

Organisational expansion in higher education:
the growth of universities' administrative staff and its
impact on performance

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Summary

The current research investigates the professional and administrative expansion taking place in universities over the last twenty years, characterised by the emergence of new roles and functions in areas such as: planning, marketing, student services, student placement, quality control, and external relations. Understanding the forces underlying this change is essential in building a reliable picture of the current state and likely direction of the university as an institution. I engage with the two arguments conceptualizing administrative and professional growth in universities: functionalist (emphasising the role of structural pressures e.g. student numbers) and neo-institutionalist (drawing attention to the cultural forces that shape universities as formal organisations).

The first chapter provides a cross-national assessment of the relative significance of functionalist and cultural (neo-institutionalist) explanations in accounting for variation in the levels of administrative and professional staff in 761 universities from 11 European countries. The second chapter provides a national level empirical illustration of how cultural forces such as the diffusion of formal organisation make UK universities' more prone to expand their professional infrastructure in catering to demographic inclusion. The third chapter extends the national level inquiry with an investigation into whether UK universities' engagement with professional staff enhances university performance, in line with functionalist expectations. The findings show that the impact of structural needs on the expansion of professional and administrative staff is overestimated, as well as the role that professional staff plays in universities' performance. The growth in administrative and professional staff is by large a by-product of universities formalising themselves as organisations. In this sense, universities' engagement with new layers of professional expertise is a purveyor of legitimacy for institutions articulating themselves as highly integrated, strategic, and goal-driven entities.

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*I dedicate this thesis to my grandmother, Ana, and to my great-grandmother,
Raveca, for guiding my first steps in life and for their unconditional love.*

Overview

The thesis consists in three chapters to be read as self-contained articles. A general introduction and conclusion are offered in order to outline the main lines of argumentation being pursued across the three articles. A comprehensive bibliography containing all references across the three chapters is provided. The first chapter is co-authored with one of the PhD supervisors (Professor Yasemin Soysal).

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I confirm that no part of this thesis has been submitted to this or any other university for another degree.

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Introduction

Universities are some of the oldest institutions in the world, traditionally being perceived as independent communities of scholars, pursuing knowledge and truth as a goal on its own. This image has been increasingly challenged over the last couple of decades, higher education professionals (other than academic staff) emerging as an integral part of the higher education (HE) enterprise (Klumpp and Teichler 2008). While the phenomenon has been documented earlier and to a greater extent in the US (see Gumport and Pusser [1995] for a comprehensive review of the literature), similar directions have been identified in European universities (Visakorpi [1996], in Finland; Gornitzka and Larsen [2004], in Norway; Gordon and Whitchurch [2007], in the UK; Krücken et al. [2013], in Germany etc).

European-wide, a distinct body of Higher Education Professionals (HEPROs) (Klumpp and Teichler 2008) is emerging in areas previously considered as marginal to the academic core. Blümel et al. (2010) revisited the Finish data presented by Visakorpi (1996) and showed that there was a 39% increase in non-academic staff from 1987 to 1992, but this was a consistent trend only for higher level administrative positions as administrative positions with lower levels of qualification (e.g. maintenance personnel, auxiliary technical staff) decreased by 11.8%. Gornitzka and Larsen's analysis based on four Norwegian universities reveals a sharp increase of 215% in the number of higher level administrative staff from 1987 to 1999 while the number of clerical staff decreased by 28% (2004). Grove (2012) refers to the data from the UK's Higher Education Statistics Agency (HESA) and shows that from 2003 to 2010 there was a 40% increase in the number of managers in HE, compared to only 19.2 % increase in the number of academic staff. In Germany, Blümel et al. (2010) documented a period of growth in academic staff between 1992 and 2007, alongside a shift from lower to higher grade

administrative positions. Krücken et al. (2013) use yearly data from the ICE-Land database of the German Higher Education Information System (HIS) and provide an in-depth picture of the changes in non-academic staff from 2002 to 2007. In this case, non-academic staff is classified by their position in the civil service in Germany, where higher education qualifications are required for the higher grade personnel (a university degree) and upper grade personnel (minimum of a degree from a polytechnic school). The authors show that non-academic staff increased by 20.9% (higher grade) and by 19.5% (upper grade) while the number of personnel with lower levels of qualification remained approximately constant (middle grade) or decreased by 32% (lower grade). Rhoades and Sporn (2002) use data from the National Centre of Education Statistics and exemplify the same trend occurring much earlier in the US, where non-faculty professionals increased from 19.6% of the total professional staff in 1976 to 29.4% in 1995 while other administrative groups underwent a slight decrease. The existing literature converges in identifying a growing proportion of higher level administrative staff in higher education institutions (HEIs) referring to non-academic personnel in professional¹ positions.

More of than not, academic publications, professional magazines, and media, announce “the fall of the university” as an inevitable consequence of managers taking over the roles “once the preserve of academics” (Newman 2008; Ginsberg 2011). Some others praise universities’ commitment to strategically expand their human resources, which is seen as a mark of entrepreneurialism (Clark 1998). Central to both sides of the argument are questions about the factors driving professional and administrative expansion,² as

¹In line with Krücken et al. (2009, 7) the concept of “professionalism” signifies the assimilation of “rationalised forms of authority” (where professional expertise is being codified as scientific approaches to organisation), which is distinct from earlier conceptualizations in the sociology of professions emphasising “trust, discretion, and collegial authority” as defining features.

²I use the term “professional and administrative expansion” in order to (a) emphasise that professional staff are part of a larger trend of organisational expansion (b) the new offices and organisational sub-divisions emerge as distinct from academic departments (either in the administrative sphere or at the borderline between administrative and academic sections) and

understanding the forces underlying this phenomenon can illuminate its implications for the development of universities in the 21st century. This research contributes to the ongoing debate by pursuing the nature of universities' professional and administrative growth as an empirical question. I engage with two major theoretical perspectives conceptualizing the growth in universities' professional and administrative staff: functionalist and cultural (neo-institutionalist).

Functionalist Perspectives

The functionalist approach covers a wide range of studies emphasising the role of structural pressures in shaping the organisation of HEIs. Since the mid-20th century, higher education has been facing a rapid increase in student enrolments, phenomenon widely known as the “massification” of higher education (Alexander 2000). This has entailed a transition from elite to mass higher education, student numbers growing more than tenfold by the end of the 20th century (Eicher 1998). The massification of higher education has fostered a growing financial crisis, the public expenditure per student decreasing in most European countries despite governments' efforts to direct more finances from the education public budget to higher education (Eicher 1998). Against the backdrop of structural pressures along an increasing perception of higher education as indispensable to socio-economic development, higher education has become increasingly “obliged to examine itself or be examined by others” (Alexander 2000, 411). The organisational changes currently taking shape in HEIs (that includes, the proliferation of higher education professionals) are typically attributed to the ways in which HE has been restructured in response to such structural pressures.

have traditionally been labelled as administrative (Leslie and Rhoades 1995; Gornitzka et al. 1998), (c) the existing data do not always entail a differentiation among administrative personnel, thus in some of the analysis professional and administrative staff have been approached as one category of “non-academic” staff.

From the end of the 1970s to the 1990s the reformation of higher education followed similar trends around the world, broadly referred to as the New Public Management (NPM) (Tolofari 2005). The reforms (characterised by: privatisation, marketisation, performance measurement, managerialism, and accountability) have entailed an increase in the formal distance between ministries and governments, with a view of enhancing universities' financial and management autonomy (Christensen 2011). In line with the Principle-Agent Theory (at the basis of the NPM), institutional autonomy is important in order to enable HEIs as "agents" supplying services and goods to the "principle" (the government) (Boston et al. 1996). The principle-agent relationship is envisioned as a contractual arrangement whereby the government can reward or penalise a higher education provider, thus institutional autonomy (e.g. freedom to charge tuition fees, freedom to allocate resources within the institution) is accompanied by more steering and control mechanisms from the state (Christensen 2011). The question of efficiency becomes central as governments develop new mechanisms of accountability (e.g. performance-based funding, auditing, and engagement with a range of accreditation and evaluation bodies) in order to ensure that HEIs provide the taxpayer with "value for money" (Tolofari 2005). In this sense, HEIs are expected to become more proactive and strategic in order to save costs, diversify their funding sources, and become more efficient in transforming inputs (e.g. human resources, consumables, equipment) into outputs (e.g. in terms of teaching, research, and broader services to society) (Melo et al. 2008). Successful universities are expected to adapt to such changing environments by means of entrepreneurially-led organisational transformation that presupposes a strengthened steering core and an enhanced developmental periphery (Clark 1998). The assimilation of managerial and professional approaches at the organisational level is thus regarded as

an entrepreneurial response to structural pressures, regulatory shifts, and complex external demands.

The aforementioned reforms are often discussed as illustrative for the “marketisation” of public services, whereby external actors (other than universities) pursue transformation of higher education into “a tradable service” (Lynch 2006). In this sense, education has a great potential of profitable returns (in year 2000 it has been evaluated by UNESCO as a \$2 trillion global “industry”) (Lynch [2006, 4], see also Robertson et al. [2002]). In line with neo-liberal principles (advocating that a market logic can be a lucrative alternative for the organisation of public services), governments re-regulate the HE sector in order to foster competition (universities are encouraged to diversify their funding sources, they are permitted to charge tuition fees at levels higher than ever before etc). It is argued that the marketisation of higher education plays a major role in shaping universities’ human resources: “they are being asked to produce commercially oriented professionals rather than public-interest professionals” (Lynch [2006, 2], see also Hanlon [2000]).

The common denominator of the above elaborated perspectives (NPM and its critical variant emphasising the implications of for-profit “marketisation”) is that the increase in universities’ professional staff is reaction to (a) structural pressures (the massification of higher education and the precarious state of government funding), (b) deregulated environments (fostering the strengthening of HEIs’ steering core), and (c) the borrowing of models from the private sector (notably the implementation of a market oriented approach where universities increasingly rely on students as customers).

Cultural (Neo-Institutionalist) Perspectives

The cultural approach (advanced through the sociological institutionalist theory, also known as neo-institutionalism, or the World Society Theory) developed as an effort to account for the increasing similarity between organisations (consider the structuration of action in terms of means and ends, the specialisation of tasks within a system, the formalisation of roles and functions etc). Against the backdrop of staggering homogeneity of organisational forms and practices (commonly referred to as “isomorphism”), DiMaggio and Powell (1983) revisit “the iron cage” previously introduced by Max Weber in order to conceptualise the spread of bureaucracy as “the rational spirit’s organizational manifestation” (147). Earlier functionalist accounts conceptualizing the spread of organisation as a structural response to the needs of the modern society or, in line with Marxist theory, as a restructuring of welfare agencies following the logic of capital accumulation, were limited in this respect: “the problem with this view was that bureaucratic organizations have spread even more quickly than the markets and technology that were thought to have created the need for them” (Finnemore 1996, 329).

Neo-institutionalist scholars argue that the post-World War II disillusionment with nation states’ ability to prevent conflict has entailed a new cultural system valuing rationalisation: the development of formal and calculable processes as means to pursue progress (understood as socio-economic development) and justice (in terms of individual empowerment) (Frank et al. 1995). The glorification of rational action as a social good is widely reflected in the 20th century enthusiasm surrounding the universal applicability of science (Drori et al. 2003). All areas of social life become subject to standardising rationalisation which can be observed at the individual level (e.g. the spread of professionalised psychology), the institutional level (e.g. the formalisation of rules and

practices) and the national level (e.g. the standardisation of action in policy agendas) (Frank et al. 1995; Finnemore 1996). Individual empowerment is another defining feature of the global cultural context, and it envisions humans as empowered agents: “the high god no longer acts in history, but sacralised human actors do, carrying legitimized agency for their own actions” (Meyer 2000, 237). The vision of the “empowered individual” has been catalysed through the expansion in human rights discourses and mass education (Meyer 2000) and has underlined the broader transformations of citizenship and citizenship institutions (Soysal 2012a). Increasingly, expectations of actorhood have also been projected onto institutions, which are viewed as integrated entities with the ability of organising means and resources towards the pursuit of clearly defined goals and standards: “like the empowered individual, the new formal organization (...) assumes a full range of responsibilities of actorhood, as with the worldwide movement for corporate social responsibility” (Meyer and Bromley 2013, 378). The global cultural trend towards rationalisation and the view of institutions as empowered agents have thus nurtured the diffusion of formal organisation in the second half of the 20th century.

Meyer and Bromley (2013) provide an elaborate review in order to illustrate the amplitude of the phenomenon. In the US, the number of non-profits per 1000 people increased from 0.59 (in 1943) to 4.48 (in 1996) (see also Hall and Burke [2002]), similar trends being noticed all around the world e.g. the emergence of thousands of nongovernmental organisations in Uganda (Murphy 2005, cited in Meyer and Bromley 2013). Organisations have increased in numbers but also in complexity, principles of “proper management” being applied to universities (Krücken and Meier 2006), hospitals (Scott et al. 2000), charities (Hwang and Powell 2009), and even churches (Meyer and Bromley 2013). Challenging functionalist expectations, neo-institutionalist scholars argue that formal organisational principles are being assimilated irrespective of structural

pressures as they are “infused with value beyond the technical requirements of the task at hand” (Selznick 1957, 17, cited in DiMaggio and Powell 1983, 148). Moreover, they are expected to penetrate all social sectors, public or private “in state, market, and public good arenas alike, new forms arise, and older social forms - traditional bureaucracies, family firms, professional and charitable associations - are transformed into managed and agentic formal organizations” (Meyer and Bromley 2013, 366). The external environment in which institutions operate is core in understanding such isomorphic processes, as organisational fields are being structured through the involvement of a multitude of actors characterised by high levels of interaction, inter-organisational structures, information load, and mutual awareness of their presence in the common enterprise (DiMaggio and Powell 1983). Within such cultural climate, higher education is itself undergoing a process of structuration as an organisational field composed of key suppliers, costumers, regulatory agencies, and other higher education providers.

The “rationalised university” becomes an “organisational ideal”, attuned to “widespread models emphasizing the virtue and feasibility of better organization and superior management” (Ramirez 2013, 126). In this sense, universities are expected to clearly define their goals, strategise towards achieving them, and develop mechanisms of learning from experience as well as from other universities’ experience. The emergence of rankings and league tables at the cross-national level is highly illustrative of the expectation that HEIs are increasingly similar in their goals and structures, and as a result, comparable (Ramirez 2013). Such changing expectations mark the transformation of the university into an “organisational actor”: “an integrated, goal-oriented entity that is deliberately choosing its own actions and that can thus be held responsible for what it does” (Krücken [2011, 4], see also Krücken and Meier [2006, 241]). At the organisational level, this transition implies the specification of new roles and functions articulating the

university as a strategic and integrated entity (Krücken et al. 2009). Human resources are increasingly mobilised around the general lines of organisational actorhood enabling university management and support to emerge as a core area of professional expertise (Krücken et al. 2009). Ramirez and Christensen (2013) illustrate the process of formalisation in two case studies (Stanford University and the University of Oslo). They document increasing professionalisation and differentiation of administrative roles (e.g. between 1990 and 2010 the number of staff in the central administrative apparatus at the University of Oslo has increased by 73%, while between 1986 and 2010 the number of non-academic staff at the Stanford University's School of Education has increased by almost 50%). They show how administrative growth was accompanied by a broader trend of organisational expansion (e.g. the formalisation of new services and facilities at the University of Oslo), and external connectedness (e.g. the increase in fundraising activity at Stanford University). In both cases, such processes of expansion were shaped by universities seeking legitimacy through becoming increasingly attuned to dominant models of institutional identity and purpose. In this sense, Krücken et al. (2009) argue that the strengthening of universities' managerial backbone in the face of growing complexity in missions has been underlined by universities' embeddedness in a cultural environment valuing the rationalisation of organisational action.

The major implications of the neo-institutionalist perspective for the increase in universities' professional and administrative staff are that (a) the proliferation of administrative and professional staff goes beyond structural pressures and the influence of the markets³, as underlined by organisational structuration at the broader level (b)

³While there is no doubt that universities have faced new challenges following the HE reforms associated with the NPM, structural pressures on their own cannot account for the similarity in universities' organisational responses to external pressures (in terms of the proliferation of professional and administrative staff). Given the uniqueness of universities (rooted in different institutional cultures and structures as shaped by national and institutional level particularities), it

universities' organisational structuration is fostered by the external cultural environment in which universities operate, characterised by rationalization and a conceptualization of universities as autonomous and strategic entities, and (c) the adoption of professionalised approaches to organisation does not necessarily make institutions more efficient, as it serves legitimacy needs rather than technical needs.

Data and Analytical Technique

In order to capture change at the organisational level, I engage with quantitative data (e.g. number of administrative and professional staff) collected from higher education institutions as the primary units of analysis. The first chapter tackles the question of administrative and professional growth from a cross-national perspective, by conducting aggregate analysis on universities from 11 European countries. In the second and third chapters I focus on the UK as the first European country where the number of administrative staff has already exceeded the one of academic staff (European Tertiary Education Register - ETER [2011], see also Lepori et al. [2015]).

