

Institutional Change in Higher Education in Germany and the Emergence of the Entrepreneurial University

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INTRODUCTION

Institutional changes in the German system of higher education are remarkable. Within the last sixty years, the system of professional dominance inspired by the Humboldtian model of a rule-governed community of scholars (Olsen, 2007; Scott, 2006) based on values of free inquiry, academic autonomy, and self-regulation has gradually transformed to a new regime of managed education (Münch, 2011). The reasons for this shift are manifold. With the rise of mass-education in the late 1960s and 1970s coupled with more fundamental reforms in university governance the Humboldtian model was already in decline. With mass-education the Humboldtian model of a co-production of teaching and research was increasingly difficult to sustain in largely underfunded public universities (Burtscheidt, 2010).

The typical public universities in Germany encountered a demand-response imbalance (Clark, 1998). With the limited resources outstanding research and high standards in teaching became difficult to realize and created the seeds for the emergence of a new institutional logic of managed education. The hallmarks of managed education are threefold (Münch, 2011). First, based on a market ideology the education system has been reformed in the name of competition, excellence, and efficiency. Universities have been given greater degrees of autonomy and the emerging discourse presents the university as a service enterprise embedded in competitive educational markets. The result of this competition for excellence, especially in research, is a stratification of elite and nonelite or central and peripheral educational institutions that differ in both their scale and reputation (Münch, 2007). While the education systems in the UK and the US have always been highly stratified, this development is rather new for the German educational field, which traditionally rather equalized than fostered differences (Münch, 2011). Second, the new market discourse is coupled with the rise of an audit society (Power, 1997), in which organizational life is subject to practices of quantification and evaluation. These practices of evaluation of research and teaching activities became institutionalized. Third, the rise of new public management (NPM) established a new remote-controlled approach for managing educational institutions whose funding becomes depending on how the university “is assessed on the basis of its effectiveness and efficiency in achieving political purposes” (Olsen, 2007). Managed education has strong implications for the role of the state, which plays an active role in orchestrating competition between educational institutions in the name of academic excellence and efficiency (Münch, 2007, 2011).

These trends are manifested in the new institutional logic of the educational field, which is sometimes referred to as the commercialization of higher education (Bok, 2003),

academic capitalism (Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004), or the triple helix that interlinks higher education, the state, and the market (Etzkowsky, Webster, & Healey, 1998). Managed education unfolds strong isomorphic pressures which forces universities to comply with these shared rules and norms of the higher education field (DiMaggio & Powell, 1983a; Meyer & Rowan, 1977). Instead of being passive adopters or victims of this new educational regime, scholars have suggested an entrepreneurial response as represented by Clark's (1998) Entrepreneurial University or more recently by Wissema's (2009) Third Generation University. The entrepreneurial response frames the university as an opportunity seeking and exploiting institution (Shane & Venkataraman, 2000).

The existing literature on the German higher education system shows at least two main deficits. First, while dealing with a number of detailed developments on the macro-level such as the emergence of New Public Management (Lange, 2008; Lanzendorf & Pasternack, 2009; Löffler, 2003; Meier, 2009; Meier & Schimank, 2009; Nickel, 2007; Schmoch & Schubert, 2010), the new Excellence Initiatives by the federal government (Bloch, Keller, Lottmann, & Würmann, 2008; Hartmann, 2006; Kehm & Pasternack, 2008; Münch, 2006; Münch, 2007), or the impact of Bologna reforms on German universities (Hanft & Müskens, 2005; Nickel, 2007), very little research exists that synthesizes these existing findings into a broader, longitudinal analysis of the institutional changes that have unfolded during the postwar period. We argue that understanding these changes in institutional logics, actors, and governance is crucial for explaining the nature of the unique setting of the German higher education system, which created a path-dependency with distinctive institutional pressures. Second, on the micro-level managed education is associated with the rise of the entrepreneurial university. In the context of the German system of higher education, the concept of the entrepreneurial university has been mainly subject to a critical analysis (Münch, 2011; Weingart, 2010). However, very little empirical research has been conducted on the specific institutional conditions, change processes, and practices of entrepreneurial universities in the German context (for the Technical University of Munich see Berger, 2008). Especially the question how a more traditional public university is turned into an entrepreneurial one has not yet been investigated empirically.

The purpose of this research and our contribution is to develop a better understanding of the societal and managerial issues associated with the transition and change on the macro-level from an era of professional dominance to managed education and on the micro-level from the Humboldtian towards the entrepreneurial university.

The paper is built as follows: first, we outline our theoretical orientation based on organizational institutionalism. The framework structures our analysis according to institutional logics, institutional actors, and governance systems. In the next section, we analyze and identify three eras of institutional change in the German system of higher education; we refer to the era of professional dominance, the era of federal involvement and Democraticization, and more recently the era of managed education. In the third section we illustrate a unique case of one of the most radical transformations of a university in the German postwar period. Leuphana University of Lüneburg transformed itself from a troubled, highly underfunded public university to a new educational institution that shows many features of an entrepreneurial university. We conclude the paper by summarizing our main findings and outlining directions for future research.

THEORETICAL ORIENTATION

Organizational Field of Higher Education: An Institutional Approach

Institutionalist approaches have increasingly been applied to analyze the educational field and have demonstrated their usefulness in understanding patterns of restructuring reflecting diverse institutional pressures (Meyer & Rowan, 2006; Schwarz & Teichler, 2000). Since its foundations (DiMaggio & Powell, 1983a; Meyer & Rowan, 1977; Zucker, 1977), modern institutionalism has advanced to a dominant approach to understanding organizations (Greenwood, Oliver, Sahlin, & Suddaby, 2008). A major theme in institutional theory is that organizations are influenced by their institutional environment. Following DiMaggio and Powell (1991: 2), institutional theory is concerned with understanding “how social choices are shaped, mediated, and channelled by institutional arrangements”. Institutionalists conceptualize the relevant social environment in which organizations compete and the appropriateness of organizational actions is evaluated as *organizational fields* (e.g., DiMaggio & Powell, 1983a; Scott, 1991; Scott & Meyer, 1983). Fields represent a mid-level social sphere that connects concrete organizational action with broader normative and social structures.

In order to explain the institutional change from the era of professional dominance to managed education and the transition from the Humboldtian to an entrepreneurial university, we build on earlier work by Scott et al. (2000) and adopt their framework to the organizational field of higher education. It is composed of three main components that are of

particular importance for understanding institutional change: (1) institutional actors, (2) institutional logics, and (3) governance systems.

Institutional Logics

Behavior of institutional actors like universities or the state is shaped by an institutional logic. By this we mean “the belief systems and associated practices that predominate in an organizational field” (Scott et al., 2000: 170). Institutional logics influence individual and organizational behavior by various mechanisms such as socialization and identity formation, social classification and categorization, or struggles for status and power (Thornton & Ocasio, 2008).

In the literature on professions, it has been widely suggested that more fundamental changes in institutional logics have taken place. A change from the traditional professional values of a “social trustee” to more business-oriented, “commercial” values has been observed along with organizational change in professional organizations to more “corporate” forms of governance (e.g., Cooper, Hinings, Greenwood, & Brown, 1996; Suddaby, Gendronb, & Lamc, 2009). This was accompanied by a changing definition of professionalism. Commercial professional values are based on the notion of expertise, rather than public service (Brint, 1994a; Greenwood, 2007).

These changes in institutional logics are also reflected in the higher education field. Gumport (2000) argues that the idea of higher education as a social institution has gradually been replaced with the image of higher education as an industry. While the former logic sees the purpose of higher education in educating and socializing society as well as advancing knowledge through free inquiry, the latter logic perceives the education field from a market logic. Universities become opportunity-seeking service providers that compete for students, funding, top faculty, and legitimacy in contested markets and students become consumers who seek for the best human capital investments (Münch, 2011). As Thornton and Ocasio (2008) stress, institutional logics can co-exist or compete and then become either drivers of change or inertia.

Institutional Actors

Academic knowledge constitutes the central “issue” (Hoffman, 1999) of the higher education field. Its creation, dissemination, and application connects institutional actors like universities as producers of academic knowledge with the state as the main architect of the educational system, professional associations, publishing firms, funding agencies, private

corporations, and the public and outlines a collective enterprise around which they can coalesce. Together, they form a “recognized area of institutional life” in the sense of DiMaggio and Powell’s (1983b: 148) field concept. Institutional actors, whether individual or collective, are involved in the creation and reproduction of specific institutional logics structuring the interactions of an organizational field (Scott et al., 2000).

