are strategic development plans funded by the state aimed at performance optimization at the university level (Musselin 2001; Musselin and Paradeise 2009). Such contracts have also become wide-spread in Scandinavia (Gornitzka et al. 2004; Hölttä and Rekilä 2003), revealing that the central government has increasingly become the promoter and guarantor of performance-based funding arrangements in state-centered systems.

In market models institutions decide for themselves how to finance operations and generate desired outcomes (Jongbloed 2003: 122). Moreover, greater discretion over funds is vested at the university management level, which may allocate funds on the basis of the

⁴ In the German case, this generally consists of input-based overhead funds allocated to professorial chairs combined with third-party funds allocated through research proposals by individual chairs or conglomerates of chairs.

Table 2 Higher education funding mechanisms

	State-centered model	Market-oriented model	Academic self-governance
Main funding base	State budget (university budget integral part of state budget)	Competitive and diversified (tuition/donations/research grants/private entities/state)	State budget (with own university budget)
State funding approach	Itemized (low budgetary discretion for universities)	Lump sum (high budgetary discretion for university management)	Mixed-type (high budgetary discretion for university)
Allocation within university	Input-based → Output-based (objectives defined by the state)	Output-based (objectives defined by university)	Input-based (objectives negotiated by the state and universities)
Strategic investments	State defined	Multi-faceted (undertaken by university management, faculties, via spin-off companies, technology centers)	Occasional, chair-based (occasionally undertaken by chairs and departments)

productive output of individual departments. Thus, an archetypical market-oriented funding model would involve a strong output-orientation, competitive funding schemes as well as a concentration of allocation authority in the university management level. In academic self-control models, universities generally also operate their own budgets. However, unlike in market-oriented systems, the professoriate often enjoys greater control over allocated resources as well as third-party funds and grants allocated directly to individual chairs. As a result, entrepreneurial models are frequently resisted by academic staff, as financial autonomy is often shifted towards university management (Schimank 2002: 8).

To address changes in funding, we must therefore ask: who pays, how are funds made available (state, tuition, grants, third-party funds) and allocated (itemized/lump sum), and who has discretion? And subsequently, do universities engage in strategic investment in technology and knowledge transfer to expand their funding base? (Table 2).

Hence, market-based financial governance entails a shift in financial autonomy towards the managerial level and an increase in output-based criteria, while in state-centered systems we are also witnessing such as shift by means of multi-annual negotiated contracts (i.e. input-based → output-based state funding). Also common to both market-based and to some extent Humboldt-oriented systems is lump-sum funding. Contrary to itemized or earmarked state funding, this increases the budgetary discretion of universities, and in particular the management level in market-oriented systems. Marketization also implies less reliance on state funding and thus the diversification of funding. Student tuition is only one potential source of funding. Market-based funding also entails the clustering of activities with private sector institutions by way of strategic investments undertaken directly by the university, e.g. start-up firms, spin-offs, knowledge transfer (see Sporn 2006: 142). In essence, market-based systems integrate entrepreneurial and investment culture into funding measures (see Gumport 2000; Clark 1998; Estermann and Nokkala 2009). In Humboldt-based and state models, income and expenditures are much more the result of incremental annual calculations and state steering measures than entrepreneurial activities (see Herrschel 1999; Burnham 1999: 75).⁵

⁵ Differences exist to a certain degree in Germany between universities and *Fachhochschulen* (polytechnics), with approximately 60% of university professors receiving additional external funding for research activities, compared to 33% of professors at polytechnics (Enders and Teichler 1995). Private-sector funding is more prevalent in polytechnics.