This research engages with multiple regression analysis as well as with advanced applications of this technique (e.g. fixed effects models) in order to assess (a) the impact of structural and cultural predictors on professional and administrative staff (b) the increase in universities' professional staff as a culturally constructed response to diversifying missions in higher education (c) the impact of professional and administrative staff on university performance. The basic model, where: "Y" is the dependent variable, " α " is the level of the dependent variable irrespective of the considered predictors, " β_1 " to " β_n " represent the coefficients for the predictor variables

is paradoxical to argue that the expansion of universities' administrative and professional base was an efficient and functional solution of dealing with structural pressures for all universities.

" X_1 " to " X_n ", while " ε " represents the variance in the dependent variable unexplained by the predictors, and " i " captures the HEI unit is:

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon_i$$

Thesis Structure

The thesis consists of three papers.

The first chapter: "Administrators in Higher Education – Organisational Expansion in a Transforming Institution" (Baltaru and Soysal 2017), assesses the suitability of structural and cultural forces in accounting for variation in the proportion of professional and administrative staff in 761 HEIs, from 11 European countries. While taking into account a wide range of structural pressures (e.g. overall increase in enrolment rates, financial need), the paper investigates the degree to which professional and administrative staff is more likely to proliferate in universities that are attuned to organisational expansion as a model of institutional identity and purpose.

In the second chapter: "UK Universities' Pursuit of Inclusion and Its Effects on Professional Staff", I investigate the growth of non-academic professionals as a strategy that UK universities engage with in catering for diversifying goals and missions. By focusing on the pursuit of demographic inclusion in the UK university sector, I show that the emergence of broader equality expectations in public institutions has acted as a vehicle driving highly rationalised approaches to organisation.

In the third chapter: "Do Non-academic Professionals Enhance University Performance? – Reputation vs Organisation" I continue investigating the UK university sector and assess the degree to which the engagement with non-academic professionals enhances university performance (student attainment, good honours degrees, research quality, and graduate employability), once cultural factors such as institutional reputation are taken into account.

Chapter I

Administrators in Higher Education: Organisational Expansion in a Transforming Institution

Baltaru, R. D., & Soysal, N. Y. 2017. Administrators in Higher Education: Organizational Expansion in a Transforming Institution. *Higher Education*. doi:10.1007/s10734-017-0204-3.

Recent European research has revealed growth in the number of administrators and professionals across different sections of universities—a long established trend in US universities. We build on this research by investigating the factors associated with variation in the proportion of administrators across 761 Higher Education Institutions (HEIs) in 11 European countries. We argue that the enactment of expanded and diversified missions of HE is one of the main factors nurturing universities' professional and administrative bodies. Our findings support such an assertion; regardless of geographical and institutional differences, HEIs with high levels of “entrepreneurialism” (e.g. in service provision and external engagement) are characterised by a larger proportion of administrative staff. However, we find no empirical support for arguments citing structural pressures and demands on HEIs due to higher student enrolments, budget cuts or deregulation as engines driving such change. Instead, our results point towards, as argued by neo-institutionalists, the diffusion of formal organisation as a model of institutional identity and purpose, which is especially prevalent at high levels of external connectedness.

Keywords Higher Education, Professional and Administrative Staff, Organisational Expansion, Functionalism, Neo-institutionalism, Entrepreneurialism

The last couple of decades have marked a shift in the very nature of higher education (HE) as a knowledge institution. The early nineteenth century Humboldtian model of an elite institution prioritising the pursuit of knowledge on its own left its place to the late twentieth century myth of the knowledge society (Meyer et al. 2006). Higher education institutions (HEIs) are facing an “age of supercomplexity” in which knowledge claims are no longer made solely by universities, but knowledge production is increasingly built in private firms and non-academic organisations (Barnett 2000). Such a context has fostered expanded and diversified HEI missions, whereby they are expected to proactively engage with wider society and explicitly articulate their contribution to social and economic development (Ramirez and Tiplic 2014). This in turn also affects the ways in which HEIs are run. At the governance level, this shift in HEIs’ orientation anticipates institutional and financial autonomy as a precondition (Maassen 1997; Christensen 2011). At the organisational level, it has been associated with an increase in the number of administrators, along with declining influence and autonomy for academics (Ginsberg 2011).

A growing literature considers how administrative growth leads to changes in academic identities and propels professionalism and managerialism into the higher education sphere (Gumport and Sporn 1999; Amaral et al. 2003; Whitchurch 2004; Henkel 2005; Deem et al. 2007; Krücken et al. 2013; Kehm and Teichler 2013). However, there is little empirical investigation of the determinants of change in the academic and administrative composition of university staff. We ask: Which factors boost the number of administrators in HEIs? Using a sample of 761 HEIs in 11 European countries, we bring to the fore empirical evidence which suggests that the differences in the number of administrators across HEIs can be accounted for by the enactment of formal organisation as a model of institutional identity and purpose.

I.1. Universities' Professional and Administrative Bodies

Scholars often study changes in the governance of HEIs by investigating the variations in the number of academic and professional/administrative staff or the distribution of expenditure between these two sections of university staff (for reviews of the literature, see Leslie and Rhoades [1995]; Schneijderberg and Merkator [2013]). Despite the general assumption that the academic body represents the core component of HEIs, since the mid-twentieth century administrative resourcing has been rivalling and, at times, outpacing that of academics. This has been a clear trend in the US (Hansen and Guidugli 1990; Gumport and Pusser 1995). No aggregate analysis exists at the European level. However, similar developments in European countries have also been documented (Rhoades and Sporn 2002). Perhaps the most striking case is the UK. Higher Education Statistics Agency (HESA) data shows that in the 2000s the number of managers increased almost twice as fast as the number of academics, meaning the overall proportion of professional and administrative staff already exceeded that of academic staff (Grove [2012], see also Universities UK [2013]).

Where data is available in greater detail, variations can be observed across administrative categories. In Germany, the increase in administrative staff in the 1990s/early 2000s was due to growth in the higher-grade positions and newly created higher education professions (Blümel et al. 2010; Kehm et al. 2010; Krücken 2011; Krücken et al. 2013). Similarly, in Norway the number of managers and administrative officers overtook the number of clerical positions starting in 1991. Although positions of higher administrative staff grew by 215% between 1987 and 1999, there was also a 28% decrease in the positions of clerical staff (Gornitzka and Larsen 2004). In Finland, between 1987 and 1992, the number of administrators grew by 39%, while that of low-skilled service staff fell by 11.8% (Blümel et al. [2010], see also Visakorpi [1996]). These

studies suggest that the increase in administrative staff reflects a rise in the number of professional and highly qualified administrative staff, and that this rise is at the expense of technical and administrative staff with lower levels of qualifications.

I.2. The Administrative University as an Organisational Actor: Searching for Explanations

Policy reforms in Europe and beyond have converged on projecting the idea of a HE that is less elitist and more inclusive, less inward-looking and more oriented to the needs of the outside world. This expanded and societally integrated model of higher education has been widely promoted by international institutions such as UNESCO, the OECD and various non-governmental organisations, as well as incorporated into the EU's policy agenda (Commission of the European Communities 2006). HEIs are expected to pursue these goals by becoming less state dependent and more autonomous in their institutional and financial affairs (de Boer and File 2009; Estermann and Nokkala 2009; Maassen and Stensaker 2010; Enders et al. 2013). European universities increasingly assimilate standardised goals and an active and "entrepreneurial" orientation towards achieving them in an efficient and systematic manner (Clark 1998). Krücken (2011) describes this process as a transformation of European universities, historically located between the state and academic professions, from their distinct traditional structures into "organisational actors". An organisational actor is defined as "an integrated, goal-oriented entity that is deliberately choosing its own actions and that can thus be held responsible for what it does" (Krücken [2011, 4]; see Meyer [2009] for a more extended discussion on modern actorhood).

From an organisational actorhood perspective, the strengthening of the entrepreneurial identity means that universities are increasingly goal oriented (consider

the widespread adoption of mission statements) and increasingly focused on technical effectiveness and accountability (consider the standardisation of strategic action plans). They also articulate an entrepreneurial identity through proactive engagement with a variety of stakeholders, from industry to non-governmental organisations (e.g. trusts and foundations) and supranational actors (e.g. EU Directorate-General Education and Culture). Equipped with this vision of inclusive and integrated higher education, HEIs consciously organise themselves in order to accommodate a growing body of students as well as societal demands, thus expanding their mission. New positions and organisational units that have emerged on university rosters in the last 20 years are indicative of the university's new purpose and identity: planning, marketing, student services, student placement, quality control, external relations, regional development, knowledge and technology transfer in addition to research and enterprise (Marginson and Considine 2000; Krücken et al. 2013). We suggest that the increase in the number of administrators across European HEIs is a by-product of organisational expansion in this sense. To analyse European HEIs' transformation into organisational actors, we follow a two-prong strategy. First, we test the "functionality" of universities' organisational expansion by assessing whether its effects on administrative growth can be explained by structural pressures. Second, we assess the role of the external environment in accounting for universities' administrative growth as a model of institutional identity and purpose.

I.3. Administrative Expansion: Efficiency or Legitimacy?

The widespread organisational transformation of HEIs is often considered to be a response to structural pressures and needs. From such a view, a strengthened administrative core is needed for the management of an institution run in a neo-liberal climate, i.e. divorced from state regulation and funding. In the pursuit of the HE

modernisation agenda, European governments have indeed introduced a certain degree of re-regulation towards deregulation and decentralization, with the aim of giving HEIs more freedom in institutional and financial matters (Neave and van Vught 1991; Christensen 2011). Clark (1998: 5) suggests that such a move creates an organisational challenge for European HEIs, which traditionally lack “self-steering,” “deepening the need for a greater managerial capacity” and a stronger administrative body. In addition, as European universities’ close integration with ministries of education and research is relaxed, they need to be responsive and accountable to external stakeholders, thus producing pressure on internal governance (Christensen 2011). The New Public Management thesis further suggests that changes in the organisational makeup of HEIs mirror managerial practices in the private sector, due to these practices offering “efficient solutions” (Tolofari 2005).

From a neo-institutionalist perspective, on the other hand, it is precisely such functional beliefs (e.g. that a managerial administrative body is necessary and efficient for deregulated steering) that can transform a model of action into performance—in other words, the enactment of a model to conform to the expected. A formidable body of literature originating from sociological institutionalism draws attention to the global cultural context that grounds and sustains an “organisational revolution,” whereby strategic action and rationalisation have developed as golden standards (Drori et al. 2009; Meyer and Bromley 2013). This explains the spectacular diffusion of formal organisation after World War II¹ and the consequent expansion of administrative apparatus:

¹Neo-institutionalist theory traces the contemporary organisational revolution back to World War II and its aftermath, a time when scepticism surrounding traditional mechanisms of state control had led to global orientation towards forms of governance rooted in traditional natural law liberalism (Meyer and Bromley 2013). The US, in particular, promoted forms of self-regulation and private governance to be implemented through soft law such as standards, certifications and codes of conduct. The growing authority of scientific principles contributed to the perceived universal applicability of rationalised action. Thus, formal organisation became a major expectation at all social levels (Drori et al. 2003).

“organizational forms expand in arenas with complex technical and political goals or interests but also in social areas where goals are unclear, interdependencies low and causal texture obscure” (Meyer and Bromley [2013, 2], see also Brunsson and Sahlin-Andersson [2000]; DiMaggio and Powell [1991]). The possibility emerges that, in the case of higher education, the proliferation of administrative units and positions is not simply the result of internal structural requirements but part of universities’ pursuit of acting in legitimate ways through their links to an external environment which itself is highly organised and hosts models and logics of purposive and strategic actions.

I.4. Hypotheses

The emergent analytical challenge is that both functionalist (structural needs) and neo-institutionalist (external legitimacy) perspectives would predict that the organisational expansion of HEIs is positively associated with an increase in the number of administrators. As has already been noted, it is not always easy to empirically differentiate the two lines of argument, as an institutional approach can be seen as complementing, rather than competing with functional views concerning policy and administration in the field of education (Bromley 2016). This is particularly the case in cross-sectional analysis, where causality is difficult to establish. Much neo-institutionalist research indeed builds on longitudinal data and analysis, where causal impact of the wider environment can be tested. In the absence of such Europe-wide data on HE staff, we attempt to investigate the nature of the relationship between organisational expansion and the proportion of administrators in HEIs across Europe by developing a number of hypotheses to address, directly and also by implication, structural needs and external legitimacy arguments.

Our starting point is that HEIs engaged in organisational expansion tend to have a higher proportion of administrative staff than those not involved in such expansion. The European Tertiary Education Register (ETER) that we use in this research allows for the operationalisation of organisational expansion from the perspective of horizontal differentiation (e.g. multiple campuses to provide higher education to local people in areas not sufficiently served) and service provision (e.g. elementary educational facilities and modern support services). A HEI may be characterised as having high levels of organisational expansion if it exhibits horizontal differentiation and consequently provides a large array of services. We hypothesise:

H1 The proportion of administrators is larger in multi-sited HEIs.

H2 The proportion of administrators is larger in HEIs with a higher proportion of expenditure on goods and services (other than staff).

The relationship between organisational expansion and proliferation of the administrative infrastructure is typically perceived as a functional one, and explained by internal structural pressures. Expanding student numbers would put pressure on direct operational needs and effective management (Gibb et al. 2012). The increasing shortage of core funding (e.g. government grants), particularly in the face of a de-regulated HE sector, should further exacerbate such pressures (Tolofari 2005). As HEIs can no longer rely on state funding, they may develop organisational subdivisions to enhance their ability to compete for alternative funding sources (e.g. fundraising and development offices, public relations, student recruitment etc.), consequently boosting the number of professionals and administrators. It follows that the relationship between organisational

expansion and the proportion of administrators might merely be an artefact of changes like increase in student numbers and shortage of funding.

H3 The proportion of administrators is larger in HEIs with a higher number of students.

H4 The proportion of administrators is higher at lower levels of core funding.

From a neo-institutionalist view, however, the relationship is not straightforward, as the association may also signal HEI's enactment of an organisational model to proactively pursue diversified missions and student profiles regardless of their internal needs. Thus, the relationship between organisational expansion and the proportion of administrators would be independent of enrolment numbers and availability of funding. By implication, we hypothesise the potential effects of organisational expansion as the following:

H3A The positive relationship between organisational expansion and the proportion of administrators holds when controlling for student numbers.

H4A The positive relationship between organisational expansion and the proportion of administrators holds when controlling for level of core funding.

We develop two further hypotheses in order to test external legitimacy arguments directly. The neo-institutionalist perspective views outward-orientation and proactive engagement as part of HEIs proving themselves to be strategic and rational actors. Furthermore, neo-institutionalist studies have documented the crucial role that third parties (e.g. governmental and non-governmental organisations and supranational bodies)

play in the diffusion of formal organisation principles and practices that have currency in the wider environment and thus provide legitimacy (see Ramirez and Christensen [2013]; Meyer and Bromley [2013]). Accordingly, we expect HEIs that are closely connected with the wider environment (e.g. through national and international funding agencies) to be frontrunners in responding to organisational expansion with an enlarged administrative body.

H5 The proportion of administrators is larger in HEIs with a higher proportion of third party funding.

The relevance of the founding institutional setting to organisational practices has been argued in organisations theory (Stinchcombe 1965), and frequently included in neo-institutionalist analyses (Oertell and Söll 2016; Ramirez and Christensen 2013). In the European context, the Bologna declaration in 1999 marked the institutionalisation of the vision of a rationalised higher education landscape and the codification of entrepreneurial HE organisational logic at transnational governance levels (Keeling 2006).² From a neo-institutionalist perspective, universities founded in such densely institutionalised environments should be more predisposed to taking for granted and adopting the organisational concepts and models afforded and legitimated by such environments. To encapsulate this argument, we hypothesise:

²The Bologna Declaration refers to the Joint Declaration of the European Ministries of Education convened in Bologna, on the 19th of June 1999. It aims at the harmonising of European HE systems (e.g. adoption of comparable degrees and cycles) and the furthering of proactive and productive engagement with each other by means of comparable structures and outputs. See https://www.eurashe.eu/library/modernising-phe/Bologna_1999_Bologna-Declaration.pdf. (accessed 7 June 2017).

H6 The proportion of administrators is larger in HEIs founded after the 1999 Bologna Declaration.

On the other hand, New Public Management inspired arguments emphasise that the current changes in HEIs are symptomatic of a managerial model borrowed from the private sector (Pollitt and Bouckaert 2004; Tolofari 2005). Deregulation of higher education opens up channels for closer connections with the private sector and it follows that HEIs directly linked to it (rather than those in the state sector) would be more likely to assimilate the sector's organisational expertise and practices.

H7 HEIs that are run privately have a larger proportion of administrators compared with those which are publicly run.