Governance Systems

The third component are governance systems that are concerned with the formal and informal relationships between the organization (e.g., the university) and its constituents (e.g., academic and non-academic staff, the state, students), as well as the relationships between these constituent groups (see Fiss, 2008). In particular, an institutionalist perspective of governance draws attention to “how coalitions of actors constitute ‘moral orders’ that determine the power structure of” an organization (Greenwood et al., 2008: 25). While many different models of governance have been proposed (for an overview see Harlacher & Reihlen, 2010), we build on earlier work of Olsen (2007) that offers a useful typology of different governance regimes in the university setting. In brief, they are described as follow:

The collegial model: Collegial governance is founded on the idea of professional autonomy and self-governance. Professional autonomy for research and teaching is protected by law and supported by proper funding from the state. Instead of being a servant of political agendas, this ensures that “scientific research is driven mainly by curiosity and the desire for peer recognition, and ... is controlled by truth tests” (Bunge, 1998b: 253). Self-governance, on the other hand, is accomplished through elected leaders and a meritocratic culture that favors academic scholarship.

The democratic model: Democratic governance is based on principles of political equality, competition for leadership, and effective participation in the struggle over power (Bunge, 2008; Dahl, 1998). While in the collegial model self-regulation is restricted to an elite group – academic scholars only –, the democratic model includes all other interest groups in the democratic process like students, research and administrative staff as well. Power and interests are more dispersed in the democratic model as all groups are represented on governing boards and councils. Decision-making is a political bargaining process with shifting coalitions and alliances.

The state model: In the state model universities are viewed as instruments that reflect the political agenda of the day with educational objectives and policies of current political leaders. Research and education are contributions to national wealth creation and become

instrumental for achieving national political ends. Contrary to the democratic model, leaders are not elected but appointed by the state as servants of state interests and their work is supported by a tighter system of authority, bureaucratic rules, and performance targets. Decision-making power is delegated to the university's executive board and funding depends on achieving specific performance targets (Olsen, 2007).

The market model: The market governance differs profoundly from the previous types. Governance of this model is founded on the attempt to maximize the entrepreneurialism of universities and their professional staff by creating incentives to capture the benefits of market opportunities, whether in research, teaching, or for the commercialization of academic knowledge. Viewing education and science from a market perspective shifts the attention to a model of governance as a trading place, in which universities compete for students and funds and researchers produce commodities to be "sold" on scientific markets (Bunge, 1998a). The market model is reflected internally by replacing principles of professional autonomy and self-governance with managerial control and a more hierarchical decision-making style. The managerial structure should match the continuous need for change in search for market opportunities.

In practice, these ideal types (Weber, 1922) are mixed into different forms of hybrid governance. Especially in the German case, in which higher education is a major political task of the state, governance whether following a collegial, democratic or market regime has always been influenced by a degree of state intervention for the achievement of political objectives.

INSTITUTIONAL CHANGE OF THE GERMAN HIGHER EDUCATION SYSTEM

Institutional theory helps to identify and distinguish different institutional eras. The idea of an era is that the composition of actors, their interaction, and governance system is given coherence and orientation by an underlying institutional logic, which allows the production and reproduction of stable patterns of actions over time. We distinguish three eras of higher education systems in postwar Germany: professional dominance (1945-68); federal involvement and democratization (1968-1998); managed education (from 1998). Indeed universities have a far more ancient history in Germany and historically grown ideals may still rule nowadays to some extent. Nevertheless in 1945 the governmental and higher education system reconstituted itself and therefore provides an adequate starting point for our

analysis. For the three eras we will not only describe the manifestations of the three elements actors, logics, and governance systems, but also explain the institutional change from one era to another by identifying the main events or drivers of change.

The Era of Professional Dominance

“Zero hour”

The German constitution organized the German Republic as a federation and competences of culture and education were transferred to the states. The victorious allies connected the emergence of the Nazi regime to the authoritative education system and wanted to allow a re-education based on freedom and democracy by means of a decentralized higher education system (Burtscheidt, 2010). In principle, the system of the Weimar Republic era preceding the Nazi regime was restored, where power is centralized in the hands of the professors (Oehler & Bradatsch, 1998).

The avoidance of centralization, politization, and bureaucratization of higher education was achieved at the price of missing the opportunity to coordinate institutions across states and “two decades of non-reform” (Robinsohn & Kuhlmann, 1967). A minimum coordination of educational policies was conducted voluntarily through the Conference of Education Ministers (Kultusministerkonferenz) founded in 1949.

Institutional Logic(s)

Following institutional theory we argue that each era has a distinct logic that organizes the interaction of institutional actors. The institutional logic of professional dominance is based on two general, but important ideas associated with the concept of professionalism (Freidson, 1970, 2001). It is based on the belief that scientific work is so specialized, that it is inaccessible to those lacking the required training and experience. In addition, it is built upon the belief that this work involves fresh judgment and discretion that cannot be standardized, rationalized or commodified. Scientific expertise depends on a stock of academic knowledge, which accomplishes two basic functions (Abbott, 1988). First, the academic stock of knowledge is subject to a considerable amount of research activities. It was Wilhelm von Humboldt’s basic idea “to appoint the best intellects available, and to give them the freedom to carry on their research wherever it leads” (Scott, 2006 op. cit. Fallon, 1980:19). The logic of professional dominance is modeled around the Humboldtian principles of (a) the unity of research and teaching and (b) academic freedom involving *Lernfreiheit* (freedom to learn) and *Lehrfreiheit* (freedom to teach) (Scott, 2006). Finally, academic knowledge is a source of

legitimacy of the scientist's claim of having esoteric knowledge (Veblen, 1918) that goes beyond the ordinary and is, in a fundamental sense, the basis of scientific authority. In the service of free inquiry and scholarly based education, scientists should be autonomous; they should have full control over their work, and scientific ethics claims to be independent from any particular interest groups such as the state, private enterprises, or the general public (Freidson, 2001). As a consequence, the primary logic associated with professional dominance, corresponding to Brint's (1994b) idea of the professionals as "social trustees", is the quality of research and teaching as determined exclusively by scholarly rules and norms.

Important Institutional Actors

Universities were organized according to the Ordinaria system. Each full professor enjoyed great academic freedom and autonomy. He was in charge of a specific knowledge field, directed an "institute", and was supported by a number of academic and non-academic staff. Furthermore, the institute was directly funded by the ministry (Scott, 2006).

State ministries of education were the main source of funding for science. Scientific associations were determining scholarly standards and norms in various research fields; journals and books have been the dominant outlets of scholarly work disseminated by academic publishers who perceived their work less as a business but rather as a profession (Thornton & Ocasio, 1999).

In order to coordinate higher education several actors emerged. Already in 1949 the Rectors' Conference (Westdeutsche Rektorenkonferenz) as a voluntary association of the universities was founded (Teichler & Bode, 1990). On the governmental level, in 1955 the Nuclear Ministry was founded and in 1962 transformed into the Science Ministry (since 1994 Ministry of Science and Education). In 1957 the Science Council (Wissenschaftsrat) with representatives from politics, science, and the public was founded as a regulative body in addition to the Conference of Education Ministers. The motive was to overcome the failures of decentralized planning and to enable coordination between governmental bodies and the universities across different states (Burtscheidt, 2010; Scott, 2006; Teichler & Bode, 1990).

Governance System

Since 1945, academics demanded the highest possible independence in order to avoid political instrumentalization. The autonomy and freedom of science was codified in the new German constitution. Academics claimed a corporative autonomy by means of a legal form as a public body and financial autonomy by means of the senate drafting the budget

(Haushaltsplan) as well as academic freedom in the sense of appointment power (Burtscheidt, 2010). To a great extent, the state embraced these demands and professors gained a degree of power never reached before (Teichler & Bode, 1990). This was reflected in the governing structure, in which decision power was largely decentralized to the Ordinaria who controlled their work through academic self-regulation basically following the collegial model. But the governance system remained a hybrid of autonomy and state control, since higher education was dependent on public funding (Burtscheidt, 2010; Scott, 2006; Teichler & Bode, 1990).