Personnel autonomy

Personnel or staffing autonomy grasps the delegation of authority between the state and institutions as well as the overall status of rectors, university leadership and academic staff and their capacity to participate in strategic decision-making processes (see Estermann and Nokkala 2009). In the state-centered model, the governments define bureaucratic and academic norms, as academic and administrative positions are based on state appointment. This falls in line with the original French model in which flexibility in resource management is substantially limited by state control over recruitment, rules, rewards and sanctions (see Burnham 1999: 75). In Humboldt-oriented models, the notion of a “community of scholars” is much more apparent as researching academics are highly involved in management affairs and the recruitment of high and lower-level personnel (see Herrschel 1999: 108), for whom tenure privileges are frequent. This is reflected in the position of the rector, who is appointed by the academic electorate, to whom he or she owes his/her loyalty. Hence, his/her selection is not based on management skills (World Bank 2005: 7), as is generally the case in market-oriented systems, while in state-centered systems rectors generally can be regarded as civil servants with an academic or administrative background. Market-oriented approaches see for greater participation of administrative staff in the selection of academic and high-level personnel, but also greater autonomy of university management to dismiss academics, e.g. for unproductiveness. The strong position of the management level can also be bolstered by performance-based remuneration of academic staff (see segment on financial governance). The greater leverage of central management in market-based systems goes hand in hand with fewer tenure options,⁶ while universities—unlike in state-centered or Humboldtian systems—also tend to have autonomy to dismiss staff for lack of productivity without state intervention. Targeted recruitment and professional hiring by university management are additional indicators of marketization (Table 3).

Substantive autonomy

Substantive autonomy essentially comprises what should be taught and researched as well as the size, core specializations, and accession conditions of the institution (see Berdahl 1990; see also Estermann and Nokkala 2009). Hence, the central question is whether teaching and research should focus on what the academic faculty or state deems most important or what students wish to learn and what the market demands. Thus, the conceptualization of substantive autonomy also moves beyond more elementary classifications, e.g. full state administration vs. market linkages, and reflects the tripartite forces tugging over HE (Clark 1983). The extent to which institutions are autonomous as regards research and teaching is also directly linked to the institutional balance of power addressed above as well as issues of quality control. Changes in substance, i.e. new departments/units and areas of knowledge, lead to changes in the size and shape of the institution, which are in turn directly reflected in the institutional framework. Distinct differences can be identified here with regard to the academic self-governance model prevalent in Germany and areas historically influenced by it. According to Trow (1990), aside from the freedom to teach and to learn, the (European) university rarely has much authority to manage its own size and shape, its entry or exit requirements, or its broader character and functions (see also McDaniel 1997: 82). In other words, in academic self-governance models, the state

⁶ For example, in the US in 2011 only one-fourth of newly hired faculty members had the opportunity for tenure (see Keller 2006: 230 for the US; Dill 1997 for Great Britain).

Table 3 Personnel autonomy

	State-centered model	Market-oriented model	Academic self-governance
Recruitment of high-level academic staff	Appointed by state	Elected by faculty/university management	Elected by professoriate
Recruitment of high-ranking administrative staff	Appointed by state	Elected by university management	Elected by professoriate
University autonomy to dismiss high-ranking academics	No—state competence; frequent tenure (dismissal for ideological non-compliance in undemocratic states)	Yes (for lack of productivity; limited tenure privileges)	No—frequent tenure (dismissal only for severe misconduct)
Professional background of rectors/deans	Public administration	Management	Scholar/chair holder
Participation of academic staff in administrative management	Limited	Moderate	High

functions as a “gatekeeper” (Herrschel 1999: 999) that sets the institutional framework conditions (size, institution requirements). Decisions over academic matters are, on the other hand, entirely left up to the professoriate with little intervention by university management or by the state, except for a very broad state framework in some cases. Market-based university institutions determine admission requirements, core academic specializations and institutional parameters without state intervention, while conducting cost-benefit analyses in devising strategic plans (Jongbloed 2003: 114) (Table 4).

Market models, for example, delegate greater autonomy over substance and content away from the “academic oligarchy” to university management, which frequently seeks to reduce the gap between research and teaching and economic demands (de Boer and Goedegebuure 2003: 215).⁷ In state-centered systems, academic content is generally the result of co-administrative arrangements between the state and academics (see Musselin 2001; Friedberg and Musselin 1993 for the French case). Humboldt-inspired systems, by contrast, thrive on heavy faculty control and academic freedom, placing greater decision-making weight on senior academic staff, e.g. in boards. Collegial self-governance models allegedly grant academics the highest degree of substantive autonomy, unrestricted by socio-economic pressures (see Schimank 2005: 7). Entrepreneurial models, which shift some substantive autonomy to the managerial level, are generally not welcomed by academics, as they tend to chip away at collegial decision-making structures and in some cases academic freedom (see de Boer and Goedegebuure 2003: 213; Felt 2003: 18). In the same vein, Olsen (2007) cites the overemphasis on individual and disciplinary freedom as a potential hindrance to good performance and timely decision-making.