Additionally, we consider the impact of two institutional characteristics with regards to profile: whether the HEI has university status and prestige (the rank of the HEI). Considering the traditional centrality of universities in the public discourse surrounding higher education, it is possible that they (rather than other HEIs which do not have university status) would be the first targets expected to comply with emergent organisational models. Quantitative performance measures such as prestige rankings, are argued to influence organisational behaviour in HE, as well as other institutional domains such as healthcare and non-profits (Sauder and Espeland 2009; Bromley and Meyer 2014).

Following the functionalist emphasis on individually informed rational choice as the basis for organisational decision making, the relationship between organisational expansion and the number of administrators should be interpreted by institutional level

differences. Alternatively, a core neo-institutional argument and research finding is that higher-education systems exhibit increasing isomorphism globally (Drori et al. 2003; Meyer et al. 2006; Ramirez 2013; Bromley 2016). This suggests that the effects of organisational expansion on the proportion of administrators transcend geographical and institutional differences.

H8 The positive relationship between organisational expansion and the proportion of administrative staff holds true regardless of country-level and institutional characteristics.

I.5. Data and Methods

Secondary data for this project were selected from ETER Project (2011)³ for the academic year 2011/2012. The register provides a census of HEIs in Europe, including information on organisational characteristics and educational activities.⁴ However, the raw data are incomplete in respect to countries and variables.⁵ In our analysis we included 761 HEIs from 11 countries across all European regions: Belgium, Cyprus,

³Data have been provided by the European Tertiary Education Register (ETER), funded by the European Commission under the contract EAC-2013-0308.

⁴As for 2011, ETER data includes 2673 HEIs in 36 countries: the 28 EU member states, EEA-EFTA countries (Iceland, Liechtenstein, Norway and Switzerland) and candidate countries (the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey). Data were collected on institutions offering courses at at least level 5 according to the ISCED-2011 classification of educational degrees. Public research organisations were excluded, as well as institutions which provide tertiary education as a side activity. Institutions below the threshold of 200 students and 30 full-time staff were also excluded with the exception of HEIs granting degrees at the doctoral level or equivalent (ISCED 8). Hence, the register includes almost all HEIs that provide bachelors, masters and doctorate degrees, according to the International Standards Classification of Education (ISCED 2011).

⁵The number of HEIs in this study was determined by two-stage consideration, namely the original country level non-response and the subsequent variable non-response. Several countries did not provide data: Hungary, Montenegro, Romania, Serbia, Slovenia, Slovakia and Turkey. Furthermore, we included only those countries for which information was available across all the variables selected for the current analysis. Outliers, with unrealistic values which required further investigation, have been eliminated, based on consultations with ETER representatives.

Germany, Italy, Lithuania, Luxembourg, Norway, Portugal, Sweden, Switzerland and the United Kingdom.

As we aim to provide an explanatory account for differences in the size of the administrative body in HEIs across countries, we use the proportion of administrative staff in total staff as our dependent variable. In line with previous studies in the field, we investigate the number of administrators relative to the number of academics (Bergmann 1991; Gornitzka and Larsen 2004; Blümel et al. 2010). *The proportion of administrative staff* has been derived by dividing the total number of administrative staff by the total number of staff (academic and administrative, headcounts).⁶ Administrative staff include: academic support staff, management, quality control and administration as well as maintenance and operational staff. We acknowledge the unavailability of breakdowns as a limitation to providing a more in-depth picture of how different professional and administrative categories in HE respond to organisational expansion. Sub-categories of administrative staff may be differently affected by cultural and socio-economic environments (Schneijderberg and Merkator 2013). Nevertheless, focusing on administrative staff as a whole represents a first step in cross-national European HE research, where comparable data are yet to be achieved.

The level of organisational expansion is operationalised by whether the HEI is horizontally diversified and by investment in goods and services. *Multi-sited*, capturing horizontal differentiation, is a binary variable where “1” indicates that the HEI has other

⁶We opted to use headcounts as the measure for number of staff, instead of equivalent full-time staff for two reasons: a) in ETER data not all countries have returned the number of full-time administrative staff (e.g. UK, Italy), the choice of which would imply significant reductions in the sample size and b) from an analytical perspective, focusing on headcounts enables us to capture growth in all staff having administrative functions, which is particularly important in the current labour market which is characterised by wide diversity of modes of employment.

establishments at the local, sub-regional level (NUTS3).⁷ *The proportion of expenditure on goods and services* in total expenditure covers current expenditure (other than on staff) on educational resources such as teaching and learning materials, contracted and purchased services (e.g. support services, ancillary services, management of school facilities), as well as property taxes where applicable (Lepori et al. [2015], elaborated in UOE [2013]).

Regarding structural pressures, the *number of students* is measured as an interval variable formed by summing up students at every level of higher education: ISCED 5 (short cycle tertiary education), ISCED 6 (bachelor or equivalent), ISCED 7 and ISCED 7 long degree (masters or equivalent) and ISCED 8 (doctoral or equivalent). This indicator was log transformed to address positive skew. Universities' *core funding* is represented by the proportion of funding that can be freely used for the operations of the whole institution. This includes sources such as government base grants (at the national or regional level), interest on endowments, donations at the institutional level and income from premises.⁸

We measure external connectedness by the *proportion of third party funding* in total revenues, which includes grants from national and international funding agencies for research activities (e.g. national research councils, European Union framework programs and international programs such as Eureka), funds from charities and non-profit organisations (e.g. Welcome Trust, Bill Gates foundation), as well as income from educational activities such as contracted research. Furthermore, we operationalise the

⁷NUTS3 is the Nomenclature of Territorial Units for Statistics referring to sub-regions, e.g. arrondissements (Belgium), administrative regions (Czech Republic), districts (Germany), counties (Sweden) etc.

⁸We have identified a number of HEIs in Germany that report values of "0" as their core budget. Upon consultation with ETER representatives, we learned that the National Statistical Authorities have confirmed these to be applicable to a number of private HEIs.

external environment by *foundation era*, i.e. whether the HEI was founded before (“0”) or after (“1”) the Bologna Declaration of 1999.

HEI *governance* shows whether the institution is publicly or privately run: “ultimate control (...) with reference to who has the power to determine the general policies and activities of the institution and to appoint the officers managing the school (...) also extend to the decision to open and close the institution” (Lepori et al. 2015, 31). Publicly controlled HEIs will have received no less than half of their funds from the government. The original ordinal variable representing private, private-government dependent and public institutions was transformed into a binary indicator comparing private and semi-private HEIs (“1”) with public ones (“0”). For this, and other indicators mentioned above, the sample has been complemented with data from the Higher Education Statistics Agency (HESA) in order to address the item non-response in the case of the UK.⁹

HEI institutional characteristics are controlled for *status*, i.e. whether the HEI has university status (coded “1” and “0” otherwise), and *rank*, i.e. whether the HEI is among the top 400 ranked HEIs in Europe published by Times Higher Education for the year 2011 (coded “1” and “0” otherwise).¹⁰

⁹Expenditure on goods and services was replaced by the HESA indicator “all other operating expenses” (excluding staff costs). The total number of students was extracted by adding up all undergraduate and postgraduate students (full-person). Core funding was derived from the HESA indicator capturing income from funding body grants (e.g. Higher Education Funding Council for England), endowments and investments. Third party funding has been based on the HESA indicator capturing “income from research grants and contracts,” which includes funding from national research councils and charities, as well as supranational organisations (e.g. EU government and bodies), thus converging with the ETER definition. For finances, data were transformed from pounds into Euros at the 2011 exchange rate. All variables were selected for 2011/2012.

¹⁰We chose Times Higher Education (THE) ranking over other ranking systems, such as Shanghai or QS, based on the diversity of criteria THE uses, being both academic (e.g. teaching, research, citations) and also reflective of the changing university environment (e.g. international mix, industry income). As a binary variable differentiating HEIs in the top 400 from lower ranked counterparts, THE correlates strongly with alternative rankings.

Table 1 reports the descriptive statistics for all the variables in the study.

Table 1 *Descriptive Statistics*

Interval Variables	<i>Mean</i>	<i>Standard Deviation</i>	<i>Min</i>	<i>Max</i>
Prop. Administrators (headcounts)	.33	.13	.03	.88
Prop. Goods & Services (Euros)	.30	.11	.05	.98
Students (ISCED 5,6,7,8)	11564	16090	64	201270
Prop. Core Funding (Euros)	.61	.30	.00	1
Prop. Third Party Funding (Euros)	.11	.12	.00	.73
Binary Variables	<i>Number</i>	<i>Percentage of Total</i>		
Multi-sited (in sub-region)	151	20%		
Post-Bologna Founded	116	15%		
Private and Semi-private HEIs	145	19%		
HEIs with University Status	634	83%		
Top 400 Ranked HEI in Europe	108	14%		

A regression-based model is used to assess the relationship between the proportion of administrators and the substantive predictors. In our dataset, HEIs are grouped by countries, hence observations are likely to be more similar within clusters (Intraclass Correlation Coefficient = .16). In order to address this issue we used a fixed-effects model which controls for any unobserved differences between countries, thus providing more accurate estimates than ordinary least square regression (F Test = 7.31, $p < .001$). The fixed-effects model also allows us to look at cross country differences in order to address the neo-institutionalist argument that the effect of organisational expansion on the proportion of administrators holds true at a cross-national level.

ETER was conceived as a census, and thus the number of HEIs differs substantially from one country to another, partly reflecting the differences in student populations across European states. We acknowledge this limitation and as a result do not attempt to estimate country level effects, but merely control for them in order to identify factors that may affect the number of administrators in HEIs at the institutional level, regardless of the national context. Working with an aggregate dataset of European HEIs is also more appropriate for the current study as some countries exhibit institutional level non-response (see **Table 2**).

Table 2 *Population and Sample*

Country	HEIs in ETER	Response Rate
Lithuania	48	77%
Luxemburg	1	100%
Norway	69	15%
Portugal	137	23%
United Kingdom	170	88%
Belgium	89	29%
Switzerland	35	83%
Cyprus	41	7%
Germany	448	80%
Italy	244	32%
Sweden	51	75%
Total	1333	57%

Source: The European Tertiary Education Register (2011)

Note: Response Rate refers to the percentage of institutions among a country's total number of HEIs that returned complete data on all variables of interest in the study.

Accordingly, our results illustrate whether the hypothesised relationships hold true for the average European university in our sample. The Breusch-Pagan/Cook-Weisberg has not detected any issue of heteroscedasticity ($\chi^2 = 3.23, p > .05$). We assumed a linear relationship between the independent variables and the proportion of administrators in total staff. The fixed effects results are reported with robust standard errors. In order to ensure that the results are not affected by outliers, the analysis was alternatively run on a sample excluding HEIs with particularly low or high proportions of administrators by cutting off the top and bottom 5% of the distribution. The results were consistent in both analyses.

The model, where “i” represents the HEI level and “j” represents the country level becomes:

$$\begin{aligned}
 \text{Prop. Admins}_{ij} &= \beta_0 + \beta_1(\text{Multi-sited HEI}) + \beta_2(\text{Prop. Goods \& Services Exp.}) \\
 &+ \beta_3 \log(\text{Students}) + \beta_4(\text{Prop. Core Funding}) \\
 &+ \beta_5(\text{Prop. Third Party Funding}) + \beta_6(\text{Post Bologna Founded}) \\
 &+ \beta_7(\text{Legal Status}) + \beta_8(\text{University Status}) + \beta_9(\text{Rank}) + \varepsilon_{ij}
 \end{aligned}$$

I.6. Findings and Discussion

Table 3 shows the empirical results. Of the two organisational expansion variables, we see that multi-sited HEIs do not significantly differ from single-sited ones with regard to the proportion of administrators ($B = -.022$, $p > .05$; H1 disconfirmed), whereas HEIs with higher investments in goods and services are significantly more likely to expand their administrative infrastructure (H2 confirmed).

Table 3 *Fixed Effects Model Predicting the Proportion of Administrators*

Variables	Model
Multi-sited HEI (in sub-region)	-.022 (.012)
Proportion of Goods and Services Expenditure (Euros)	.198** (.041)
Number of Students (ISCED 5,6,7,8)	.009 (.005)
Proportion of Core Funding (Euros)	.037** (.010)
Proportion of Third Party Funding (Euros)	.172*** (.032)
Foundation era (Post-Bologna Founded)	.039** (.008)
Governance (Private and Semi-Private HEIs)	-.052* (.018)
HEIs with University Status	.016 (.009)
Rank (Top 400 HEIs in Europe)	.024 (.016)
F-Test	377.72***
N	761
R ² (within countries)	.11
R ² (between countries)	.24

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

Robust Standard Errors in the Parentheses

Coefficients and Robust Standard Errors Rounded to the Third Decimal

Controlling for institutional level differences, we find that a 1% percentage increase in the proportion of expenditure spent on goods and services predicts an approximately 20 percentage increase in the proportion of administrators ($B = .198$, $p < .01$). We further explore this finding by evaluating the role of structural pressures in this relationship, as well as the role of external legitimacy drives in universities' administrative growth, controlling for structural pressures.

1.6.1. Structural Pressures and Budget Needs

From a functionalist perspective, this finding can be interpreted in relation to the need to effectively manage larger institutions, as the massification of higher education and increasing budget constraints bring new organisational challenges for service provision and administration (Gornitzka et al. 1998; Tolofari 2005). However, we find that the number of students is not a significant predictor of the proportion of administrative staff ($B = .009$, $p > .05$) (H3 disconfirmed), the results clearly show that the relationship between organisational expansion in terms of goods and services and the proportion of administrators is independent of the size of the student body (H3A confirmed). Moreover, HEIs with lower levels of core funding are not more predisposed to embrace professional and administrative expansion as a way to effective management. On the contrary, the proportion of administrative staff is positively associated with core funding ($B = .037$, $p < .01$) (H4 disconfirmed). Neither do we find support for the functionalist argument which highlights the borrowing of models from the private sector in an increasingly deregulated and underfunded HE system. Contrary to H7, we see that on average, the proportion of administrators is 5 percentage lower in private and semi-private HEIs when compared with public ones ($B = -.052$, $p < .05$). The results up to this point reinforce the

importance of furthering our understanding of the changing makeup of HE personnel beyond simple functional need explanations.

1.6.2. External Connectedness and the Diffusion of Formal Organisation

Our findings support the neo-institutional arguments regarding external connectedness. We can see that, controlling for all other institutional differences, a 1 percentage increase in the proportion of third party funding is associated with an over 17 percentage increase in the proportion of administrators ($B = .172$, $p < .001$; H5 confirmed). This emphasises the importance of the external environment, where connectedness with external stakeholders can act as a proxy for exposure to the broader cultural frameworks characterising wider society (Meyer 2009). Given the failure of internal functionalist arguments to satisfactorily account for cross-national patterns of organisational change, there has been a shift towards reconceptualising the role of environmental factors in an increasingly interconnected world (Meyer 2000; Ramirez 2010, 2013; Ramirez and Christensen 2013). The broader environment, rooted in the ontological centrality of reason and the consequent glorification of rationalised action, exerts “pressure and opportunities for rationalization”, through standardisation, rankings and accounting (Meyer and Bromley 2013). In the process of proactively engaging with the external environment, HEIs themselves are reconstructed as organisational actors, elaborating their administrative infrastructure. This may explain why, on average, regardless of their diverse structural and cultural backgrounds, HEIs that are externally engaged through third party research funding, display a significantly higher proportion of administrators when compared with those HEIs simply relying on state funds and/or HE fees.

The role of external connectedness is equally important in understanding the diffusion of formal organisation at the transnational level, where organisational models

that emphasise effectiveness, strategy and accountability are increasingly codified as scientific approaches to social purpose and promoted through elaborate expertise and consulting mechanisms. It can be argued that many of the ongoing European projects within the Bologna process are driving the diffusion of formal organisation through standardisation of educational purposes and ideals.¹¹ Indeed, our findings indicate that European HEIs founded after the Bologna Declaration, compared to those founded before, are more likely to have an expansive administrative infrastructure ($B = .039$, $p < .01$; H6 confirmed).

The diffusion argument also underlies the neo-institutional observation that the blurring of the boundaries between the public and private sectors is more profound than the simple “borrowing” of management ideals and practices in order to meet the current challenges of higher education (Meyer and Bromley 2013). Given the purported centrality of higher education for global competition and social development, European states themselves have become keen adopters of organisational ideals and relevant models available in the transnational environment, thus driving public HEIs to reorganise themselves as effective organisational actors. This offers the prospect of understanding why the proportion of administrators is significantly higher in public HEIs than in private and semi-private ones, as we have found in our analysis.