Precursors of Change

In addition to the hybrid relationship between the state and the university, the contradiction of unbalanced power within the universities remained unsolved. By reconstituting the principle of the Ordinaria of the 19th century the chance to restructure at the zero hour was missed (Burtscheidt, 2010). Therefore the emerging demands for the democratization of society in general and university structures in particular finally led to student revolts in the late 60s requesting equal access to higher education, the abolition of elites, and wide ranging participation in academic matters (Teichler & Bode, 1990).

A second driver for change was the continuously increasing number of student enrollments due to economic prosperity. A growing middle class was sending students to universities and industry demanded highly skilled labor. Nevertheless the rise of mass education was encountered with regional expansion and hiring in existing universities, but funding was not sufficient, leading to a decline in academic quality (Binswanger, 2010; Burtscheidt, 2010; Hödl & Zegelin, 1999; Münch, 2011; Teichler & Bode, 1990). It became more apparent that the existing logic of professional dominance with decentralization and academic self-organization could not deal with the increasing massification and serve the new demands for democratic reforms. A new institutional logic surfaced in which the federal government stepped in and took an active role as planner and regulator of the higher education at the cost of an emerging regime that coupled the university more tightly to the interests of the state, initially worried by the victorious allies and academics. This increasing role of the state was coupled with wide ranging reforms for the democratization of universities.

The Era of Federal Involvement and Democratization

Institutional Logics

In the precursors of change we indicated two major forces of change, which correspond to two interacting logics characterizing the era of federal involvement and democratization.

The first underlying institutional logic of this era was marked by a massive expansion in higher education financed by the government, the equality and access to higher education was stressed, and the state played an increased regulatory role (Teichler & Bode, 1990). This *logic of democratization* of higher education won over the incompatible logic of academic self-regulation and professorial collegiality, as now non-professorial academic staff and students took part in defining quality of higher education.

The second logic is guided by the idea of making higher education for masses more effective by central coordination and planned development (Teichler & Bode, 1990) and can be labeled as the *institutional logic of central planning or bureaucratic control*. Professional self-regulation seemed to be incompatible with democracy as well as the massification and was therewith replaced by this new double-logic.

New Actors

The growing need in managing higher education of the masses in Germany was accompanied by a rapid proliferation of new federal and state agencies engaged in coordinating, planning, and controlling various aspects of the higher education system. As a consequence of mass-education, financial problems of the states, and pressures of the 68 movement, the federal government gained influence on state legislation by establishing framework legislation power in higher education (Rahmengesetzgebungskompetenz) in 1969. Since then coordination in higher education was anchored in the constitution and the transfer of far-reaching responsibilities to the federal level was legalized. The peak of centralized federal involvement was reached with the Higher Education Framework Law (Hochschulrahmengesetz) from 1976. The idea was to homogenize the diversity in the German higher education system by regulating in detail the structure of university personnel and committees as well as academic domains (study programs, course contents, exams).

In addition, new agencies were created to deal with the rising number of students. For instance, already in the 1960s the Rectors' Conference founded a central registrar (Zentrale Registrierstelle) for allocating study places to medical schools based on school leaving grades.

In 1972 the successor agency (ZVS) of the registrar was founded, which centrally distributed students mainly based on school leaving grades to universities for several subject areas such as medicine, business administration, psychology, and law. With such a federal control agency, the supply of higher education programs was centrally coordinated with the demand of applicants. This marriage of federal control and mass-education initiated the period of supply-oriented study programs (Müller-Böling, 2001).

Governance Structure

The governance system had an internal and an external dimension. Internally, democratization as well as homogenization was reflected by the following main structural changes (Teichler & Bode, 1990).

(a) The Ordinaria University was replaced by a new organizational type of the Committee or Group University (Gremien- oder Gruppenuniversität) (a judgement of the court in 1973 limited non-professorial voting power to the maximum of 49% (50%) in science (teaching)); (b) academic careers were shortened and autonomous research was facilitated for the academic staff that had not reached up to the professor rank; (c) duration of the rector was extended from 1-2 to 4-8 years; (d) without strengthening the position of the dean, some decision areas that addressed the interests of professors were transferred from the ministerial to the faculty level.

Besides the reorganization of the university's internal governance, the relationship to the state changed by more intensive financial and educational regulation and control. The reasoning behind was to provide equal opportunities for university applicants and to cap costs. The newly created cost containment regimes of the early 1970s were supply-driven. This is well represented by the capacity regulation act (KapVO), which was a follow-up of a contract between the states and the federal government from 1972 (Seeliger, 2005). The idea of the capacity regulation regime was to balance conflicting interests between university applicants and the scarce availability of teaching capacity (Seeliger, 2005). As a consequence, the number of admissions into a study program under the capacity regulation regime was standardized based on the available teaching capacity. Universities were not allowed to set any admission restrictions or university-specific student selection criteria. Since they were required to exhaust their capacity, which "frozen" the number of incoming students, universities operated permanently at their limit and this weakened the position of state universities in an emerging higher education market with domestic private and foreign public and private competitors (Kluth, 2001). Furthermore, study programs / curricula (Müller-

Böling, 2001) as well as budgeting had been highly regulated and subject to a control philosophy (Nickel, Zdebel, & Westerheijden, 2009).

In this era, the state model of governance was strengthened by the new role of the state and especially by the federal role in regulating and coordinating higher education. At the same time, the call for more democracy shifted internal university governance from a collegial to a democratic model.

Precursors of Change

In 1977 the state launched a policy of “Opening Universities” (Öffnung der Hochschulen) as a response to the predicted baby boomer generation. This policy aimed at ensuring equal chances for higher education, however, without committing the financial resources needed for an expansion in educational infrastructure. As a result, universities had to overstretch their capacities, at least until the baby boomer generation would leave university (Teichler & Bode, 1990).

Furthermore, study duration in Germany was considered as excessive and graduates were perceived as too old in comparison to other EU countries. Probably unparalleled in any other country an extension of regular study duration has tradition and has been regarded as an academic freedom. In 1986, the average graduate was 28 years and studied more than seven years, while for most studies the regular duration was four to five years, and dropout rates at that time were about 15% (Teichler & Bode, 1990). Additionally, due to long schooling, military service, and rising unemployment, which motivated graduates to accomplish an apprenticeship before enrolling for a university program, the average entry age rose considerably (Teichler & Bode, 1990).

In this era, besides long duration of studies and massification, two dimensions of the problems became obvious: (a) the bureaucratic governance relation between state and university and (b) the “organized irresponsibility”, as the rector of the Goethe University of Frankfurt once described the committee governance regime within universities (Herrmann & Steinberg, 2008). The often politicized internal governance accompanied with time and resource consuming struggles in committees and the detailed regulation of academic and financial affairs by the state were accountable for the stagnation of universities being unable to improve the quality of research and teaching (Burtscheidt, 2010).

The first amendment of the Higher Education Framework Law in 1985 initiated the first reforms aiming at deregulation. Nevertheless, reforms in the 1980s remained precautionary and far less drastically than in the decades before (Teichler & Bode, 1990).

In addition, initiatives were launched that concentrated on the improvement of research. Until the early 1980s approximately only 20% of all research activities were directly funded by external sources such as governmental funding programs (Förderprogramme) and funding agencies. Universities were demanded to compete for external funding for their research activities and engage in entrepreneurial activities in order to improve quality, efficiency as well as social and economic relevance of research (Teichler & Bode, 1990).

In 1983 the Federal Ministry of Education and Science labeled the emerging changes in higher education with the slogan “Differentiation and Competition”. In the following years, an increasing consensus was formed that the competitiveness of educational institutions would be assessed based on rankings, reputation, and performance indicators of universities and their faculties (Teichler & Bode, 1990).

In the mid of the 1990s an OECD-Study brought to light the deficits of the German higher education system and the pressure for change rose. The OECD-Agenda was regarded as a main driver for the new definition of the role of universities as promoters of innovations and economic growth; accordingly, universities were elevated to entrepreneurial actors in the worldwide competition for innovation (Münch, 2011).

These emerging trends made the contradictions of the era of federal involvement and democratization more obvious. Universities that were considered as the central actors in the global competition for innovation had very little strategic choices to improve their own competitiveness. Attracting highly talented students was confined by the state controlled supply plans, which made it difficult to develop a differentiated and attractive educational profile (for an overview of the discussion at the ending era of federal involvement see Meyer & Müller-Böling, 1996). The situation was similar for attracting qualified academics that would contribute to a specific research and teaching profile; universities were lacking the required financial autonomy to pay competitive and flexible salaries for highly qualified professors. In summary, demanding competition and differentiation as new policy measures of the higher education field was incompatible with the centralized state control model of the era of federal involvement and democratization. Expected benefits of competition can only be harvested if universities are given greater autonomy in matters of resource allocation, student selection, hiring policies, educational program development, and strategic positioning.