⁷ Market-based academic cultures (e.g. the United States) are often marked by the co-existence of public colleges and university with private institutions. In public institutions, the state assumes a greater role in the development of higher education policy. Personnel policy and funding are generally set down by the state executive and authorized by the legislature. Nevertheless, institutions maintain a considerable degree of substantial, procedural and financial autonomy with regard to the allocation of funds (see Horton 1999: 269).

Table 4 Substantive autonomy

	State-centered model	Market-oriented model	Academic self-governance
Setting academic profiles/ curriculum design	State/academia	University management/ academia	Academia
Setting strategic goals	State	University management	Academia
Determining the research profile	State/academia	University management/ academia	Academia
Setting accession conditions, size of institution, and core specializations	State	University management	State/university (negotiated)

Conclusions

Our proposed scheme for analysing HE governance structures built on various previous analyses on higher education governance and aimed to break down three historical ideal-types in Europe into empirically observable indicators. Despite their somewhat simplified and static character, the presented indicators may be used to trace and operationalize the extent and direction of policy change or persistence in European higher education systems. By doing so, we also aimed to demonstrate how university autonomy can manifest itself differently and that marketization is not necessarily synonymous with the retreat of the state. Countries may be confronted with more market *and* government influence at the same time (see Theisens 2003). Decisive is not necessarily the mere amount of influence, rather the nature of influence (i.e. *product* vs. *process control*; more state steering via performance-based funding) that is crucial. It is also often the government which has the power to decide how much “market” may penetrate into higher education, making clear distinctions difficult. Moreover, some measure of university autonomy is compatible with all three models, but this autonomy presents itself in different manners and different facets.

Fully aware that the typology is by no means complete, we contend that individual indicators may be fine-tuned, supplemented and realigned, for example to accommodate more recent notions such as *corporate governance*, *flexible governance* and *participative governance* (see Braun and Merrien 1999; Sporn 1999). In particular, the classification of financial governance could be fine-tuned to accommodate the recent trend towards contract-based funding arrangements in Scandinavia (Gornitzka et al. 2004) and France (Musselin 2001; Musselin and Paradeise 2009). However, the scheme does offer an array of advantages for assessing domestic or comparative cross-country changes in higher education governance. Firstly, the classifications allow for the existence of mixed-types, i.e. national systems which have evolved into hybrid forms of Humboldt or state-centered and market-oriented governance (see Dobbins and Knill 2009 for several such examples in central and eastern Europe). The classification also enables us to “mix and match” different characteristics of the ideal-types and allows for variation between different sub-dimensions of governance. For example institutions in one country might display great financial autonomy, but limited personnel autonomy, or strong procedural autonomy restricted by stringent state financial oversight. Or, interestingly, two ideal-types may be in practice in one single country. Such is the case with Poland, whose public higher education system remains strongly aligned with the academic self-rule model, while its private HE system reflects the market-oriented model in all its facets (see Dobbins and Knill 2009).

Despite difficulties in accommodating the entire complexity of contemporary HE governance (e.g. co-decision authority of governments and academics), our contribution to the contemporary debate about HE reforms can be used for both large cross-country comparative studies as well as a few comparable countries. Single case studies may also provide crucial insights into the nuances and peculiarities of individual national approaches to HE governance, which can only be partially reflected by our indicators. Moreover, the framework can be used to compare the status quo of different timeframes and thus identify what events (e.g. domestic political transmission or external forces of globalization, the Bologna Process) were important for HE policy change.

Although the scheme is unable to identify the forces of change or inertia, it also provides a systematic framework to analyze developments in various sub-dimensions of governance. For example, we can now measure the correspondence of a particular European country to a certain model in various different aspects of governance (e.g. role of the state, internal university governance, funding issues). Future empirical analyses could also demonstrate, for example, whether changes are more easily implemented in financial governance than in personnel issues, or whether quality assurance or the incorporation of external stakeholders, for instance, are particularly change-resistant areas requiring more focussed reform strategies. In any case, it is our hope that the true value and limitations of such a framework will become more apparent in future research.

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