External connectedness on the other hand could mean new pressures and demands on universities that consequently require specialised staff and a stronger administrative infrastructure. It is possible, for example, that HEIs founded in the post-Bologna environment have equipped themselves with a more elaborate administrative infrastructure in order to comply with the formally established demands of harmonisation

¹¹Remarkably, Bologna is a voluntary higher education reform process. Originally signed by 29 countries in 1999, it was later opened to members of the Council of Europe. Currently, 49 higher education systems are signatories.

and standardisation. As state resources in the post-Bologna era are increasingly uncertain, new HEIs would be expected to be more likely to comply with models in the environment in order to gain acceptance and access to resources. They might be expected for example to satisfy the requirements of their funders by developing “administrative structures and procedures to complement the structures of resource providers” (Gornitzka et al. [1998, 39]; see also Leslie and Rhoades [1995]). While such functionalist interpretation is plausible, our findings do not completely support such a position. Expansive administrative and professional structures and procedures develop of their own accord, not because HEIs are necessarily dependent on funders. As we have shown, it is not resource depleted HEIs that engage with and adopt the entrepreneurial and proactive organisational model as reflected in administrative expansion. HEIs founded in the post-Bologna environment, independent of their resource needs and dependency, are more likely to take for granted and enact such organisational models as a legitimate way of being a “proper” HE actor.

Overall, our findings put into perspective the organisational expansion of HEIs as a model of institutional identity and purpose. In their commitment to further formalisation, HEIs’ purposive engagement with entrepreneurial activities and supranational programmes contribute to self-perpetuating professionalisation and diversification. Our results hold beyond country-level and institutional characteristics (H8 confirmed), giving further credibility to the idea of increasing HE isomorphism.

I.7. Reflections on HE Organisational Transformations and Further Research

Directions

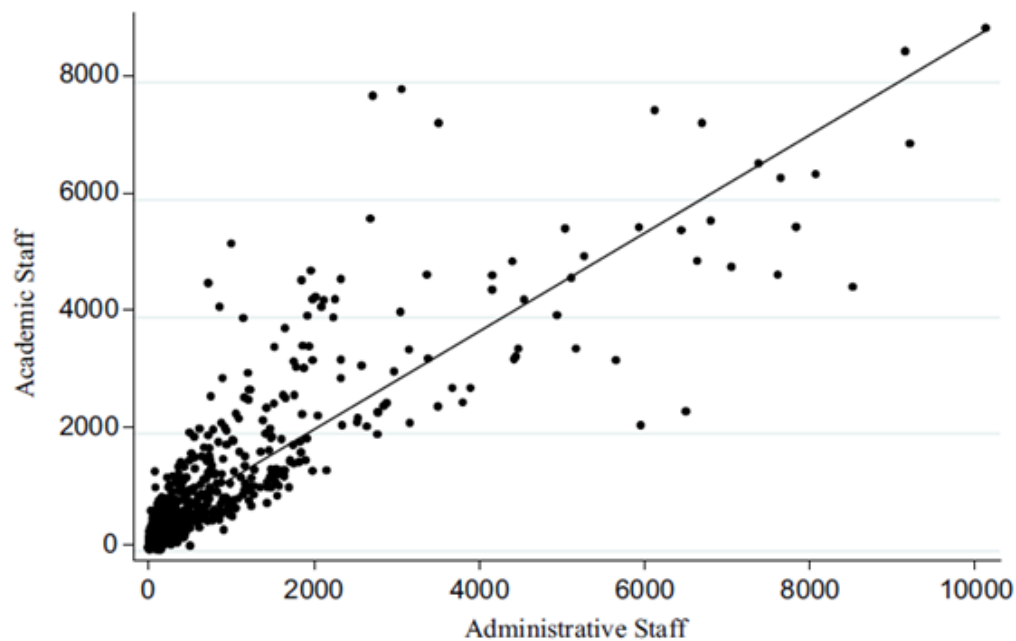
The current paper takes a first step in using European level organisational data in order to address the nature of universities' administrative growth as an empirical question. Our findings point to European HEI's increasingly taken for granted new organisational identity and structure. It is expected that neo-liberal reforms pushed both at national and transnational levels put HEIs in a position of vulnerability (Guzmán-Valenzuela and Barnett 2013). Increased student numbers in the face of public budget cuts should then increase the appeal of instrumental and managerial approaches to higher education and implicitly a stronger administrative and professional base to push for organisational survival. However, our results reveal that HEIs expand their administrative body irrespective of their student numbers, and they do so more if they are organisationally resourceful both in terms of core funding and external connections. Moreover, while the model of a university as a proactive, purposeful organisation with an expansive administrative and professional spine is not traceable to precarious conditions or private environments, we find it to be embraced widely by the typical European public HEI.

The organisational model underlining HEIs' administrative expansion is closely linked with broader changes in the European higher education landscape. Scholars have pointed out the competing logics that the diffusion of this model brings to the fore (Gumport 2000; Olsen 2007; Dobbins et al. 2011; Pinheiro 2016). Not only do European universities face global challenges of supercomplexity in terms of rearticulating their centrality as knowledge institutions (Barnett 2000), but the implementation of an increasingly "managerialised" governance has implications for the ways that academics long assumed how to profess their profession (Ginsberg, 2011; Harris 2011). The extensive literature on HE transformations expresses much concern about the idea of

university as a community of scholars with institutional autonomy and individual freedom being eclipsed by the new norm of a growing body of professionals and administrators (Ginsberg 2011). The debate often focuses on whether the “administrative periphery” expands to the detriment of “academic heartlands” (Clark 1998).

While we acknowledge the importance of the debate in its broader context, as a post-hoc hypothesis, we test the relationship by using the number of administrators to predict the number of academic staff, net of institutional differences. **Figure 1** illustrates the predicted probabilities.

Figure 1 *Number of Administrative Staff Predicting the Number of Academic Staff (2011)*

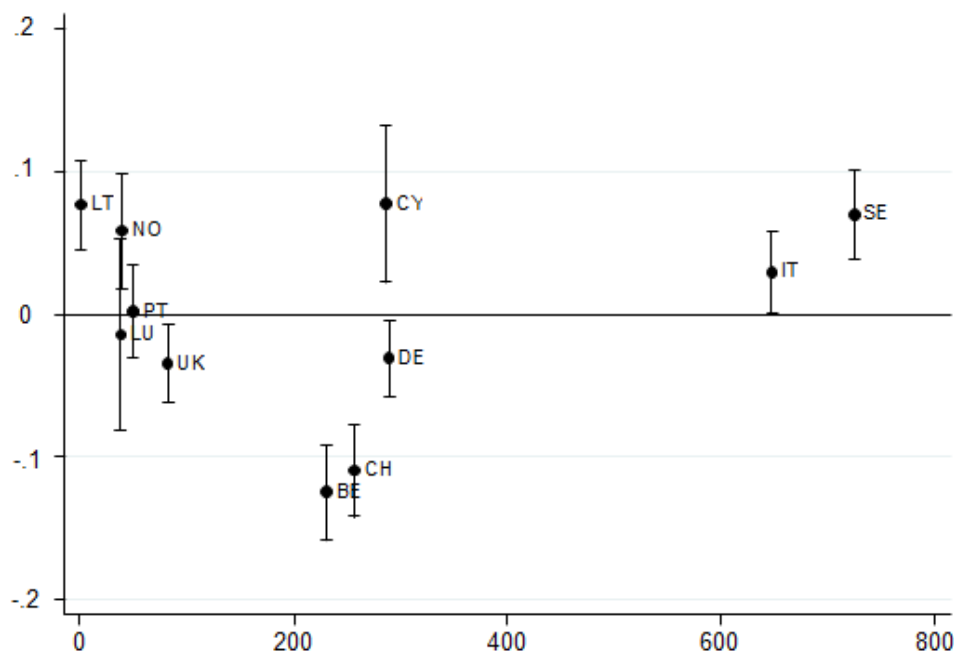


We can see that the organisational expansion of HEIs presupposes the engagement of both the administrative periphery and the academic core, the number of academic staff being positively associated with the number of administrative staff. Given the widespread adoption of the new HEI identity and organisation, it would be useful to assess its implications for universities’ knowledge mission, while assessing whether the new model can secure the sustainability of this mission in the face of current challenges.

The age of supercomplexity brings a wide variety of challenges, and differentiating among them allows HEIs to better understand the nature of their transformation.

In this paper, we provide a European overview of HE institutional transformations. Our analysis at the European level gives credence to the transnational diffusion argument. We note however that according to our results 24% of the variation in the proportion of administrators is attributable to national level differences (Table 3, R^2 between HEIs = .24). On closer investigation of the dispersion of country level residuals, we find moderate country differences (**Figure 2**).

Figure 2 *Countries' Positioning with regards to the Predicted Proportion of Administrators for the Average European University in the Sample*



In our analysis, we used a fixed effects model in order to identify the institutional level factors that nurture the share of administrative staff net of country level differences. While the fixed-effects model controls for country level differences in administrative staff, it does not allow for assessment of national level characteristics (e.g. levels of deregulation and decentralization of the HE system) and variations in the degree of national HE systems' exposure to the transnational environment (e.g. the implementation

of the Bologna process; membership of European and international level professional associations) as predictors in order to further explore the nature of national variation. Further research should focus on breaking down country level variation by utilising national level data and engaging with analytical techniques that allow operationalisation of between country variation (e.g. random effects models). Further research should also consider other indicators of organisational expansion (e.g. diversification of mission statements and related establishment of new units and offices) in order to capture possible variations in the manifestations of organisational diffusion across HE systems. Such comprehensive data to conduct a European level analysis do not yet exist. Finer grained analyses at the national level may compensate for the absence of detailed data at the European level. As such, the current findings offer the conceptual and empirical basis for further national and transnational level studies to situate the local dynamics and patterns of HE organisational transformations into the global context.

Chapter II

UK UNIVERSITIES' PURSUIT OF INCLUSION AND ITS EFFECTS ON PROFESSIONAL STAFF

This paper explores the proliferation of UK universities' non-academic professionals as a cultural response to demographic inclusion in line with statutory duties on public institutions (race equality duty 2001, disability equality duty 2006, and gender equality duty 2007). Departing from a neo-institutionalist perspective, I argue that the diffusion of highly rationalised models of institutional action shapes universities as formal organisations who engage with new levels of professional expertise in the pursuit of goals and missions. Using yearly longitudinal data on 109 UK universities from 2003 to 2011 I show that universities expand their professional expertise in catering for demographic inclusion in terms of ethnicity and disability, revealing highly rationalised responses to the aforementioned equality duties. The findings contribute to the neo-institutionalist literature drawing attention to universities' transformation into organisational actors, and illustrate how governmental directives which envision universities as vehicles driving inclusion are purporting further formalisation at the organisational level.

Keywords Non-Academic Professionals, Universities, Demographic Inclusion, Equality Duties, Formalisation, United Kingdom

The UK higher education (HE) sector has been pursuing inclusion on two fronts. On the one hand, the widening of access to HE became increasingly important, the participation rate increasing from about 6% in 1963 to 49% by 2016 (Wyness 2010; Department for Education 2017). On the other hand, the pursuit of inclusion was expanded to cover university staff as diversity management became an increasingly popular approach towards enhancing egalitarian conditions in the labour market (Tatli et al. 2012). It is expected that the introduction of diversity goals in higher education will foster change at the institutional level, but there is little empirical research addressing the important question of how universities are changing in the process.

UK universities are undergoing profound organisational changes and this is reflected in the proliferation of higher education professionals beyond the traditional academic and administrative staff (Gordon and Whitchurch 2007). The increase in the numbers of non-academic professionals has been documented in various European countries, and it has been attributed to the assimilation of new goals and missions in the university sector (Schneijderberg and Merkator 2013). This paper aims to contribute empirically by assessing the degree to which the pursuit of demographic inclusion in the UK university sector fosters the increase in non-academic professionals, thus providing a unique systematic investigation into how new goals and missions shape universities at the organisational level. In line with Krücken et al. (2009), particular consideration is given to the conceptual premises underlying universities' organisational responses to such missions. In particular, I refer to global developments of individual empowerment (entailing the emergence of inclusion as a university mission) and of rationalisation (shaping the ways in which universities cater for their missions).

UK universities' commitment to demographic inclusion provides a highly illustrative case study into how diversifying missions (articulated through governmental

directives) shape the university sector. In this sense, the introduction of secondary legislation in the form of Public Sector Equality Duties (the race equality duty in 2001, the disability equality duty in 2006, and the gender equality duty in 2007) envisions duty bearers (including universities) as active agents in reducing discrimination and enhancing inclusion (McLaughlin 2007). In addition, the UK developments are highly relevant for understanding the proliferation of non-academic professionals, as the first European country where the number of administrators has exceeded the one of academic staff (European Tertiary Education Register [ETER] 2011).

First, I provide an overview of the increase in professional staff as a major trend in UK universities and beyond. Second, I engage with a cultural argument in order to illustrate how the pursuit of demographic inclusion in line with equality duties has been shaped by broader cultural forces, namely the emergence of individual empowerment as an ideological direction and the diffusion of highly rationalised models of institutional action. Third, I operationalise and empirically assess the effect of demographic inclusion on universities' non-academic professionals, controlling for diversification in other university missions. Fourth, the findings are being discussed in relation to the wider literature documenting universities' transformation into organisations as they strategise for the pursuit of new goals and missions. The findings set up the premise for further empirical research investigating the role of professional staff in this process and call for a critical apprehension of universities' organisational change.

II.1. Universities' Higher Education Professionals

The 2012 definitional change in the Standard Occupational Classification (SOC) used by UK's official Higher Education Statistics Agency (HESA) signals a blurring of the boundaries between academic and non-academic professionals. As from 2012, the higher

level administrators previously referred to as “non-academic professionals” have been incorporated along traditional academic staff as “higher education professionals”. The reclassification indicates an expanding perception of the role of higher education institutions (HEIs), whereby the core “higher education professionals” can be involved in the traditional activities of teaching and research but they may also perform other functions within the HE enterprise (e.g. student and staff development, research impact, global outreach). In this sense, it is specifically upper level administrators that enjoy an exceptionally high degree of professionalisation and expansion unlike other non-academic personnel such as those situated in lower technical and manual occupations (Universities UK 2013).

The restructuring of the HE personnel has been a subject of debate in various European countries; see Schneijderberg and Merkator (2013) for an extensive review of the literature. The empirical investigations converge in identifying a growing proportion of non-academic personnel in professional positions (Whitchurch [2004; 2013], in the UK; Visakorpi [1996], in Finland; Blümel et al. [2010]; Krücken et al. [2013], in Germany; Gornitzka et al. [1998]; Gornitzka and Larsen [2004], in Norway). Although previous research stresses the importance of understanding the factors associated with this pattern (Gumport and Pusser 1995; Leslie and Rhoades 1995), there is a profound lack of systematic investigations into the potential explanations. Emerging empirical research at the European level puts forward the argument that the proliferation of non-academic professionals is best understood as a cultural response to new goals and missions attributed to universities (Baltaru and Soysal 2017).

This paper assesses this argument for the UK higher education sector, by focusing on universities’ mission to pursue demographic inclusion in line with the public sector equality duties. In this sense, the chronological overlap between the availability of HESA

data on professional staff (early 2000s) and the outlined legal developments (the race equality duty in 2001, the disability equality duty in 2006, and the gender equality duty in 2007) is highly suitable for such an investigation. Furthermore, I engage with a neo-institutionalist account and argue that universities' response to inclusion as a culturally prescribed goal was shaped by highly rationalised models of institutional action that have currency in the wider institutional environment.

II.2. Organising for Inclusion: a Neo-Institutionalist Account

The increase in universities' professional staff has been conceptualized as an organisational response to goals and missions that have wider currency in the global environment (Krücken et al. 2009). The sociological institutionalist approach (also known as neo-institutionalism or The World Society Theory) provides the conceptual framework to situate organisational change in the global cultural context (DiMaggio and Powell 1991; Finnemore 1996; Meyer et al. 1997; Meyer and Rowan 1978; Drori et al. 2006; Krücken and Drori 2009; Schofer et al. 2012). Neo-institutionalist scholars highlight the importance of individualism and rationalisation as “two prominent features of modern social thought and cultural ideology” (Frank et al. 1995, 360).

II.2.1. Individual Empowerment and Universities' Pursuit of Inclusion

Universities' mission of inclusion has been catalysed by the diffusion of individual empowerment as a legitimising ideological direction “within and among societies, individuals mobilise around principles of actorhood and human rights” (Meyer [2000, 237], see also Frank and Meyer [2002])¹. The human rights' provisions have consolidated

¹The principle of actorhood taps into the important assumption at the basis of the modern society, namely the ability of the individual to act autonomously and play a central constitutive role in the wider public life. This presupposes the centrality of the individual as an autonomous entity (Berger et al. 1974) of high relevance to the collective good (Frank et al. 1995).

this ideological direction through rights and freedoms for all (regardless of gender, race, or other social status) enabling the image of individuals as empowered agents (Soysal 2012b).