The Era of Managed Education

The Global Context of Managed Education

Globalization, shifting demographics, the changes in the production regime towards knowledge-intensive work, growing competition from the private higher education sector, and ongoing fiscal constraints have been drivers for the world-wide institutional change of higher education (Høstaker & Vabø, 2005; Sporn, 2001; Subotzky, 1999). Since Europe intends to become the “most competitive and dynamic knowledge-based economy” (European_Council, 2000), Germany’s higher education system is considered to become more effective in producing useful knowledge and skilled labor to support the necessary innovations on the level of the firm, region, and country (Warning, 2007). Additionally, a more effective and efficient utilization of resources was requested that would allow cutting costs in higher education in order to meet fiscal constraints (Kluth, 2001). What we recognize is an emerging world-wide structure of higher education, which unfolds isomorphic forces. As an effect, academics, universities, and even countries are becoming more alike in the way they encourage, incentivize, and manage higher education.

The main properties of that global structure are at the same time the infusers of a different logic for managing education: (a) global competition in science follows increasingly an economic rationale, in which countries, universities, and researchers compete on a global education market for reputation and market share. Germany as a late-mover in this competitive game attempts to gain stronger visibility by scoring higher in global benchmarks and moving up in global rankings; (b) the Anglo-American model serves as an intellectual source for a market model of higher education by the German government and educational experts and derives its legitimacy from the successful positions of Anglo-American universities in global rankings, despite the articulated critique of how these rankings are constructed (Münch, 2011). In search for a more competitive educational regime the market model unfolds strong legitimacy for the restructuring of higher education;

Institutional Logics

With the new initiatives from federal and state agencies as well as the emerging global competition in higher education showed that institutional actors “not only do things differently, but also increasingly do different things” (Scott et al., 2000: 349). With the rise of managed education emerged a new interpretive scheme based on three main pillars. First, the

centralized planning approach to higher education invented in the 1970s was gradually replaced by a *market logic*. This move required new policy measures such as increasingly deregulating higher education, especially granting universities greater autonomy in selecting their own students, hiring their own academic staff, and allocating their own financial resources for the development of a strategic profile in competitive educational markets. The role of students also changed gradually from socialized and cultivated learners to sovereign consumers in search for a human investment (Gumport, 2000; Ritzer, 2004). As Gumport (2000: 79) points out: “The conceptual shift elevates consumer interests as paramount considerations in the restructuring of academic programs and the reengineering of academic services.”

The application of the market logic to research was facilitated by the emergence of research productivity indicators such as the social sciences citation index and various research rankings (Adler & Harzing, 2009; Frey & Osterloh, 2010; Münch, 2007) that gradually formed the belief among academic bureaucrats and some educational experts that research output can be measured and reasonably quantified. This created the impression that even non-experts can access the quality and productivity of research by simply counting the number of publications weighted, for instance, by the quality of the journal. The market logic turns the highly uncertain venture of research into a commodity. As Bunge (1998b: 253) writes: from a market perspective “scientists produce commodities namely problems, concepts, hypotheses, data, and methods - that can be imputed shadow prices; that they trade these commodities among themselves; that they sell them to universities, business firms, or governments; that every scientist attempts to maximize his utilities by producing the largest possible quantity of papers ...; that scientific creativity is market-driven ...”.

Second, new *auditing practices* (Moldaschl, 2005; Power, 1997) became a prerequisite and a reinforcing mechanism of the new competitive regime of managed education. In order to organize higher education as a competition within quasi-markets (Bartlett & Le Grand, 1993; Binswanger, 2010), audits and evaluations serve as a substitute for purchase decisions in private goods markets (Meier & Schimank, 2009). Audits and evaluations whether of teaching or research establish feedback mechanisms that aim to raise quality, but at the same time create “... a measure of uniformity and homogeneity” Larson (1977: 40). As Power (1997: 14) argues, with the rise of the audit society auditing becomes a ritualized practice of verification whose technical efficacy is less clear than its role in the creation of organizational legitimacy.

Third, the market model is combined with a *managerialist ideology* based on the belief that the external university relation to the state can best be managed by a New Public Management (NPM) approach. NPM was developed in the 1980s and became the dominant managerial model for public organizations (Gruening, 2001; Lane, 2000). The German version of NPM was formalized as a New Control Model (Neues Steuerungsmodell) from the newly founded institution of Municipal Association for Administration Management (KGSt, 2012). A guiding idea of NPM is that decentralized decisions with organizational and financial freedom result in more effective outcomes and more efficient use of scarce resources than the former centralized planning approach of public administrations (Ziegele, 2002). Instead of regulating processes as a main property of the era of federal involvement, NPM defines educational policy missions and derives specific objectives for research and teaching that are further broken down to individual universities, faculties, and departments. The financial support of the state then depends largely on the attainment of negotiated objectives (Nickel, 2007).

The internal dimension of the managerialist ideology is reflected in new roles and practices of academic managers. Principles of academic autonomy and self-governance have been perceived as less effective for adapting the academic enterprise to changing market needs (Wissema, 2009). Like in many other professions, more corporate models based on managerial authority and corporate control have gained interest and have been legitimized as superior for the enterprising university (Clark, 1998). The hallmarks of this new institutional logic are well summarized by Osterloh and Frey (2010: 3): “‘More market’ and ‘strong leadership’”.

New Actors

The emergence of new actors or the transformation of existing ones follows the logic of centrally orchestrated competition and an audit explosion.

(1) For all participating European countries, the Confederation of EU Rectors’ Conferences became an influential actor after the Bologna Declaration in 2000. This new actor initiated restructuring processes for the development of higher education (Hanft & Müskens, 2005; Nickel, 2007). The general idea of the “action programme” of the Confederation of EU Rectors’ Conferences can be headlined with convergence, competition and international competitiveness, higher quality, and efficiency (CEURC, 2000). The restructuring of higher education aims to “enhance the employability and mobility of citizens”

and “to compete more resolutely than in the past for students, influence, prestige and money in the worldwide competition of universities.”(CEURC, 2000)

The main instruments of convergence are (a) a common framework of comparable degrees, (b) the distinction into undergraduate and postgraduate level, (c) the ECTS credit point system, (d) a European co-operation in quality assurance and (e) free mobility for students, teachers, researchers, and administrative staff. For Germany, the main innovations lie in new study program structures, new degrees, introductions of evaluations of teaching and research, as well as accreditation of study programs, which was before an administrative act of the state ministries of science and culture.

(2) In 1994, the Center for University Development (Centrum für Hochschulentwicklung CHE) was founded with a yearly budget of 3 Mill. Euro, funded half by the Bertelsmann Foundation (private) and half by Foundation for the German Rector’s Conference (Stiftung zur Förderung der Hochschulrektorenkonferenz). The CHE was designed as a partner for ministries and higher education institutions to support restructuring projects and to offer training programs. The CHE is free from directives of its funding organizations, publishes continuously studies, and since 1999 developed a national university ranking.

(3) Publications, associations, and conferences throughout all eras have been the institutions of communication, exchange, and networking for academics. In the past eras communication and quality control of publications were more or less decentralized in the hands of academics. Managed education is characterized by the emergence of central organizations as intermediaries between state and academics governing science by allocating resources and reputation as well as controlling of research agendas (Whitley, Gläser, & Engwall, 2010). The most important authorities are the citation indices such as the Social Sciences Citation Index, the hegemony of American high impact journals, and rankings such as the Shanghai-Ranking (Münch, 2011). This narrowing of publication preferences results in a devaluation of monographs, book chapters, research reports, policy recommendations and so on. Consequently, academics increasingly focus on the publication type of the journal article and hunt for placements in high impact journals, sometimes at the cost of originality due to the limits of the peer review process (Münch, 2011).

(4) Since study programs are no longer approved by the ministries, a new type of actor appeared in the German educational field: national and international accreditation agencies. These new actors became important players in the quality control of the university’s teaching

programs and may improve quality assurance and reduce the inefficiency of “traditional” state bureaucracy (Schwarz & Westerheijden, 2004); however, the auditing practices of accreditation agencies may involve new problems such as a new bureaucratization of universities and an increasing standardization and homogenization of teaching programs as well as ignorance of non-measurable quality properties (Münch, 2011). With the establishment of the European Consortium for Accreditation (ECA) in order to mutually recognize accreditation decisions, governmental bureaucratization seems to be reintroduced on a higher level.