In the UK, the post-war consensus on non-discrimination was widely institutionalised in the provisions of equality law. The statutory equality duties from the early 2000s mark an important shift in the pursuit of individual empowerment from “negative equality law” (typically addressing issues of discrimination after they have occurred), to “positive equality duties” (where duty bearers are encouraged to play an anticipatory role in ensuring that individual’s liberty is not damaged as a result of prejudice, but without the capacity or purpose to increase positive liberty) (McLaughlin 2007, 115; Feldman 2002). Positive equality duties have been specified with regards to race and ethnicity, disability, and gender (see Race Relations Act [2000], Disability Act [2005], Equality Act [2006]) and they were cumulated few years later as a generalised equality duty (see Equality Act [2010]).

Historically, the spread of individual empowerment discourses has led to new expectations surrounding the role of higher education, emphasising its function in linking the ideologies of human rights and progress (Meyer 2000). In this sense, positive equality duties act as a purveyor of legitimacy for institutions that are proactive in acknowledging and catering for students and staff that are protected under this legislation. It is crucial that we understand the ways in which universities adapt their provisions in response to external demands as the HE sector is hosting an increasingly diversified body of people. While the expansion of university services to meet the needs of a more diverse student body has been a reoccurring theme on the higher education agenda (Dearing Report 1997; Browne Report 2010), management models are increasingly required to meet the perceived development needs of staff (Gordon and Whitchurch 2007). The latest equality

statistics show that from 2003/2004 to 2013/2014 there was a 90.9% increase in staff disclosed as disabled, a 39.6% increase in the proportion of UK staff from black and ethnic minority backgrounds (32% in the case of non-UK staff), and an over 3% increase in the proportion of female staff (Equality Challenge Unit 2015a). For the same time interval, the proportion of students disclosing a disability has increased by 85.2%, there was an over 35% increase in the proportion of UK domiciled black and ethnic minority students, while female students continued to make for over a half of the student population (Equality Challenge Unit 2015b).

Virtually all UK universities are developing and monitoring equality and diversity (E&D) objectives through policy documents and annual reports. Their formal commitment can be seen as a direct response to the “specific duties” concerning the implementation of equality schemes with regards to race and ethnicity, disability, and gender. However, universities’ approaches in terms of human resources are expected to vary depending on the needs of individual institutions. Gordon and Whitchurch (2007), for example, argue that some HEIs may choose to put additional responsibilities on academic staff (without pay or formal recognition), or create new professional support roles in areas such as: learning support, staff development, student advice etc. Recent research, on the other hand, shows that universities indeed adopt similar organisational responses by expanding and diversifying the body of their professional staff (Baltaru and Soysal 2017). I argue that in order to fully understand universities’ organisational responses to the external demands, one must consider the broader cultural forces that shape universities as formal organisations.

II.2.2. *Rationalisation and Formalisation in Universities' Pursuit of Inclusion*

The enactment of “global institutionalized scripts of what a university is expected to be” does not only presuppose similarity in university missions but also in the ways in which such missions are catered for at the institutional level (Krücken et al. 2009, 5). Universities are part of a rationalised environment² where they are portrayed as having the capacity to analyse resources and organise means-ends technologies in order to achieve clearly set goals and targets (Meyer and Bromley 2013). Such an environment fosters the transformation of the university into an “organisational actor”: “an integrated, goal-oriented entity that is deliberately choosing its own actions and that can thus be held responsible for what it does” (Krücken [2011, 4], see also Krücken and Meier [2006, 241]).

The previously discussed equality duties in the UK public sector are highly illustrative of a standardising environment as duty bearers are expected to engage with highly rationalised approaches in order to minimise discrimination. Consider the example of the Disability Equality Duty (2006). Institutions are expected to articulate their commitment to the disability equality scheme in clearly defined objectives, devise an action plan (outlining the steps that the authority will engage with in pursuing these objectives), develop methods of assessing the impact of the proposed activities as well as collect and analyse data to assess the degree to which disability equality outputs were achieved as a result of the action plan.

²The glorification of rational action is widely reflected in the 20th century enthusiasm surrounding the universal applicability of science: “most aspects of modern society are organized around institutionalized and rationalized cultural theories managed in reality by scientists, lawyers, and other professionals” (Frank et al. [1995, 361], see also Drori et al. [2003]). The diffusion of professional expertise in institutions of all types and from all over the world is symptomatic for this cultural direction “between the Otherhood that is involved in the scientific and professional contemplation of universal law and the practical world of actors, a thick layer of professionalism arises” (Meyer 2000, 241).

From a neo-institutionalist perspective, the diffusion of formal organisation as a model of institutional identity fosters further formalisation in roles and functions, as universities “design new formal technical structures to meet taken-for-granted social norms” (Krücken et al. 2009, 19). This may put into perspective the growing body of Higher Education Professionals (HEPROs) (Klumpp and Teichler 2008) at the middle ground between traditionally academic and administrative domains, a “third space” (Whitchurch 2008) where the increasing level of specialisation leads to blurred boundaries (Whitchurch 2004) and permeable borders (Kehm et al. 2008). The emergence of HEPROs in these areas underlines a human resource approach where new professional roles are being created (e.g. student support, staff development) as opposed to adding new responsibilities to the roles of academic staff (Gordon and Whitchurch 2007).

Strictly pertaining to inclusion, professional roles such as: equality officers, staff counsellors, staff disability support, dignity and respect advisors are increasingly common across the UK HE landscape. However, the wave of professionalisation stemming from the pursuit of inclusion has a wider magnitude fostering formalisation in adjacent areas (e.g. human resource officers, academic advisors). An illustrative example is given by the Teesside University’s Equal Opportunities Policy (2008), subsequently updated to reflect the Equality Act (2010). Specialised teams such as the Equal Opportunities Committee are playing a central role in monitoring policy implementation, but institutional services at all levels are expected to articulate their commitment to widening participation (that includes: market and publicity, access and admissions, staff recruitment, curriculum development and delivery, and language use). Notice also that the mission of inclusion is presented as the institution’s own commitment rather than a

mere implementation of the equality duties, which further articulates the university as a proactive and autonomous entity (see also Krücken et al. 2009).

II. 3. Empirical Implications

Following the diffusion of formal organisation as a model of institutional identity and purpose, universities are likely to expand their levels of professional expertise in catering to demographic inclusion. Such dynamics should be especially evident in universities' responses to demographic inclusion in terms of race and ethnicity, disability, and gender, following the role of statutory equality duties in nurturing highly rationalised approaches to organisation. Accordingly, I hypothesise:

H1 Universities increasing students and staff from black and ethnic minority backgrounds engage with a larger proportion of non-academic professionals.

H2 Universities increasing disabled students and staff engage with a larger proportion of non-academic professionals.

H3 Universities increasing female students and staff engage with a larger proportion of non-academic professionals.

The hypothesised relationships will be assessed while controlling for the total number of students capturing broader trends of massification in higher education (i.e. the widening of access to students from different socio-economic backgrounds) (Schofer and Meyer 2005). I will also control for diversification in universities' missions beyond inclusion, as universities are pursuing a wider array of goals possibly nurturing the proliferation of professional staff. In this sense, universities are increasingly strategising for internationalisation (Ayoubi and Massoud 2007), and they are orienting towards

stronger research profiles in response to the Research Assessment Exercises³ (Yokoyama 2006; Deem 2010). Concomitantly, universities are adopting an entrepreneurial approach by looking to expand their sources of funding from external stakeholders such as governments, industry, and the local community (Clark 1998).

Last but not least, I control for universities' reliance on income from tuition fees and education contracts (e.g. research studentships). From a market-oriented perspective (as opposed to cultural forces) (Lynch 2006), the increase in income from tuition fees and education contracts may foster universities engagement with professional staff in order to attract and secure students as customers.

II.4. Data and Methods

Longitudinal data providing yearly information on staff numbers and all other organisational characteristics since 2003 is available from HESA, the official agency for the collection of UK HE data funded principally through the subscriptions of various HEIs. The current paper explores the changes in non-academic professionals in 109 universities for which data are fully available, amounting for approximately 80% of the UK HEIs with a university status. HESA uses the national standard provided by the Standard Occupational Classification (SOC) in order to categorise occupational information. The data used in this paper captures the number of staff full-person or equivalent (headcounts) and it excludes atypical staff whose contracts last less than four consecutive weeks (e.g. guest lecturers, temporary staff contracted for short term projects). The analysis is run on a longitudinal dataset with yearly data from 2003 to

³The Research Assessment Exercise (RAE) started being conducted by the UK funding councils every five years since 1986 as a tool of evaluating research quality in British HEIs. In 2008 it was followed by the Research Excellence Framework (REF).

2011, as from 2012 non-academic professionals are being merged with academic staff as “higher education professionals” in line with the SOC changes in occupational coding.

A regression based analytical technique is used in order to test the hypothesised associations, controlling for other institutional level differences. *The proportion of non-academic professionals* represents the dependent variable. Although HESA suggests merging the managerial, professional and technical staff in order to distinguish non-academic professionals from other administrative positions such as clerical and manual staff, I follow the approach of Gornitzka and Larsen (2004) and reconstruct this category by excluding the technical staff.⁴ Therefore, the category of personnel to be explored in this study includes: managers, senior administrators, planning and support personnel (e.g. student welfare workers, careers advisers, vocational training instructors, personnel and planning officers), services personnel (e.g. artistic, media, public relations, marketing) as well as other non-academic professionals (e.g. academic standards officers) but excludes: building engineers, IT technicians and other technical staff.

The level of demographic inclusion represents the principal predictor. It is operationalised starting from the legal directives surrounding the equality duties of UK public institutions. I consider six variables indicating the proportions of students and staff (in total students and staff respectively) with regards to: ethnicity (black and ethnic minority students and staff), disability (disabled students and staff), and gender (female students and staff). The exploratory factor analysis has identified three dimensions of inclusion explaining 81% of variance in the underlying construct: the ethnicity variables load the highest on the first factor (Alpha = .83), the gender indicators on the second factor (Alpha = .75), and the disability indicators on the third factor (Alpha = .40).

⁴The substantive distinction between non-academic professionals and higher technical staff is also reflected in the different factors that may play a role in their proliferation. As an example, the digitalisation of administrative work is directly relevant in understanding the changes in higher technical staff but an arguable determinant for the changes in the wider professional personnel.

According to the Kaiser criterion all factors are relevant in accounting for institutional variation in the underlying construct (Eigenvalues > 1). Based on this analysis, each pair of indicators has been cumulated across students and staff (e.g. the proportion of female students and staff in the total number of students and staff indicates “female inclusion”, the proportion of black and ethnic minority students and staff in the total number of students and staff indicates “ethnic inclusion”, and the proportion of disabled students and staff in the total number of students and staff indicates “disability inclusion”).

Note that the disability indicators have a low reliability coefficient (Alpha $< .70$) (Nunally and Bernstein 1978). It is possible that that the proportion of disabled students and staff in the total number of students and staff will have an effect of its own (as higher shares of disabled people may be indicative of a broader culture of self-identifying and declaring disabilities within an institutional framework) thus it will be included in the analysis. However, the low reliability coefficient underlines differences in the patterns of disability inclusion among students and staff, which may imply further differences in the ways in which the two levels of disability inclusion relate to professional staff. In order to account for such differences, the analysis will be additionally run by separately including the proportion of disabled students in total students and the proportion of disabled staff in total staff. The relationships between each type of demographic inclusion and the share of non-academic professionals are estimated while controlling for the total number of students in order to account for the widening of participation in higher education.⁵

The model controls for *the broader diversification in universities' missions*. First, I account for international outlook by controlling for the proportion of non-UK students in total students. Second, I account for the expansion in fundraising activity (beyond research grants and contracts), operationalised as all income from services rendered to

⁵The total number of students is strongly correlated with the total number of staff ($r = .63$) thus the model will only control for the total number of students in order to avoid multicollinearity.

outside bodies (e.g. health and hospital authorities, local authorities, EU government bodies), including the supply of goods and consultancies, in total income. The model also accounts for universities' reliance on students as customers, by controlling for universities' proportion of income derived from tuition fees (fees from credit bearing courses) and education contracts (income from charities to cover tuition fees and bursaries in the context of research studentships), in total income.

Table 1 illustrates the descriptive statistics.

Table 1 *Descriptive Statistics*

Indicator	M	SD	Min	Max	N*T
% Non-academic Professionals	.16	.04	.04	.33	872
Female Inclusion (% students and staff)	.61	.08	.34	.99	872
Ethnic Minority Inclusion (% student and staff)	.15	.12	.02	.55	872
Disability Inclusion (% students and staff)	.07	.03	.02	.33	872
Total Number of Students	16985	7626	1440	36505	872
% Income Tuition Fees and Education Contracts	.30	.10	.06	.63	872
% International Students	.23	.12	.00	.71	872
% Research Staff	.34	.09	.02	.59	872
% Income from services rendered to outside bodies	.17	.07	.04	.50	872

NOTES: Distributional issues have been addressed where appropriate through log transformations (non-academic professionals, ethnic inclusion and disability inclusion).

The empirical analysis is implemented in two steps. First, I carry out a descriptive analysis of the HESA data in order to illustrate the pattern of change in HE staff relating to the average number of personnel between 2003 and 2011. Second, I fit a series of Fixed Effects (FE) regression models with lagged independent variables in order to empirically assess the proposed arguments. The data is set on a balanced panel with universities as the primary units of analysis (N=109), observed yearly from 2003 to 2011 (981 observations). Having lagged the independent variables at time ' $T - 1$ ' the total

number of observations was reduced to 872. The Open University represents a major outlier for the students and staff data, and so it has been excluded from the analysis.⁶

The Breusch and Pagan Lagrangian Multiplier (LM) test has identified a significant level of institution specific variance ($\chi^2 = 1,503$; $p < .001$), thus pooling the data deemed to be invalid. In order to control for the unobserved differences between universities I used a fixed effects (FE) model. Having lagged the independent variables by one year, I was able to predict whether the level of demographic inclusion has any effect on the share of professional staff. Overall, the model entails an assessment of whether getting more students and staff from demographic backgrounds protected under the previously illustrated equality duties increases the proportion of non-academic professionals in total staff, net of institutional level differences.

The model, where: 'Y' is the dependent variable (DV) with 'i' indicating the university and 't' indicating the time, 'X_{i(t-1)}' exemplifies one lagged independent variable (IV) with coefficient ' β_1 ', and ' α_i ' is the unknown intercept for each university, and ' u_i ' is the error term, becomes:

$$Y_{it} = \beta_1 X_{i(t-1)} + \alpha_i + u_{i(t-1)}$$

II.5. Findings and Discussion

Figure 1 illustrates the evolution of academic staff and non-academic staff (that includes: clerical staff, higher technical staff, manual staff, and the category of interest to this paper: non-academic professionals), in the current sample, from 2003 to 2011. We can see that the average number of personnel has increased from about 2319 in 2003 to about 2646 in 2011 i.e. approximately 14%. Although about 68% of this growth was due to the

⁶With regards to the number of students The Open University displays values over ten times higher than the national average. Atypical values are also present for other indicators as in the case of staff data.

increase in academic staff, in 2011 the number of academic staff amounts to less than a half the total number of staff. In a more finely grained analysis, we can see that the highest relative growth in the average number of personnel per university has been registered among non-academic professionals (27%), followed by academic staff (25%) and clerical staff (11%). The average number of manual staff decreased by 10% and technical staff decreased by approximately 2%. The analysis shows a strong convergence with what has been found in other European countries and the earlier example of the US.

Figure 1 *The Average Number of Personnel by Category in UK Universities (2003-2011)*

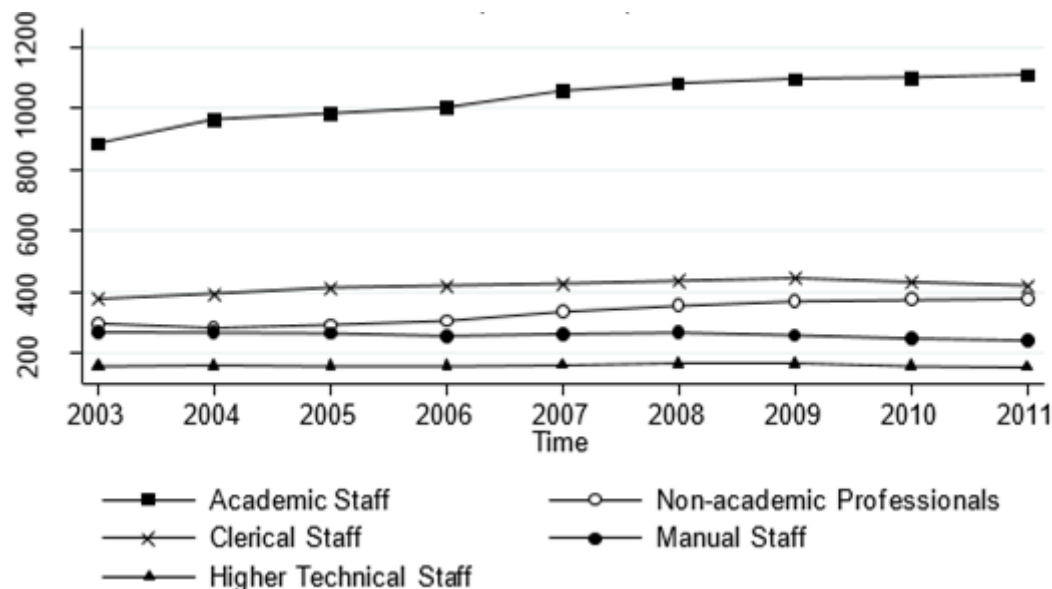


Table 2 shows the results from the fixed effects model with lagged independent variables predicting the proportion of non-academic professionals in total staff. The model introduces universities' level of demographic inclusion among students and staff (in terms of race and ethnicity, disability, and gender). The relationships are estimated while controlling for: total students, international students in total students, income rendered from external services in total income, research staff in total staff, and income from tuition fees and education contracts in total income.

In **Table 2** we can clearly see that demographic inclusion in line with the equality duties on public institutions is propping up the proliferation of professional staff.

Table 2 *Fixed Effects Model with Lagged Independent Variables Predicting the Proportion of Non-Academic Professionals*

Variables	Coefficients
Constant	-1.693*** (.464)
Ethnic Minority Inclusion	.245*** (.052)
Disability Inclusion	.069* (.033)
Female Inclusion	.453 (.654)
Total Students	.011 (.039)
International Students	.455* (.211)
Income from services rendered to outside bodies	.091 (.283)
Research Staff	-.043 (.255)
Income from tuition fees and education contracts	.419* (.178)
R ² Within Universities	.22
R ² Between Universities	.00
F-Test	10.52***
N (Universities)	109
N (Observations)	872

NOTES: *p <.05, ** p <.01, ***p<.001

Robust Standard Errors in Parentheses

Coefficients and Standard Errors Rounded to the Third Decimal

More precisely, controlling for all other variables, the model estimates that a 1% increase in the proportion of students and staff from black and ethnic minority backgrounds leads to about 25% increase in the proportion of non-academic professionals

($B = .245$, $p < .001$) (H1 confirmed). Concomitantly, a 1% increase in the proportion of disabled students and staff increases the proportion of non-academic professionals by approximately 7% ($B = .069$, $p < .05$) (H2 confirmed). The inclusion of female students and staff is also positively associated with the share of non-academic professionals, but insignificant ($B = .453$, $p > .05$) (H3 disconfirmed). The relative strength and significance of the relationships reflects the chronological introduction of the statutory equality duties. In this sense, the highly significant relationship capturing the impact of ethnic minority inclusion on professional staff pertains to the firstly introduced equality duty (the race and ethnicity equality duty 2001), which was followed by the disability equality duty (in 2006), the last statutory duty being specified for gender (in 2007).

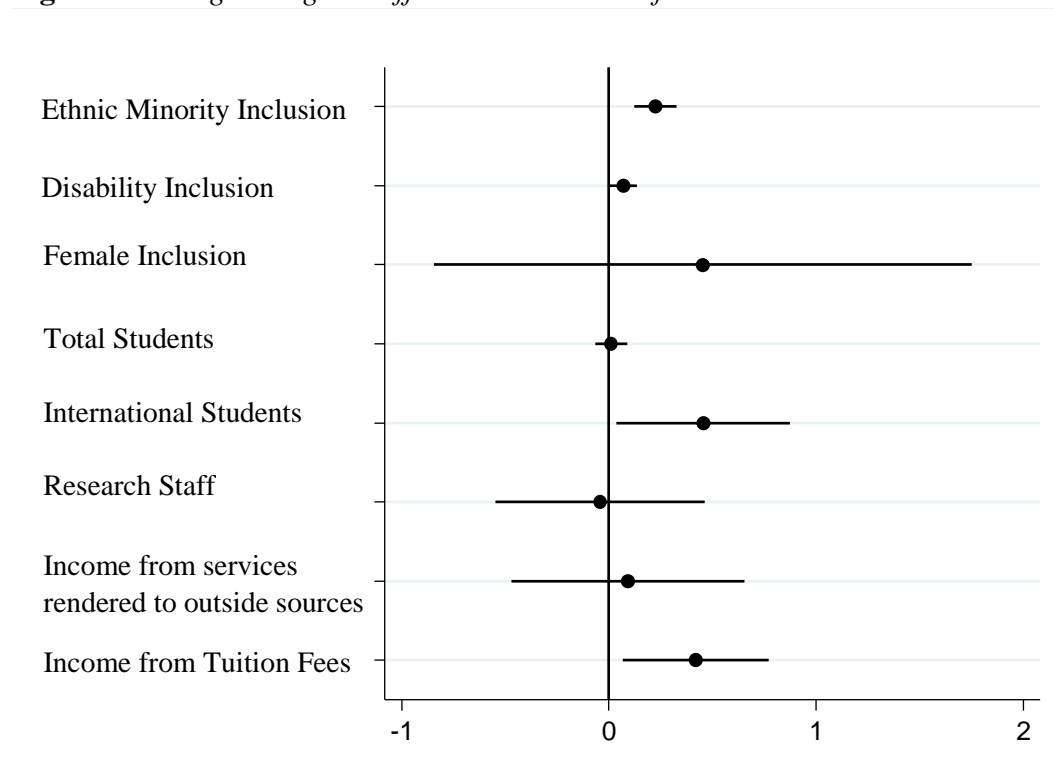
Notice that the inclusion of international students is another important aspect contributing to the proliferation of non-academic professionals ($B = .455$, $p < .05$). The positive impact of international students on non-academic professionals is especially interesting as this can be observed while controlling for the share of income from tuition fees and education contracts. This finding shows that universities do not simply cater for international students as cash cows. We can see that universities getting more international students expand their professional expertise regardless of their level of reliance on tuition fees and education contracts. This finding strengthens the neo-institutionalist argument according to which universities' engagement with professional expertise goes beyond the pressures of the markets, underlying the formalisation of the university as an organisation.

This finding can further help us interpret the independent effect of income from tuition fees and education contracts on professional staff. Controlling for demographic inclusion, total number of students, international students, research staff, and income from externally rendered services, universities' that become more reliant on income from

tuition fees and education contracts tend to engage with more professional staff ($B=.419$, $p<.05$). As I have previously illustrated, it is unlikely that the impact of tuition fees and education contracts on professional staff stems from universities' competition for international students as customers. Moreover, the relationship may indicate that as universities are faced with new opportunities of expansion (in the UK case, the removal of the cap on tuition fees) they respond by further diversifying their professional expertise thus consolidating their formal organisational structures. This echoes the experience of other European HE systems, where universities have responded to complex regulatory shifts by strengthening their organisational backbone (De Boer et al. 2007).

The model explains 22% of the variance in universities' non-academic professionals across time (R^2 Within Universities = .22) which is a moderate amount. **Figure 2** provides a visual illustration for the marginal effects. We can see that apart of research staff, all hypothesised indicators are positively associated with the share of professional staff (their coefficients are situated on the right hand side of the vertical axis). However, only demographic inclusion (in terms of ethnicity and disability), international students, and income from tuition fees and education contracts significantly contribute to our ability to estimate the share of professional staff.

Figure 2 Average Marginal Effects with 95% Confidence Interval



Finally, given the low reliability coefficient between disabled students and disabled staff ($\text{Alpha} < .70$), the analysis has been additionally run by separately considering the proportion of disabled students in total students and the proportion of disabled staff in total staff. **Table 3** illustrates the results for disability inclusion and for all other significant predictors, controlling for female inclusion, total students, research staff, and income from services rendered to outside bodies (not shown in the table).

Table 3 *Fixed Effects Model with Lagged Independent Variables Predicting the Proportion of Non-Academic Professionals*

Variables	Coefficients (A)	Coefficients (B)
Constant	-1.729*** (.463)	-1.741*** (.463)
Disability Inclusion (columns “A” for students; “B” for staff)	.063* (.027)	.026 (.020)
Ethnic Minority Inclusion	.233*** (.052)	.258*** (.054)
International Students	.455* (.211)	.449* (.211)
Income from tuition fees and education contracts	.437* (.177)	.421* (.179)
R ² Within Universities	.22	.22
R ² Between Universities	.00	.00
F-Test	10.54***	10.21***
N (Universities)	109	109
N (Observations)	872	872

NOTES: *p <.05, ** p <.01, ***p<.001

Robust Standard Errors in Parentheses

Coefficients and Standard Errors Rounded to the Third Decimal

Model controls for: female inclusion, total students, research staff, and income from services rendered to outside bodies.

We can see that the positive relationship between disability inclusion and professional staff primarily reflects universities’ responses to the increase in disabled students (Table 3, Column A: B=.063, p<.05), while the inclusion of disabled staff is not significant on its own (Table 3, Column B: B =.026, p>.05). This finding may point towards the pursuit of inclusion among disabled students being a reoccurring theme in higher education policy even before the 2006 disability equality duty. As early as the 1990s, the higher education sector was urged to “do more to adapt its teaching and learning strategies to meet the requirements of some students with disabilities” (Dearing Report 1997, 112). It is possible that the engagement with professional staff in the 2000s has developed faster on the rosters of already existing formal structures responding to disability among students.

II.6. Implications for Universities' Institutional Identity and Purpose

The findings are immediately relevant to the ongoing debate surrounding the increase in the number of non-academic professionals in UK universities. If the pattern is projected against the classic university model (as an independent community of scholars, pursuing knowledge as a good on its own), the binary opposition “academics vs administrators” is inevitable. Departing from this view, universities’ engagement with professional expertise stems from the inability of academic staff to fulfil the traditional missions of teaching and research as the university sector continues to grow. However, the impact of the overall increase in student numbers on universities’ administrative and professional expansion tends to be overestimated (Teichler 1998), the current paper showing that more complex forces come into play.

The values and missions that universities currently associate themselves with go beyond the sole pursuit of knowledge. The contemporary university prides itself as an empowering institution, contributing to the public good by expanding its mission to accommodate the inclusion of people from all demographic backgrounds (Meyer et al. 2006; Schofer and Meyer 2005). Universities provide their proactive and rational actorhood in catering for inclusion, thus articulating themselves as strategic entities. The UK HE sector aligns with this pattern, the emergence of statutory equality duties entailing further formalisation in universities’ pursuit of inclusion. Universities are expected to adopt a proactive and anticipatory approach towards reducing discrimination by developing and implementing equality schemes at the institutional level. The statutory duties are portraying institutions as integrated actors, with the capacity to rationalise their resources and act systematically towards the pursuit of inclusion. The current investigation into the UK universities’ pursuit of inclusion has shown that the institutionalisation of rationalised approaches to organisation entails a butterfly effect at

the organisational level that untimely shapes the personnel makeup. Universities increasingly codify their commitment to inclusion as scientific approaches to organisation by creating new roles and functions to be filled by professionals. The findings align with the neo-institutionalist literature arguing that universities are increasingly transforming into organisational actors in catering to culturally prescribed goals and missions (Krücken and Meier 2006; Ramirez 2013; Ramirez and Christensen 2013).

The current findings provide the impetus for two streams of research. First, the proliferation of professional staff as a culturally legitimised form of institutional action raises important questions about the degree to which the increase in non-academic professionals is functional in helping universities achieve their goals and targets, rather than a mere enactment of how a university is expected to be. Research in this area is particularly needed as highly influential models of higher education (purporting a vision of higher education that is both expansive and high quality) are coming under scrutiny more than ever before (Marginson 2016). Second, universities' transformation into organisational actors fosters increasing similarity in university missions as well as in the ways in which universities are assimilating such missions at the institutional level. To the extent to which variation in universities' responses to environmental demands is a barometer for their ability to maintain a critical approach to normative and ideological directions, further research may explore the ways in which universities' catering for culturally prescribed goals and missions can be reconciled with their identity as "forums of critical thought" (Barnett 2000, 418).

Chapter III

Do Non-Academic Professionals Enhance Universities' Performance?

Reputation vs. Organisation

Universities are increasingly engaging with non-academic professionals in facilitating performance outcomes, reaffirming themselves as purposive organisations, i.e. institutions with the ability to organise strategically in the pursuit of goals and standards. However, there is little empirical evidence for the impact of professional staff on university performance. Drawing on a sample of 100 British universities, I assess whether the changes in the ratio of professional staff to students (from 2003 to 2011) influence subsequent university performance. I find that universities that are moderately increasing their share of professional staff display higher levels of degree completion, but no significant differences can be observed in terms of research quality, good honours degrees, and graduate employability. University performance is largely determined by reputation, prestigious universities performing higher in all dimensions. The findings contribute to the emerging empirical research assessing the impact of professional staff in higher education.

Keywords university performance, non-academic professionals, reputation, purposive organisational action, United Kingdom

Since the 1970s/1980s, scholars have documented a “managerial revolution” signalled by the accelerated increase in the number of non-academic professionals working in managerial and service oriented areas of university administration (e.g. Blau [1973], in the US; Visakorpi [1996], in Finland; Gornitzka and Larsen [2004], in Norway; Gordon and Whitchurch [2007], in the UK; Krücken et al. [2013], in Germany; for elaborate reviews of the literature see Leslie and Rhoades [1995]; Schneijderberg and Merkator [2013]).

The ongoing debate surrounding the increase in the number of non-academic professionals mirrors wider concerns about the nature of universities. The managerial revolution is often invoked to illustrate the controversial transition from the traditional collegial system of decision making and professorial self-governance (in most European countries) to a performance oriented model welcoming the contribution of an increasingly professionalised body of administrative staff (Hamlin and Patel 2015; Kehm 2015; Deem 1998; Clark 1998). More recently, numerous studies emphasise the lack of empirical research for the effectiveness of managerial revolution and the capacity of individual institutions to enhance their outputs through developing organisational strategies (e.g. tightening entry standards, consolidating strategic leadership) (Keith 2001; Bryman 2007; Hamlin and Patel 2015). Concomitantly, a wide body of literature originating in the neo-institutional tradition, points towards the diffusion of “instrumental rationality” as a gold standard of institutional identity and purpose (Meyer 2000; Ramirez and Christensen 2013). The proliferation of non-academic professionals is argued to be symptomatic of the university increasingly articulating its identity as a purposive organisational actor i.e. “an integrated, goal-oriented entity that is deliberately choosing its own actions and that can thus be held responsible for what it does” (Krücken [2011, 4], see also Krücken and Meier [2006, 241]).

Do non-academic professionals enhance performance in higher education? Or is the engagement with strategically oriented personnel a mere artefact of universities trying to sustain the image of goal-oriented entities, capable of effective self-management? I address this question for the UK by drawing on longitudinal organisational data from 100 British universities in order to assess whether the increase in professional staff in the early 2000s had any impact on subsequent university performance.

III.1. The UK Context

The UK is among the countries where the performance culture has had the most impact in higher education policy (Teichler 1988). In the late 1970s/1980s, the Conservative government under Margaret Thatcher pushed for more public service accountability. For higher education (HE), seen as indispensable for national growth, this meant that the internal organisation of universities could no longer be left to academic staff alone. Yokoyama (2006) argues that the introduction of the Research Assessment Exercise (RAE), in particular, has encouraged a perception of managerial approaches as indispensable to universities' performance.¹

The emergence of new areas of expertise (e.g. research impact, new learning technologies, equality and diversity standards in student admissions and staff recruitment) has prompted the development of an increasingly professionalised body of non-academic staff. Whitchurch (2004) argues that the openness to new roles became a tool of adaptation for universities as one could “redefine and push the boundaries” of administrative sub-sections (internally) as well as easily engage with partner institutions (externally). As an example, in the biggest report commissioned by the UK Government

¹The Research Assessment Exercise (RAE) started being conducted by the UK funding councils every five years since 1986 as a tool of evaluating research quality in British higher education institutions. In 2008 it was followed by the Research Excellence Framework (REF).

since the 1960s (Dearing Report 1997), non-academic professionals are acknowledged as strategic in enabling HEIs to cater for the student body and for external stakeholders. The UK case aligns with the European trend, where universities increasingly engage with professional staff in the development and delivery of educational activities and research (Schneijderberg and Merkator 2013).

III.2. An Underexplored Area of Higher Education Practice

The existing literature exploring university performance as a function of personnel resources typically focuses on top executives and offers a descriptive overview of attitudes towards institutional efficiency rather than an assessment of behavioural performance and effectiveness. A range of qualitative studies have documented the perceived characteristics and behaviours associated with the effectiveness of personnel such as pro-vice chancellors (Spendlove 2007), academic programme directors (Ladyshevsky and Vilkinas 2012), and heads of departments (Hamlin and Patel 2015; Trocchia and Andrus 2003).