(5) The logic of managed education demands a division of labor like teaching, research, and management of academic affairs, and results in new groups or actors. In Germany this trend becomes visible, even though Germany is still lagging behind in hiring professional full time presidents or deans (Kirchgessner, 2011), and some academics are critical about the division of teaching and research (Meier & Schimank, 2009).

Governance system

The changes in institutional logics were accompanied by a move from the state to the market model of governance. The new system of governance is reflected in: (1) an internal reorganization of the university and (2) new external relationships to the state and other actors in the field such as intermediaries.

(1) The internal governance system of universities changed by strengthening the rights of academic managers while reducing participation rights of academic and non-academic members. The withdrawal of democratic rules was manifested in the following structures:

(a) *Emergence of University Councils (board of trustees)*: Behind the diversity of state laws of higher education, three commonalities can be identified: (i) the council is an additional managing body to the traditional organs of rectorate and senate; in most states, the majority of its members or all of the trustees are to be non-university members, which should make university leadership more sensitive and responsive to broader societal requests; (ii) inspired from NPM, councils are taking over supervision and control functions, which have previously been performed by state bureaucrats; (iii) university managers should be more professionalized and take the managerial practices from the corporate world as an important reference point (Burtscheidt, 2010; Kluth, 2001; Meyer-Guckel, Winde, & Ziegele, 2010).

(b) *Shifting power structure: From a rectoral to a presidential constitution*: The introduction of councils goes hand in hand – at least ideally – with a strengthening of the executive

committee and a weakening of the senate by reducing its competencies in academic matters (Kluth, 2001; Meyer-Guckel et al., 2010).

(c) *Shifting incentives*: In the past eras, professors could negotiate initial endowments and resources have been fixed for the time of their appointment (Burtscheidt, 2010). In managed education, academics increasingly are paid for their performance in research, teaching, and other university relevant domains measured by such indicators like the acquisition of external funding, number and quality of journal publications as well as specific objectives that bring academics in line with the university's strategy (Osterloh & Frey, 2008).

(d) *Mergers of higher education institutions for cost efficiency and strategic profile development*: Whereas mergers in higher education are widespread in the US, GB, Australia, and the Netherlands since the 1970s (Goedegebuure, 1992; Harman & Harman, 2003; Harman & Meek, 1988; Skodvin, 1999), in Germany mergers are a rather new phenomenon. Motives for these mergers are profile development, quality improvement, raising visibility, economies of scale and synergy effects to improve the position in competitive education markets (Battke & Cremer-Renz, 2006; Pruisken, 2012; Weber, 2009) Empirically, the majority of the few mergers in Germany (Battke & Cremer-Renz, 2006; Klockner & Rieck, 2010; Pruisken, 2012; Zechlin, 2003) still reflect state-decreed cost reduction policies (Pruisken, 2012).

(2) The reforms of external governance were designed to encourage competition among universities and enhanced at least an increasing degree of autonomy.

(a) *Ambivalent autonomy*: The 4th amendment of the HRG of 1998 was an important legal step in order to enhance the overall requested autonomy for universities by deregulating the internal and external organization, the administration, and the budgeting process. Following NPM, input control was replaced by output control, i.e. funding was now related to outputs via goal attainments, controlling, reporting, and auditing systems based on performance indicators (Nickel, 2007). However, the extent of the use of performance indicators and goal attainments varies by states (Leszczensky, Orr, Schwarzenberger, & Weitz, 2004). Cameralism in the era of managed education was disappearing and replaced by global budgets, where the state only provides few aggregated titles (in the extreme case two titles: investments and current expenditures). In practice, the degree of financial autonomy of universities varies by state law and in most cases a "minimal cameralism" remains (Ziegele, 2002). Since then, universities gained a new degree of autonomy over their resources, especially financial resources, and they can allocate inputs themselves in order to accomplish

specific outputs. These changes brought universities an increasing autonomy, which is the necessary condition for creating profiles and striving for excellence. However, in practice it did not stop the states from cutting university funding (Behrens, Leszczensky, Mück, & Schwarzenberger, 2006).

(b) *Substitution of basic funding through competitive funding programs.* Funding agencies like transnational organizations such as the World Bank or the European Union, national research foundations such as the Deutsche Forschungsgemeinschaft (DFG), Volkswagenstiftung, and programs offered by federal, state, and local government agencies are important actors in shaping research. In Germany, the percentage of so-called third party funds of total funding is increasing continuously (DESTATIS, 2009). Funding agencies develop research programs ranging from the future of production (BMBF¹) to Joint Ventures for Caucasian railways (EU). More recently, the most prominent of these competitive funding programs is the federal Excellence Initiative. Typically, these programs initiate interaction within the scientific community and, depending on the program, even facilitate interdisciplinary discourse. The institutional function of these programs is at least twofold. First, they offer specific research services for the beneficiaries. Second, programs trigger innovations in the scientific system. As studies on innovation problems of research groups show, research teams have a tendency to stabilize the status quo and therefore demonstrate conservative behavior patterns (Krohn & Küppers, 1989). Krohn and Küppers (1989: 89) argue that this situation leads to an interesting paradox. In those areas where science can be practiced autonomously, we can recognize a tendency of research groups to do the same thing over and over again; while in areas where they have to attract external funding substantial higher innovating activities can be recognized. In this respect, funding agencies perform an important cognitive function for the scientific community. These programs are perspectival constructions of future knowledge. However, competitive funding is also subject to criticism, for it confines knowledge creation, especially in times when basic funding for independent research of professors is reduced, leads to a stratification of universities (Münch, 2009), and creates inefficient resource allocation because of declining economies of scale (Binswanger, 2010; Münch, 2011).

¹ BMBF : Bundesministerium für Bildung und Forschung (German federal ministry of education and research).

The Entrepreneurial University as a Strategic Response to Managed Education

The Institutional Context in Lower Saxony Demanding Organizational Change

In chapter three we explained the general institutional environment of managed education, which demands strategic responses of universities. Before illustrating an entrepreneurial response with the case of Leuphana University of Lüneburg (Leuphana), in this section we want to describe the specific context that enabled the transformation of Leuphana.

The institutional setting is important to understand the strategic response of Leuphana. This setting can be systematized in six related components: (a) the research assessment exercise of the Scientific Commission of Lower Saxony (WKN); (b) the cost cutting program of Lower Saxony; (c) the Higher Education Law of Lower Saxony (NHG) affecting all institutions in the state; (d) the regulation of foundations of public trust within the NHG – the legal form given to Leuphana; (e) the Merger Law (FusionG) designed to conduct a merger of two institutions into the Leuphana University of Lüneburg; and (f) goal attainments as the concrete new instrument of higher education governance.

(a) The Scientific Commission of Lower Saxony (WKN) is a unique institutional actor in federal Germany founded in 1997 with the purpose to consult the government and higher education institutions concerning science and research policies (WKN 2007). In 2001 the WKN conducted the first research assessment exercise entailing an evaluation of faculties across Lower Saxony with a less advantageous result for the former University of Lüneburg (UL). A new beginning was recommended by building a more distinguishable competence profile (WKN, 2001, 2011). With that judgment UL was made sensitive to necessary strategic activities and restructuring.

(b) In 2003 the MWK announced structural funding cuts (40 Mill. for 2004) in order to confront public debts labeled as “Higher Education Optimization Concept” affecting all higher education institutions in Lower Saxony (Behrens et al., 2006). For the most, the budgets were cut considerably and had to be met with personal dismissals. The Technical College Buxtehude, for instance, had to be privatized in order to avert closure. In 2004 the Ministry of Science and Culture developed a model for the merger of the UL and the University of Applied Science of Northeast Lower Saxony (UNLS). The critical conditions or main drivers for the decision to merge were clearly public budget and debt problems.

Additionally, the Bologna European treaty on higher education can be seen as an enhancing or proceeding condition (Stratmann, 2006). Bundling competences in order to create a research profile played a minor role besides the dominant and clear target to reduce costs (Pruisken, 2012).