Other (quantitative) investigations into the determinants of university performance as underlined by institutional ratings have yielded useful insights into the limitations of strategic organisational action (Keith 1994; 1999; 2001; Keith and Babchuk 1998). These studies draw attention to the importance of considering past reputation, defined as “one’s relative standing based on prestige, honor, and deference” (Keith 2001, 496), as yet another factor shaping the perceived merit of individual universities. The role of past reputation in shaping such perceptions is of direct relevance to university performance as universities perceived as meritorious by the public (e.g. prospective students, employers, other universities) are more advantaged than their less prestigious counterparts. The underlying argument is that good students self-select into reputable universities,

employers give higher credit to graduates from prestigious universities, and last but not least, reputable universities continue to benefit from the historical networks and affiliations with other high performing HEIs. As an example, Keith (2001) explores the relationship between organisational attributes (e.g. lowering the student staff ratio, increasing entry standards) and institutional status (operationalised based on aggregated departmental level ratings and national level ratings) on 138 US universities, while considering the impact of past ratings. The results show that institutional status is rather stable over time (the 1982 score explains 99.7 percent of the variance in the 1996 score), the changes in universities' organisational attributes (e.g. percentage change in the student/faculty ratio, percentage change in the undergraduate student acceptance rate) being unrelated to the corresponding changes in institutional status.

Even fewer studies focus specifically on the relationship between non-academic professionals and university performance. Graham and Regan (2016) provide a qualitative investigation into the contribution of professional staff to student outcomes. The inquiry is based on semi-structured interviews conducted with professional personnel (administration, management, learner support and facilities) from a UK and an Australian institution, in order to draw a list of key factors that enable or limit the contribution of such personnel to institutional outcomes. The results reveal three dimensions associated with the performance of professional staff in both contexts (staff knowledge, attitudes of colleagues and supervisors, and job satisfaction) but little can be inferred about the relative impact of professional services on the performance of their respective institutions. Dunder and Lewis (1998) propose a series of institutional features as potential predictors of research productivity within 3,600 doctoral programmes in the US, one of which is the availability of support oriented services and facilities. Although the results confirm a positive relationship between such facilities and research productivity,

inferences cannot be made about the wider share of professional resources as the indicator solely relies on library expenditures.

The scarcity of evidence concerning the impact of professional staff on institutional outputs provides the impetus for larger scale empirical research into the possibilities and limitations of purposive and strategic organisational action.

III.3. Functionalist and Cultural Perspectives on Purposive Organisational Action

Universities' capacity to act strategically towards enhancing performance can be studied from two perspectives (functionalist and cultural). Each perspective yields very different predictions regarding the relationship between professional staff and university performance.

III.3.1. The Promise of Purposive Organisational Action

The taken for granted assumption (to be referred here as “functionalist”) is that professional staff can use their expertise to help HEIs transform *inputs* (personnel and non-personnel resources) into *outputs* relevant to the institutional mission (e.g. student attainment in terms of the educative function, research productivity in terms of the knowledge sharing function). The “input-output model” illustrated by Tablot (2007) along similar models portraying universities as highly rationalised, goal oriented entities, have provided the conceptual foundation for the 1980s New Public Management reforms in HE. The NPM is a term used to capture the increasing pressure on public institutions to achieve “value for money” within the context of budget cuts (Tolofari 2005) and increased participation in HE (Brennan and Shah 2000). Eicher (1988) argues that in most Western European countries the decrease in per student expenditure (relative to the national GDP) has prompted HEIs to adopt new managerial solutions. Clark's notion of an “entrepreneurial university” (1998) characterised by a strengthened steering core and

an expanded developmental periphery is another illustrative example of the promise associated with the transformation of universities into effective organisations whose personnel goes beyond the traditional teaching and research staff. The functionalist expectation behind these models is that, by increasing their share of professional staff, universities will eventually improve their performance.

The indicators most frequently invoked in the existing literature on university performance are research output, student attainment, and employability (e.g. Bazeley 2010; Grotkowska et al. 2015; Graham and Regan 2016). While acknowledging the role of academic staff in enhancing performance, many of these studies emphasise the importance of drawing on a more diverse pool of professional resources and of acting strategically in bridging universities with the external stakeholders such as industry (Dundar and Lewis 1998; Grotkowska et al. 2015).

III.3.2. The Limitations of Purposive Organisational Action

From a neo-institutionalist point of view, the spread of functionalist approaches is symptomatic of institutions seeking legitimacy by adhering to taken for granted models of institutional identity and purpose (DiMaggio and Powell 1991; Meyer 2000; Krücken et al. 2013). Within a cultural climate prioritising the rationalisation of action through the articulation of clearly defined means and goals, institutions of all types and from all over the world are being reinvented as “organisational actors” (Meyer and Bromley 2013). While the engagement with professional staff may reaffirm universities’ identity as purposive organisations, the impact of this strategy on subsequent performance risks being overestimated, given the taken-for-granted-legitimacy of professionalised approaches to organisation. This may explain why, despite HEIs’ increasing engagement with professional staff, very few studies have examined the actual impact of this type of

personnel on university performance. In this sense, Edgar and Geare (2013, 775) point out that “changes in managerial practices in higher education settings have been significant and far-reaching” nevertheless “few studies have sought to examine their efficacy” (see also Deem [1998]).

The cultural, neo-institutionalist critique questions the very rationale underlying the promise of purposive organisational action. This perspective is echoed by various studies suggesting that the culture of a company and the broader environmental factors limit the potential of change coming from strategic organisational decisions. Keith (2001) illustrates the underlying mechanism. The differential allocation of institutional status (via ratings) is delivered as a meritocratic process based on demonstrable outcomes. In order to allow for comparable outcomes (an essential condition for institutional legitimacy), universities are becoming increasingly isomorphic in their structures (see also Meyer and Rowan [1977]; DiMaggio and Powell [1983]). This trend is clearly reflected in the UK HE sector where virtually all universities engage with strategies such as articulating research impact or offering a wide range of employability and academic support. From a neo-institutionalist perspective, institutional status “is only loosely coupled with these ceremonial structures and activities” as “organizations within an institutional environment become increasingly homogenous over time” (Keith [2001, 496], see also Meyer and Rowan [1977]; Steiner et al. [2013]). This entails the emergence of institutional reputation (as opposed to rankings) as the main factor differentiating between universities. As an example, the recent successes of a HEI may not feed into employers’ attitudes to the same extent as its reputation, delaying the impact of institutional efforts to enhance subsequent performance in terms of graduate employability. In other words, universities’ reputation stemming from the historical ratings may overshadow their current performance in moving up and down the rankings.

III.4. Hypotheses

Several empirical implications can be derived as follows. From a functionalist perspective, universities are able to act as strategic organisations by channelling their efforts towards improving performance. Professional staff plays a central role in this endeavour, by supporting the professional development of students and staff, providing academic support tailored towards the needs of individual students, and last but not least, facilitating universities' third mission i.e. universities' contribution to socio-economic development through means such as community engagement and research impact (Etzkowitz et al. 2000). Universities are encouraged to diversify their professional resources and engage with an expanded developmental periphery (in addition to the "academic heartlands") in order to deal with the increasing pressures and expectations coming from governments and global markets (Clark 1998). With regards to the UK context, Whitchurch (2004) shows that universities increasingly engage with professional staff as a way of pursuing institutional innovation and development (e.g. student services, human resources, research enterprise). From such a perspective, universities having increased their share of professional staff are expected to display higher levels of subsequent performance (**H1**).

From a cultural perspective, the potential of purposive organisational action is rather limited as universities are deeply immersed in an institutional environment where reputation overshadows the current successes or failures of individual HEIs. Despite universities' efforts to become more entrepreneurial, external stakeholders such as: prospective students, employers, and other universities, may continue to largely inform their choices based on reputation (O'Loughlin et al. 2015). In line with the neo-institutionalist argument, this paper assesses the claim that organisations and their outputs "are not only the result of conscious design but are also influenced by institutional

preferences and culture” (Steiner et al. 2013, 410). That is, reputable universities are expected to display higher levels of university performance (**H2A**). Furthermore, Steiner et al. (2013) argue that universities are developing in an institutionalised environment that fosters increased homogeneity between structures and activities (see also Meyer and Rowan [1977]). As universities are engaging with increasingly similar strategies of facilitating performance (e.g. learning support structures, student placements and internships, professional development courses), reputation grows in importance as a differentiating factor between HEIs (Keith 2001). Accordingly, I hypothesise that reputation is a stronger predictor of university performance compared to an increase in the share of professional staff (**H2B**).

III.5. Methodology

III.5.1. Sample and Timeline

The current paper draws on 100 universities for which data are available in both The Complete University Guide (CUG) and Higher Education Statistics Agency (HESA). CUG (providing ranking tables compiled by Mayfield Consultants) was first published in 2007 in The Daily Telegraph. CUG has been chosen over other available rankings (e.g. *The Guardian*, *Times Higher Education*) as it provides detailed performance criteria available over an extended period of time. The CUG indicators are adjusted to take account of the subject mix at the university where applicable. In addition, CUG relies extensively on HESA data which enhances comparability with the HESA indicators used to operationalise the share of academic and professional staff. This sample amounts to approximately 80% of the UK universities (see the European Tertiary Education Register - ETER [2011] for a full list of UK HEIs with university status) covering every UK region (England, Wales, Scotland and Northern Ireland). The sample includes universities

of various sizes from universities of under 5,000 students (e.g. University of Abertay Dundee) to universities of over 30,000 students (e.g. University of Leeds), the average number of students being of approximately 16,000.

HESA data on professional staff were extracted from the earliest available time point (2003) and the latest available time point with comparable data (2011), as from 2012 the definitional change in the Standard Occupational Classification (SOC) has entailed the merging of non-academic professionals with academic professionals as one category of “higher education professionals”. For comparability purposes, information for all other predictors was collected for 2003 and 2011. The two time points were used to compute percentage changes in the predictor variables in order to assess whether different organisational strategies (e.g. increasing the proportion of professional staff to students from 2003 to 2011) can be related to university performance in the short run (2011) and in the long run (2017). The decision of analysing long run effects by using the changes in the ratio of professional staff to students from 2003 to 2011 to predict university performance in 2017 takes into account the SOC 2012 definitional change. The model does not include the changes in the ratio of professional staff to students from 2011 to 2017 (i.e. when the definitional change came into effect), for comparability purposes but also for allowing this time gap to conveniently account for time lags involved in institutional level planning.

III.5.2. *Definitions and Variables*

University Performance has been operationalised based on indicators collected from the CUG League Tables. Among the performance criteria that CUG uses to determine universities’ ratings, I utilise in this paper those that have also been considered by the Higher Education Funding Council for England (HEFCE) in setting quality benchmarks

for the UK HE sector (i.e. student attainment and graduate employability). Research quality will also be considered following the engagement of HEIs with the REF (Research Excellence Framework) process.

Student attainment is operationalised based on degree completion and good honours degree. Degree Completion (ranging from 0 to 100) has been derived by CUG from the HESA calculation of anticipated outcomes for a cohort of students i.e. the percentage of students expected to complete their course or transfer to another HEI. Good Honours (ranging from 0 to 100) has been derived by CUG from HESA and it captures the percentage of graduates achieving first or upper second class degrees in the total number of graduates with classified degrees. *Employability* is indicated by graduate prospects. Graduate Prospects (ranging from 0 to 100) has been derived by CUG from HESA, operationalised as the percentage of graduates who engage in employment or further study in the total number of graduates with a known destination (first degree graduates only). *Research Quality* (ranging from 1 – nationally recognized quality to 4 – world leading quality) has been derived by CUG from the REF. Research quality is assessed in terms of originality, significance and rigour with regards to outputs, impact and environment.

Professional staff is the main predictor of interest. It has been operationalised based on HESA staff data which capture the number of staff full-person or equivalent (headcounts) excluding atypical staff whose contracts last less than four consecutive weeks (e.g. guest lecturers, temporary staff contracted for short term projects). Although HESA recommends merging the managerial, professional and technical staff in order to distinguish non-academic professionals from the clerical and manual staff, I apply the technique suggested by Gornitzka and Larsen (2004) and exclude the technical staff. In this paper, professional staff include: managers, senior administrators, planning and

support personnel (e.g. student welfare workers, careers advisers, personnel and planning officers), services personnel (e.g. artistic, media, public relations and marketing occupations) and other professional administrators (e.g. academic standards officers). The number of personnel has been considered relative to the total number of students (i.e. the ratio of professional staff to students) in order to account for the challenges of management associated with larger student numbers. Moreover, professional staff has been operationalised as the percentage change in the ratio of non-academic professionals to students (from 2003 to 2011). The indicator was derived by subtracting the ratio of non-academic professionals to students in 2003 from the ratio of non-academic professionals to students in 2011 then transforming the difference in percentages relative to the initial 2003 ratio.

$$\% \text{ change in the ratio of non - academic professionals to students} = \frac{T_{2011} - T_{2003}}{T_{2003}}$$

The relationship between professional staff and university performance is explored while accounting for *reputation* as a potential determinant of university performance. This predictor is crucial in capturing the broader cultural forces that may overshadow the potential of purposive organisational action underlying universities' engagement with professional staff. Reputation has been operationalised based on data manually collected from an earlier version of The Times Good University Guide (GUG) (O'Leary et al. 2002, 49). In 2002, GUG offered a Top 20 list containing the highest ranked universities based on an evaluation of three retrospective factors dating back to the 1990s: the number of appearances in subject tables, the number of times in top ten, and percentage of appearances in top ten. This group of universities will be referred here as "prestigious universities".

III.5.3. *Organisational Controls*

The relationships of interest have been assessed while taking into account a series of organisational attributes (other than the share of professional staff), that can also make a difference in terms of university performance. First, the model controls for institution specific personnel (academic staff) primarily responsible for delivering the teaching and research functions of the university thus a widely used indicator in understanding university performance (Grunig 1997; Walker 2016). *Academic staff* is operationalised as the percentage change in the ratio of academic staff to students (from 2003 to 2011). Second, the effects of the staff to student ratios are estimated while controlling for the mode of employment, in order to account for the rise of part-time teaching staff in UK universities (Association of University Teachers 2005). The indicator has been operationalised as the percentage change in the proportion of *part-time staff* (from 2003 to 2011). Third, the model controls for *institutional size* as another institutional characteristic closely associated with university performance (Grunig 1997). Larger universities may display higher levels of subsequent performance as they can draw on a larger pool of human and financial resources, whereby more academic staff cater for larger student numbers and higher income levels allow for higher levels of expenditure. An exploratory factor analysis confirms this expectation empirically, as total expenditure, total students, total staff and total income are highly correlated and they explain approximately 87% of variance in the underlying construct (Cronbach's Alpha = .71). The generated variable is measured at the earliest time-point in the analysis (2003), and it has been used as an indicator of institutional size. Fourth, the model controls for whether the university is located in Scotland (as opposed to England, Northern Ireland and Wales), Johnes and Taylor (1990) arguing that Scottish universities may display lower completion rates due to students embarking in longer courses as well as enrolling at an

earlier age. Fifth, foundation era is considered, as age may represent an asset in terms of institutional resources and reputation (O'Loughlin et al. 2015). A binary indicator is utilised to distinguish older universities from the universities founded in the post-1960 period characterised by great HE expansion.² Sixth, the model accounts for potential diseconomies of scale (postulating that large scale organisations may encounter a decrease in efficiency after a certain point due to growing costs) by including a squared term for institutional size. A non-linear relationship may also characterize the impact of professional staff as formal organisational structures initially implemented as a response to structural pressures may continue to perpetuate as a legitimizing model of institutional action instead (DiMaggio and Powell 1983). In order to account for this dynamic, the model will also include a squared term for professional staff.

Finally, a core factor to be considered in exploring university performance is selectivity or entry standards (Grunig 1977). The indicator must be handled with caution as it is possible that high performing universities display higher selectivity in line with their reputation: “universities high up the [rankings] table will, in general, [show] higher grades in whatever qualification you are offering than those lower down the table” (O'Leary et al. 2002, 36). The striking association between entry standards and university performance is also present in the current data. At the cross-sectional level (for both 2011 and 2017), the bivariate correlations between entry standards and each dimension of university performance (student attainment, research quality and graduate prospects) range from .70 to .91, making the cross-sectional indicator a potentially endogenous predictor. Following the logic applied to all other predictors, the model controls for the percentage change in entry standards as opposed to the cross-sectional measure. This technique helps address the endogeneity issue while focusing on entry standards as an

²Examples include the “plateglass universities” and the former Colleges of Advanced Technology achieving university status after the Robbins Report in 1963.

object of purposive organisational action, i.e. allowing the assessment of whether tightening entry standards may affect subsequent university performance. Unlike the other predictors available from 2003 to 2011, CUG data on entry standards are only available from 2008 thus the percentage difference is computed from the 2008-2011 time interval. The CUG indicator is based on the average UCAS (The Universities and Colleges Admissions Service) tariff score for new undergraduate students, converting students' examination results in a numerical score (A level A=120, B=100 etc). Students in their foundation year were excluded.

Table 1 illustrates the descriptive analysis of the indicators outlined above.