(c) In the sense of enhancing managed education through strengthening autonomy and responsibility, the Educational Law of Lower Saxony can be counted as one of the most progressive laws in Germany. Lower Saxony was a pioneer in introducing a maximum degree of financial autonomy according to budgetary legal frameworks (Haushaltsrecht) for three universities in 1995, and in 2001 for all institutions (Behrens et al., 2006). Goal attainments and financial incentives as part of the budgeting process have been conducted since 2004 (Behrens et al., 2006). Since the time of its introduction, composition and task definitions of university councils in the state have also been more progressive in comparison to the university councils regulated by the federal university laws (Landeshochschulgesetze): (Meyer-Guckel et al., 2010).

(d) Furthermore, the NHG provides more autonomy through a framework to take the legal form of a foundation of public trust (NHG §55-63) in order to support the competitiveness on international education markets (Oppermann, 2002). Foundation universities are legal personalities as opposed to be part of the state's administration, as had been the case previously (Behrens et al., 2006). Lower Saxony was the pioneer in actively applying the transformation from public bodies (Körperschaften) into foundations (5 universities transformed since 2003, (for an overview of Germany see Hener, Kaudelka, & Kirst, 2008). Up to date, only few states do not provide this legal form (Lanzendorf & Pasternack, 2009), and besides Lower Saxony, only a handful of transformations have been conducted so far (Goethe-FF, Viadrina) (Hener et al., 2008). The foundation model for higher education follows the prevailing forms for private foundations only to some extent, as funding is still guaranteed by the state (Zuwendungsstiftung), but based on goal attainments with the ministry and performance measurement (Stratmann, 2006).

With the form of a foundation, the scope of action is enlarged by the right to appoint professors autonomously, to create positions, to allocate and to capitalize resources. In the Lower Saxonian model, the senate is no longer involved in operative and financial decisions; its role largely changed from a decision to an advisory body. Following the idea of NPM, decisions and accountability are unified in the executive committee of the university (Stratmann, 2006).

(e) Besides the NHG and the foundation-option, the power of the executive committee of Leuphana was strengthened through the merger law (FusionG) especially drafted at the time in order to enhance the effectiveness of the merger and to create a capacity of action for the new institution facilitating restructuring and change (Bonin, 2005). Furthermore, the merger law aimed at a stronger symbiosis of teaching and research, as well as at developing an advanced knowledge-transfer structure that would contribute to the regional economic development.

(f) Additionally, structural changes have been initiated by the so-called “contract of the future” (Zukunftsvertrag) between the ministry of science and culture and the universities in 2006. This contract was renewed in 2010 with the main features: profile and network building, active third party funding, performance-based funding, improvements in teaching and cost efficiency. Universities are committed to develop indicator systems in order to assess their performance, and to use indicators for internal control. Likewise, the ministry together with the different institutions elaborated guidelines in 2001, which serve as the basis for specific goal attainments (Fedrowitz, Krasny, & Ziegele, 1999; Michaelis, 2002).

The latest goal attainments in Lower Saxony were made in 2010, valid for two years, based on the results from 2007. Among of the more than 40 goals the most important ones are: (a) profile building in research (e.g., increasing of fundraising by 25% each year; increasing the number of international publications); (b) improvement of teaching (e.g., more masters students from external universities, more PhD-student enrollments, more courses taught in English); (c) networking (e.g., joint doctoral study programs); (d) facilitating academic careers (e.g., more doctoral theses, more academic grants), and opening for new target groups (increase of vocational training).

As a response, the controlling department at Leuphana developed as many indicators as necessary in order to measure the degree of the attainment of every goal. In this context, many of the entrepreneurial activities of Leuphana can be seen as a strategic response to the changes in its institutional environment.

Strategic Response in Institutional Environments and the Emergence of the Entrepreneurial University

Organizations react to institutional pressures by adopting different strategic responses (Oliver, 1991) to these institutional changes depending on the extent to which the institutional environment influences its specific organizational attributes and resources (Scott, Ofori-

Dankwa, & Justis, 2008). While we recognize different responses to managed education by German universities, the most wide-ranging response is the emergence of a new archetype – the entrepreneurial university, which adopts innovative strategies and entrepreneurial approaches. We define entrepreneurship in the university context as the creation and exploitation of knowledge for research, teaching, and/or the commercialization of academic knowledge. Research on entrepreneurship has redirected its attention to the opportunity concept, describing entrepreneurship as opportunity-seeking and opportunity-exploiting behavior (Eckhardt & Shane, 2003; Hitt, Ireland, Sirmon, & Trahms, 2011; Shane & Eckardt, 2003; Shane & Venkataraman, 2000).

The entrepreneurial university was first introduced by Clark (1998) as a strategic response to emerging trends in higher education. Since then, several scholars such as Röpke (1998), Sporn (2001), Etzkowitz (2003), Kirby (2005) and Rothaermel et al. (2007) have extended some of the original ideas. The entrepreneurial university (Guerrero-Cano, Liñán, Toledano, & Urbano, 2009; Guerrero-Cano & Urbano, 2007; Guerrero-Cano & Urbano, 2010) strives for the “capitalization and commercialization of knowledge” (Etzkowitz, 2003; Slaughter & Leslie, 1997), the “contribution to local economic development” (Röpke, 1998); and the “development of an entrepreneurial culture”, both within and around the university (Clark, 1998; Kirby, 2005). Entrepreneurial universities are opportunity-seeking and opportunity-exploiting regimes that respond strategically to challenges in its core domains of research, teaching, and commercialization of academic knowledge in order to fulfill its mission.

Higher education as a process transforms input resources such as academics, funds, and students into output resources based on teaching, research, and the commercialization of knowledge (Lindsay, 1982). The transformation process involves diverse attributes specific to each institution, which define the degree of accomplishment of the institutional mission. Previous research has provided a number of theoretical models based on specific criteria that define entrepreneurial attributes of higher education institutions (Clark, 1998; Guerrero-Cano & Urbano, 2010; Kirby, 2005; Rothaermel et al., 2007; Sporn, 2001; Wissema, 2009). Although difficult to define and quantify, the educational resources and institutional attributes can also be qualitatively interpreted for illustrative purposes. We will use as guideline some of the entrepreneurial attributes proposed by some of the previously mentioned theoretical models, which can likewise be illustrated in our example of Leuphana as an emerging entrepreneurial university. We consider this case a unique example of how a mid-size

university in the German state of Low Saxony was able to strategically reinvent itself as an entrepreneurial university, in response to the institutional change within the German higher educational system.

Strategic Reorientation: The Case of Leuphana University of Lüneburg

The Leuphana University of Lüneburg was formed in 2006 from the merger of the University of Applied Sciences of Northeast Lower Saxony and the University of Lüneburg. This new institution was to serve as a model university in the changing German higher education field. The innovative approach of the Leuphana concept constitutes an entrepreneurial institutional undertaking unique in Germany (Battke & Cremer-Renz, 2006). The process of merging and renewal of Leuphana was focused at creating a new type of German higher education organization. The emerging university was to build on the strengths of both predecessors, maintaining and developing an action-oriented teaching and research structure in close cooperation with industry and regional economic agents, playing in this way a more active role in the regional economy (Keller, 2008).

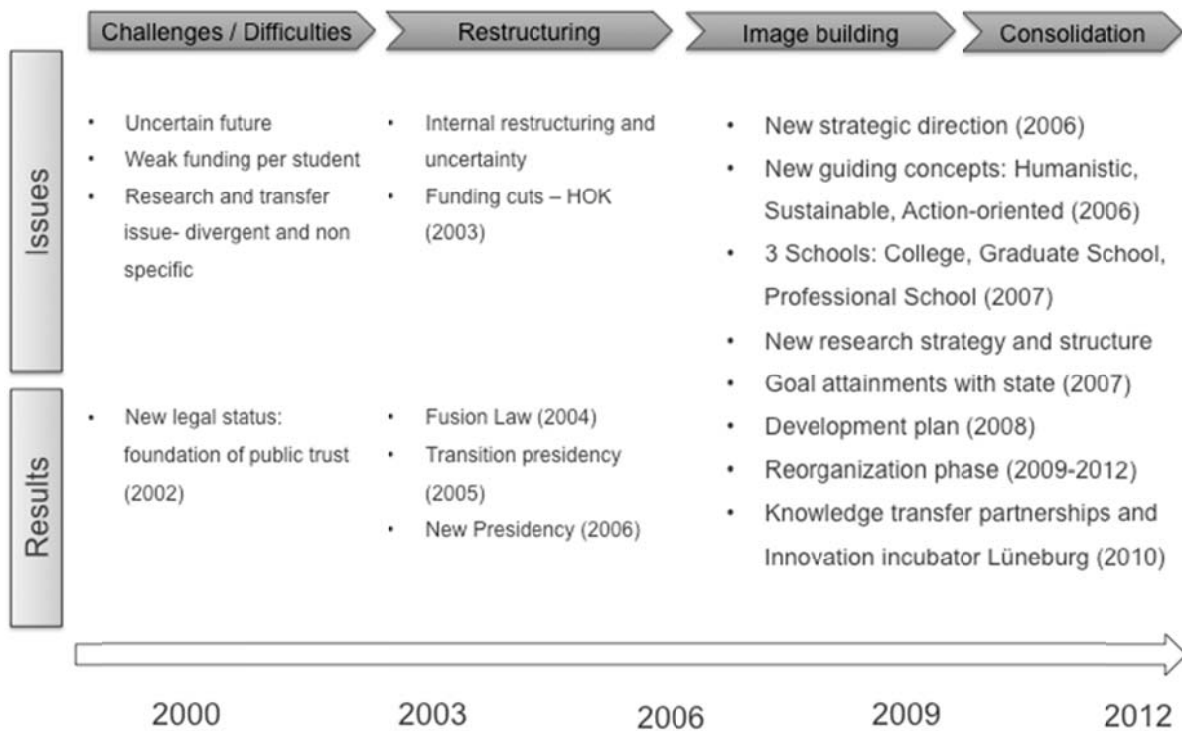
The merger of the University of Lüneburg and the University of Applied Sciences of Northeast Lower Saxony was triggered by changes in the institutional context, as explained earlier these changes started in 1997 with the foundation of the states' Scientific Commission of Lower Saxony (WKN) and was followed by related components and subsequent events that preceded the union and restructuring of both universities. In 2005, the states' parliament approved the merger law (FusionG), which served as an instrument for the re-foundation of governance structures, granting more autonomy to the emerging institution and concentrating decision-making and managerial power in the new executive committee (Pruisken, 2012), consequently granting substantial freedom for building a distinctive educational profile (Bonin, 2005).

In January 2005, a temporary executive committee was established officially merging the two universities. In May 2006, the governance bodies of the new institution were appointed. The new president Sascha Spoun was to lead the institutional reorganization and the strategic management of the newly founded university. Under this new leadership a strategic plan was developed to position Leuphana as a humanistic, sustainable and action-oriented university (Keller, 2008) with the mission of teaching, research, and knowledge-transfer dedicated to contribute to lifelong learning for the greater benefit of society (Remdisch, 2009). Besides the states' top aim to promote a more efficient use of the its

educational resources, Leuphana became a model for the Bologna treaty in Germany and to project the city of Lüneburg as a university town (Hoffmann, 2010).

A summary timeline of the main events leading to the merger, restructuring, and reorientation of Leuphana is shown below (Figure 1).

Figure 1: Timeline of Events Leading to the Creation and Restructuring of Leuphana University Lüneburg 2000-2012



Source: Self-devised based on various documents 2001-2011.

New Identity Creation: Leuphana Branding and Image Building

Even though there has been a proliferation of branding in higher education institutions around the world (Wæraas and Solbakk, 2008), this phenomenon is not yet common among German public universities with only few exceptions such as the TU München, Goethe University and the Humboldt University (Keller, 2008). Hence, Leuphana is one of the few universities to make use of the branding concept in Germany.

The new “Leuphana identity” is value-based grounded on three main pillars that present the university as humanistic, sustainable, and action-oriented (Keller, 2008). The humanistic dimension evokes higher education as a fundamental role model that shapes and influences values, attitudes, and social skills. Sustainable denotes the support that universities provide for the long-term societal development by promoting interdisciplinary and

autonomous teaching, research and knowledge transfer. A proactive or action-oriented university encourages responsibility and transmits achievement-oriented values, creative and reflexive abilities, in addition to a will to bring about constructive change in the public sphere (Müller-Rommel, 2010).

Moreover, the university searched for nationally and internationally renowned personalities that would help to create symbolic capital and could serve as image ambassadors by spreading the new brand identity along different spheres, either on a single basis (i.e., a speech) or on a continuous engagement (i.e., through honorary professorships). Some examples among these “Leuphana ambassador” are: former US president and Nobel peace prize winner Jimmy Carter; American architect Daniel Libeskind; and the philosopher Richard David Precht.

Reorganization of Academic Structures

The academic structures were organized based on student target groups, an innovative concept within the German higher educational field (Keller, 2008). The new organizational model subdivides the university into four transdisciplinary entities. Three “Schools” – College, Graduate, and Professional School – were created to fulfill distinct needs of differentiated academic target groups. The academic programs and activities of each school are differentiated and specific in accordance to the qualifications and age of the particular student group. The three schools are embedded within a research support structure called “House of Research” (Forschungszentren), which was designed to coordinate and foster multidisciplinary and applied research activities. In 2010 an additional organizational entity, the Innovation Incubator Lüneburg, was established to further support knowledge transfer and commercialization, entrepreneurial activities, and regional networks.

Inspired by the Anglo-Saxon model, the Leuphana college offers a unified first academic degree to all undergraduates called Leuphana Bachelor. Designed as an interdisciplinary study program, it aims to foster personal development, applied-knowledge, and social responsibility. The Leuphana Bachelor consists of three building blocks. Firstly, all students have to complete a joint-term called the “Leuphana Semester”, in which students are enabled to engage in scholarly reflection, gain broad general knowledge, and become acquainted with methods and theories. Secondly, students choose one out of nine areas of specialization or “Majors” and combine them with one of 16 Minors (secondary field of study); allowing students to tailor their studies according to their personal goals, interests, and talents. Thirdly, an additional component called “Complementary Studies”, in which personal

and social skills, interdisciplinary problem-solving abilities, and discipline-specific praxis oriented skills are developed. The Leuphana Bachelor study model received nation-wide attention and obtained the prestige award “Bologna – Future of Teaching” from of the Volkswagen Foundation and the Mercator Foundation.

In addition to the regular bachelor and graduate programs, the professional school centered on the motto of lifelong learning and applied professional education, focuses on knowledge transfer, and need-oriented education for working professionals and teaching programs developed together with regional partners. The concept of knowledge transfer is at the core of the professional school, carried out by transfer centers and innovation assistance units (Remdisch, 2009). The educational programs consist of Masters, courses and seminars, customized continuing education programs for companies and organizations, as well as individual coaching. The Master’s programs at the professional school have a unique system of dynamically combining social competence and field expertise. They constitute a unique example of educational innovation and institutional entrepreneurial initiative within the German higher education arena. They are application-oriented and designed as extra-occupational studies with a duration ranging from 3 to 5 semesters. The professional school currently runs a two-cluster portfolio of seven open Master’s programs, plus an MBA program exclusive to young professionals at Otto Group. The programs offer a multi-perspective learning approach: changing learning environments, with academic professors and working professionals for teaching. Students also benefit from a dynamic-learning environment, including case studies, blended learning and individual coaching (Remdisch, 2009). The number of students at the professional school grew since 2008 by more than 40 % annually, eaching more than 7 % of the total Leuphana students in 2011 in only four years of its existence and showing a clear focus of Leuphana in strengthening industry links and knowledge transfer.

The restructuring of the academic organization of the Leuphana seeks to facilitate innovation, entrepreneurial activities, and applied interdisciplinary research together with regional industry.

Attracting External Funding

In order to increase and diversify the sources of third party funding, a wide variety of potential partners were approached: Governmental agencies and state banks; Supranational entities such as the European Union; Larger private corporation; Small and Medium size regional companies; and NGO’s and non-profit social organizations. Concrete research,

academic and transfer projects were crafted to achieve mutual goals and satisfy the needs of both, the partner and the university.

Among the concrete examples of new partnerships and projects that have already been established, we can mention a MBA in Strategic Management developed and conceived for young professionals of the Hamburg based OTTO Group; the graduate education program Audit Excellence in cooperation with the Big Four accounting firms, and a partnership with the Nord/LB bank.

One of the most recent successes in attracting external funding is the innovation incubator, developed by the university and the German Federal State of Lower Saxony. This is a project that is unique in Europe. Over six years, with an investment volume of around EUR 100m, it will jump-start regional economic development through innovative research cooperation, cutting-edge training, and development measures in College, Graduate School and Professional School as well as through infrastructure measures. A project-based meta-organization under the name of Innovation Incubator Lüneburg was established in 2010 (Müller-Rommel, 2010).

The general goals of the Innovation Incubator are the creation and strengthening of university-industry-government cooperation and links. Further stepping up applied research, development and training in collaboration with regional small and middle size enterprises. Moreover, it aims at promoting and supporting the creation of technology-oriented business and the development of industrial innovation.

Additionally, the Innovation Incubator has specific projects dedicated to regional networking with the aim to nurture the creation and expansion of knowledge-intensive jobs in the region. These include business start-ups and counseling, e-learning, social and creative-economy projects, all of them in close cooperation with regional partners from industry and governmental agencies. Moreover, a project format called “competence tandems” for network and knowledge transfer has been set-up with the aim to increase regional research capacities. These tandems involve international academic researchers and science collaborators in specific interdisciplinary applied regional research projects.

The Innovation Incubator project will also invest in the infrastructure development of the Leuphana, thanks to the funding of the European Union and the Federal and Region Government, the university is to have by 2015 new facilities for integrated research. An environmentally-friendly building will be constructed on campus, featuring an innovation and research center, the structure will also house the professional school and the innovation

incubator. These long-term projects and investments should increase the attractiveness of the Leuphana and the region for highly qualified professional and innovative entrepreneurs.

Since the year 2006 the university has managed to diversify and increase its funding base, augmenting the total financial resources by an increase of approximately 60 % and almost doubling the third party funding ratio. Additionally, the innovation incubator project will represent a direct investment of more than 100 million Euro over five years, which is likely to generate strong multiplier effects around the university, industry partners and local economy.

Improving Conditions for Teaching and Research

The recruiting and human resources policies emphasize academic acknowledgment, teaching quality, industry links, and international recognition in the respected scientific community when recruiting and sourcing new professors and researchers. Likewise, professionals with industry experience and academic recognition were assigned for managerial positions and transfer projects. Various indicators signal an improvement in conditions for teaching and research due to these sourcing policies and other actions. For instance, the student – full professor ratio has been improved from 1 to 69 to 1 to 44. Research output of Leuphana increased since the restructuring in 2006. The impact of Leuphana researchers measured by the number of paper citations recorded in the web of science has increased sixfold, the external funding for research tripled, and the number of PhD-students increased by 50% since 2006, indicating higher research efficiency and academic recognition. Moreover, Leuphana's entrepreneurship profile has been publicly recognized. In a recent ranking of 63 German universities on entrepreneurship education and start-up counseling Leuphana was ranked 4 (Schmude; Aevermann, & Heumann, 2011). Similarly, in a survey of 395 German speaking entrepreneurship researchers of the *Zeitschrift für KMU und Entrepreneurship*, Leuphana was ranked 5 (Papagiannidis et al., 2011).

The illustrative case of Leuphana explored the main events leading to the conception and restructuring of a different type of university. The case offers some preliminary empirical insights: Our study shows two important forces accountable for Leuphana's transformation. First, the strategic response taken by Leuphana has to be understood and was facilitated by the changing institutional context of managed education in Germany and by the state of Lower Saxony. In addition, the unique history of the University of Lüneburg favored a more radical organizational change. Second, these institutional conditions offered the new executive committee greater freedom in repositioning and restructuring the Leuphana. This new scope

of strategic actions was constructively used by creating unique entrepreneurial strategies for the field of teaching, research, and knowledge transfer. Moreover, contrary to the dominant concept of the entrepreneurial university, focusing mainly on the academic-industry link as the driving force for the organization's innovative activities, the Leuphana case shows that opportunity seeking and exploiting also applies to the traditional domains of research and teaching. In fact, Leuphana gained its first attention through the innovative study model – the Leuphana Bachelor.

CONCLUSION

The key motivator behind writing this paper was the growing awareness that the higher education system in Germany and in most other Western countries is undergoing a fundamental institutional change. This change is redefining the rules of the game of science and herewith the roles, which universities and scholars as well as the state play within this emerging institutional context of managed education. While managed education is a far more tangible reality in the Anglo-Saxon world, it also became the key reconfiguring force for the German system of higher education (Burtscheidt, 2010; Münch, 2007, 2011; Rhoades & Sporn, 2002). However, the German version of managed education is not simply a transfer of practices that have been implemented elsewhere, especially in the UK and the US, but turns out to be a locally adapted form creating substantial variations in actors and governance systems. Since all education systems have a history creating a path-dependency, our aim was not simply to reconstruct the current state of affairs of the German system of higher education. Rather, we wanted to understand how the institutional changes unfolded over time and emerged into systems of beliefs, norms, and practices in the postwar period. As a result, we developed a typology of institutional eras composed of a unique interplay of logics, actors, and governance systems. The German system of higher education, as we argue, departed in the postwar period from an era of professional dominance (1945-68), which was replaced by an era of federal involvement and democratization (1968-1998) until more recently managerial and market orientation became guiding pillars for the new archetype of managed education (since 1998). With managed education a new type of university emerged as a strategic response to the institutional pressures of the marketization of science. We described this emerging type as the entrepreneurial university and illustrated this with the case of Leuphana University of Lüneburg.

Yet, this move to managed education is not only perceived as a progress. Its sceptics rather see the managerialist and market ideology behind managed education as a threat to the

project of science (Münch, 2011; Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004). While managerialism replaces professional self-regulation (Freidson, 2001) and may even foster professional disintegration (Broadbent, Dietrich, & Roberts, 1997), the market logic facilitates the commodification of science (Bunge, 1998a). Some of the dysfunctional effects of the marketization of science such as rising student consumerism (Gumport, 2000; Riesmann, 1998), intellectual prostitution (Frey, 2003), undermining scientific creativity (Heinze, Shapirab, Rogers, & Senkerd, 2009), a loss of intrinsic motivation (Binswanger, 2010; Osterloh & Frey, 2008), new bureaucratization under the guise of orchestrating competition (Binswanger, 2003, 2010; Münch, 2007), or tendencies of institutional decoupling of teaching and research (Meier & Schimank, 2009) are well documented.

Still, the critics partly overlook that the precursor of managed education – the era of federal involvement – already created the seeds for the decline of higher education in the Humboldtian sense. Mass-education in largely underfunded universities combined with a centralized planning approach to higher education from the state, and the managerial problems associated with the committee governance system of universities made it more difficult to commit the education system to high scholarly standards. Despite the drawbacks of managed education as reported by its critics, universities have regained a degree of autonomy, which they lost during the era of federal involvement (Burtscheidt, 2010). However, returning to the hierarchical culture of the Ordinaria system, which was rightly attacked by the 68 movement, is antiquated and demonstrates no attractive and sustainable alternative.

As Olson (2007) points out, “institutional change is often seen as driven by perceived failure” (p. 52), which undermines the legitimacy of institutions and is followed by processes of de-institutionalization (Greenwood, Suddaby, & Hinings, 2002). While managed education replaced the era of federal involvement and democratization for good reasons because the practices behind federal involvement were largely unsuccessful in meeting educational and scientific expectations, the emerging new practices improve science in some respect, but also carry the seeds of institutional conflicts. For example, the commodification of science undermines scientific creativity (Heinze et al., 2009), managerialism in academia conflicts with professional self-identity creating patterns of academic reactance to change (Schilling, Werr, Gand, & Sardas, 2011), and finally the new academic incentive structure discourages transdisciplinary research and other forms of theory-praxis exchange (Münch, 2011). The more these conflicts and other emerging issues undermine the perceived effectiveness of

science in the eye of powerful actors, the more the practices of managed education will encounter a legitimacy threat triggering again processes of de-institutionalization and change (Lawrence & Suddaby, 2006).

Future research should therefore investigate the nature and consequences of managed education in-depth. In order to do so we propose a multi-level analysis (Reihlen, Klaas-Wissing, & Ringberg, 2007; Reihlen & Werr, forthcoming). Such an analysis entails *first* the level of the higher education field involving actors, logics, and governing systems, as well as processes of change; *second* the level of the university and in our case especially the emerging archetype of the entrepreneurial university and its transformation processes; and *third* the level of the individual scholar socialized and embedded in this new institutional setting. The guiding research question is: How is marketization and managerialism affecting the reconfiguration of the higher education field, the strategic choices and structure especially of universities, and the motivation and behaviour of scholars? Shedding more light on these issues and developing sustainable policy measures are crucial for the future governing practices of science and consequently for its usefulness and relevance to society.

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