Table 1 *Descriptive Statistics*

Continuous Variables	Mean	Standard Deviation	Min.	Max.	N
Good Honours (2011)	62.35	10.12	42.3	85.6	100
Good Honours (2017)	72.81	8.65	50.4	90.7	100
Degree Completion (2011)	84.24	7.49	62.6	97.8	100
Degree Completion (2017)	86.33	6.16	71.1	97.6	100
Graduate Employability (2011)	66.39	8.32	49.2	88.9	100
Graduate Employability (2017)	69.38	9.72	45.2	90.8	100
Research Quality (2011)	2.29	.37	1.37	2.96	100
Research Quality (2017)	2.74	.37	1.63	3.36	100
<i>Non-academic Professionals/Students</i> 2003-2011 % change in the ratio of non-academic professionals to students	20.7	72.5	-75.2	236.5	100
<i>Academic Staff/Students</i> 2003-2011 % change in the ratio of academic staff to students	8.9	70.0	-80.2	343.7	100
<i>Part-Time Staff</i> 2003-2011 % change in the proportion of part-time staff in total staff	13.3	47.5	-71.6	137.3	100
<i>Institution Size</i> 2003, factor variable	-0.0	0.9	-1.2	2.5	100
<i>Entry Standards</i> 2008-2011 % change in entry standards	2.5	8.0	-24.5	35.1	100
Categorical Variables	%				
<i>Prestigious Universities</i>	15				100
<i>Post-1960 Founded</i>	18				
<i>Scotland</i>	12				100

Notes: Negative numbers for minimum values should be interpreted as part of factor variables (institution size) or as percentage decreases over time (all staff variables and entry standards).

III.5.4. *Analytical Strategy*

An ordinary least square regression (OLS) technique has been used in order to assess the relationship between universities' performance (the dependent variable) and the independent variables and controls outlined above.

Two OLS models have been run in order to enable the detection of immediate effects (university performance measured in 2011) and long term effects (university performance measured in 2017). Extreme outliers have been removed from the analysis. The sample of 100 universities was kept unchanged across the two regression models (2011 and 2017) based on the sample size in 2011.

III.6. Results and Discussion

Table 2 illustrates the results from the models predicting universities' performance. The models show how changes in the professional staff to students ratio over a period of time of approximately one decade (2003 to 2011) are associated with university performance in the short term (in 2011) and in the long term (in 2017), while considering the potential impact of reputation. The relationships are estimated while controlling for the percentage change in: the ratio of academic staff to students, part-time staff, entry standards, as well as for cross-sectional measures of institutional size (2003), foundation era, and geographical region.

We can see that universities that have increased their ratio of non-academic professionals to students display slightly higher shares of degree completion both in the short run (2011: $B = .038$, $p < .05$) and in the long run (2017: $B = .038$, $p < .01$) (H1 partly confirmed). This association may point towards the role that non-academic staff increasingly plays in supporting academic activities such as teaching and tutoring (Whitchurch 2008; Scheijderberg and Merkator 2013; Graham and Regan 2016).

Table 2 *Linear Regression Model Predicting University Performance*

Variables	Good Honours		Degree Completion		Graduate Prospects		Research Quality	
	2011	2017	2011	2017	2011	2017	2011	2017
Constant	61.29*** (1.114)	71.44*** (1.091)	83.96*** (.941)	85.97*** (.809)	65.79*** (1.127)	69.56*** (1.249)	2.340*** (.035)	2.788*** (.038)
2003-2011 % change in the ratio of non-academic professionals to students	.038 ⁺ (.019)	.013 (.019)	.038* (.017)	.038** (.014)	.018 (.018)	.022 (.023)	.001 (.001)	.001 (.001)
Square Term (2003-2011 % change in the ratio of non-academic professionals to students)	-.000** (.000)	-.000 (.000)	-.000** (.000)	-.000** (.000)	-.000 (.000)	-.000 (.000)	-.000 ⁺ (.000)	-.000 (.000)
Prestigious Universities	9.382** (2.789)	7.845** (2.231)	6.533** (2.151)	4.839** (1.549)	6.725** (1.970)	4.921* (2.403)	.293*** (.081)	.234** (.080)
2003-2011 % change in the ratio of academic staff to students	.031 ⁺ (.017)	.033* (.015)	.014 (.012)	.013 (.010)	.026 ⁺ (.014)	.037* (.017)	.001* (.000)	.001 (.001)
2008-2011 % change in entry standards	.128 (.154)	-.000 (.079)	-.028 (.136)	-.026 (.059)	.013 (.115)	.070 (.095)	-.003 (.007)	-.009* (.003)
F-Test	18.95***	12.04***	13.25***	17.91***	19.47***	14.65***	13.10***	16.00***
N	100	100	100	100	100	100	100	100
R ²	.51	.45	.40	.47	.53	.50	.48	.48

Notes: ⁺p<.10, *p<.05, **p<.01, ***p<.001

Robust Standard Errors in the Parentheses

Coefficients and Standard Errors Rounded to the Third Decimal

The models control for 2003-2011 % change in part time staff, institution size in 2003 (including squared term), geographical region and foundation era.

However, the significance of the squared term for degree completion (2011: $B = -.000$, $p < .01$; 2017: $B = -.000$, $p < .01$), as well as good honours (2011: $B = -.000$, $p < .01$) reveals a tendency for student attainment to increase and then decrease at higher levels of non-academic professionals to students. The findings echo neo-institutionalist studies showing that initial adoption of new organisational forms may be related to structural needs, while later adoption no longer responds to such needs “but is related to institutional definitions of the legitimate structural form” (Zucker and Tolbert [1981]; Meyer [1981], cited in DiMaggio and Powell [1983, 149]). The growth of administrative sections independent of ground level demands may indirectly negatively affect university performance through rising costs and inefficient allocation of funds (Gumport and Pusser 1995).

Both graduate prospects and research quality are independent from the increase in the ratio of professional staff to students. The absence of significant associations for the two dimensions of university performance disconfirms the wide-spread expectation that universities’ engagement with professional resources and expertise beyond the traditional academic staff benefits graduate employability (Grotkowska et al. 2015) and research activity (Dundar and Lewis 1998). By comparison, universities increasing their ratio of academic staff to students display higher research quality in the short run (2011: $B = .001$, $p < .05$), while in the long run they exhibit improved graduate prospects (2017: $B = .037$, $p < .05$) and good honours degrees (2017: $B = .033$, $p < .05$). The positive association with graduate prospects and good honours degrees is also observable in the short run, but at a lower level of significance (Graduate Prospects/2011: $B = .026$, $p < .10$; Good Honours/2011: $B = .031$, $p < .10$).

Reputation is, by far, the main determinant of university performance. Regardless of the changes in staff to student ratios, part-time staff, entry standards, institutional size,

foundation era and region, universities consistently ranking highest in the 1990s/early 2000s are on average performing better than their less prestigious counterparts across all dimensions, both in the short run (2011: Good Honours = 9.382, $p < .01$; Degree Completion = 6.533, $p < .01$; Graduate Prospects = 6.725, $p < .01$; Research Quality = .293, $p < .001$), and in the long run (2017: Good Honours = 7.845, $p < .01$; Degree Completion = 4.839, $p < .01$; Graduate Prospects = 4.921, $p < .05$; Research Activity = .234, $p < .01$) (H2A and H2B confirmed). Notice also that the positive association weakens over time (from 2011 to 2017) across all dimensions of university performance. Finally, we can see that universities that have been raising their entry standards do not distinguish themselves through improved subsequent performance. On the contrary, a negative association with subsequent research quality can be observed (2017: $B = -.009$, $p < .05$).³ It is possible that the negative relationship reflects the precarious state of universities ultimately attempting to improve performance by tightening entry standards and for whom this strategy was unsuccessful in reducing the downward performance spiral.

The findings clearly show that despite universities' efforts to improve subsequent performance via purposive organisational action and strategy, the social perceptions surrounding the value of universities' credentials is shaped by earlier accounts of performance consolidated as reputation. All models explain at least 40% variance in university performance ($R^2 \geq .40$) which is indicative of a good fit.

³A sensitivity analysis was conducted in order to address the limited timespan for the change in entry standards. The model was re-run to predict university performance in 2017 based on the percentage change in entry standards from 2008 to 2017. The negative and significant relationship between the change in entry standards and university performance was replicated, this time for all dimensions of university performance. The finding supports the possibility that the existence of a positive relationship between entry standards and university performance solely at the cross-sectional level is an artifact of reputation, whereby performant students self-select into prestigious universities.

III.6.1. *Reputation and University Performance*

A potential criticism may arise if reputation is viewed as merely an indicator of previous university performance, making the relationship between the two tautological. In order to articulate the difference between indicators at the analytical level, I derive a post-hoc hypothesis. The model was re-run to predict universities' performance in 2017 whereby the indicator of reputation was accompanied by a new indicator capturing the percentage change in universities' ranking from 2008 (the earliest time point when data are available) to 2017. No issue of collinearity has been identified. If reputation truly captures the social perceptions underlining the value of universities rather than universities' recent performance attainment, we would expect that the positive relationship will continue to be significant while the actual change in university rank will have little to no effect on the dependent variables.

Table 3 displays the results. We can clearly see that reputation is the main determinant of subsequent university performance as opposed to universities' recent success in the ranking tables. The findings illustrate the limited role of purposive organisational action and merit, a core assumption within the functionalist argument. Interestingly, the only dimension of performance that is responsive to the incremental changes in universities' position in the ranking tables is graduate prospects ($B=.042$, $p<.01$). This may show that among the stakeholders in the higher education sector, employers are the most responsive to universities' recent successes in moving up the league tables. Nevertheless, the role of prestige remains dominant also in the case of graduate prospects ($B=5.012$, $p<.05$).

Table 3 *Linear Regression Model Predicting University Performance in 2017*

Variables	Good Honours	Degree Completion	Graduate Prospects	Research Quality
Constant	71.53*** (1.112)	86.11*** (.827)	70.02*** (1.224)	2.785*** (.039)
Prestigious Universities	7.863** (2.269)	4.864** (1.554)	5.012* (2.317)	.233** (.081)
2008-2017 % change in university rank	.007 (.016)	.012 (.011)	.042** (.015)	-.000 (.001)
F-Test	10.98***	15.48***	15.19***	14.16***
N	100	100	100	100
R ²	.45	.48	.54	.49

Notes: ⁺p<.10, *p<.05, **p<.01, ***p<.001

Robust Standard Errors in the Parentheses

Coefficients and Standard Errors Rounded to the Third Decimal

The model controls for: 2003-2011 % change in the ratio of: professional staff to students (including squared term), academic staff to students, part time staff, 2008-2011 % change in entry standards, institutional size in 2003 (including squared term), geographical region and foundation era.

III.7. Reputation vs Organisation

Understanding the limitations of purposive organisational action is especially important in a time when universities are enacting taken for granted functionalist assumptions by behaving as goal-oriented entities with the ability to make purposive choices and be accountable for their actions (Krücken [2011, 4] see also Ramirez and Christensen [2013]). The current aggregate level study provides a point of reference for individual HEIs by illustrating the cross-institutional experience of organising for performance (generally), and of engaging with non-academic professionals (particularly).

The results show that universities that have increased their ratios of non-academic professionals to students display higher levels of subsequent performance solely in terms of degree completion, the relationship being rather weak and inconsistent. Taking into account the changes in a wider range of institutional features that universities can manipulate in order to increase performance (ratio of academic staff to students, entry standards etc), reputation emerges as the strongest determinant of performance. The results are supportive for the previous studies finding that universities' reputation is the

main determinant of subsequent performance, which leaves little space for strategic organisational change (Keith 1994; 1999; 2001; Keith and Babchuk 1998). This is largely related to the slow changes in the public perceptions about the merit of individual HEIs (Keith 2001), whereby reputation feeds into research funding and research networks, shapes employers' perceptions of graduate employability, and influences students' choice of university. The findings are equally relevant for the wider neo-institutional literature documenting the diffusion of organisation as a model of institutional identity and purpose (Meyer and Bromley 2013; Meyer 2000). In this sense, universities are increasingly behaving as strategic actors, despite there being little evidence for the capacity of individual institutions to produce outputs via purposive organisational action. On a positive note, the current study shows that the impact of reputation tends to decrease over time. Moreover, universities' efforts to improve their performance attainment are not futile, but longer periods of time may be needed for performance attainment to consolidate as reputation. In this sense, O'Loughlin et al. (2015) suggest that beyond strategic branding and marketing, it is important that HEIs are aware of the subjective nature of institutional reputation which is informally and historically determined (e.g. informal research networks, long-standing institutional affiliations).

Finally, lessons can be derived about the external environment in which universities operate. Policy makers may consider the implementation of alternative league tables that rank universities based on their improvements relative to their previous performance, as opposed to the classic approach providing a cross-sectional comparison of performance scores. This measure may encourage the responsiveness of external stakeholders (e.g. prospective students, employers and funding councils) to universities moving up the ranking tables, while providing a challenge to already prestigious universities.

Conclusion

In this study, I have pursued a comprehensive approach towards understanding the nature of professional and administrative expansion in universities. The phenomenon was analysed from a cross-national, European perspective (first chapter), as well as by focusing on the national context of the UK (second and third chapters). This approach increases the reliability of the findings, as structural and cultural forces have been assessed at both levels. In addition, the extensive process of data collection from four sources (ETER, HESA, CUG, and THE) has enabled a unique dataset operationalising structural and cultural drivers of universities' professional and administrative expansion.

Below I outline the main contributions this thesis brings to the scholarly literature as well as its implications for policy and practice.

Functionality and Culture in Universities' Professional and Administrative Expansion

This thesis reveals that the role of structural pressures in professional and administrative expansion is overestimated, as well as the impact of professional staff on university performance. In particular, the findings show no relationship between the overall increase in student enrolments and universities' share of professional and administrative staff. This is a clear finding at the cross-national (European) level, as well as at the national level (pertaining to the UK). Building on the national level investigation, I also found that aspects of university performance are differently affected by professional staff: while increasing the ratio of professional staff to students benefits degree completion, all other dimensions of university performance (research quality, good honours degrees, and graduate employability) are independent from universities' engagement with professional staff. This finding is in line with earlier sociological institutionalist accounts asserting that "bureaucratisation and other forms of organizational change occur as the result of

processes that make organizations more similar without necessarily making them more efficient” (DiMaggio and Powell 1983, 147).

The role of financial pressures and market dynamics bears a higher level of complexity. The cross-national analysis shows that public universities are likely to exhibit a higher number of administrative and professional staff, while the national level analysis (strictly pertaining to the UK) confirms that universities increasing their proportion of income from tuition fees end up engaging with more professional staff. This may reflect the particularity of the UK HE sector where major increases in tuition fees have shaken up the organisation of finances over the last decade (Wyness 2010). Although it can be argued that the association is indicative of a higher customer focus (where universities engage with professional staff in order to attract students as customers), in the second chapter we have seen that tuition fees do not play a role in the relationship between the inclusion of (high) fee paying students (i.e. international students) and professional staff. Moreover, it is possible that faced with new prospects of expansion (following the removal of the cap on tuition fees), universities have responded by diversifying their professional base and expanding even more as organisations.

The current research brings extensive empirical support towards organisational expansion as a model of institutional identity and purpose (Ramirez 2010; Ramirez 2013; Bromley and Meyer 2014). The cross-national analysis confirms that universities with higher levels of organisational expansion in goods and services foster larger shares of administrative and professional staff, net of structural pressures and financial needs. Moreover, national level analysis illustrates how universities’ diversify their professional staff in catering to new goals and missions (such as the pursuit of demographic inclusion), thus formalising themselves as organisations. In both cases the role of the external environment has been clear: while at the European level universities’

administrative and professional staff are flourishing at high levels of external connectedness and in universities founded after the Bologna Process, at the national level (pertaining the UK), the emergence of statutory equality duties has fostered high levels of formal organisation at the university level.

Implications for Universities' Institutional Identity

The findings bear important implications for universities as transforming institutions. It is possible that universities' organisational expansion represents one strategy of realizing institutional identity in an age of supercomplexity, where universities no longer have the monopoly over the production of knowledge (Barnett 2000). In this sense, the cross-national analysis has shown that the expansion in universities' administrative periphery does not stem from structural vulnerabilities but it characterises HEIs that are equally expanding their number of academic staff, while relying on high shares of core funding and strengthened external networks. Universities' organisational expansion acts as a purveyor of institutional legitimacy (a) it reconstructs universities as integrated entities in a cultural environment that glorifies individual agency (at the ontological level) and scientific approaches (at the epistemological level) (Drori et al. 2009) (b) it strengthens universities' historical role in legitimising such values by assimilating them as part of the academic core (Frank and Gabler 2006).

While exploring the world-wide proliferation of social sciences as indicative of the institutionalisation of evolution-based origins (emphasising the centrality of human actorhood as opposed to God), Frank and Gabler (2006) assert that "changes in the assumed features of reality alter the raw materials of university studies" (17). In line with this argument, I propose that changes in the assumed features of reality equally alter the way in which universities imagine themselves as institutions. In this sense, the diffusion of formal organisation portrays universities as highly integrated and rationalised agents of

change. But are these realistic expectations or are they rather exorbitant claims on institutions?

Implications for Policy and Practice

The above question is highly relevant for policy and practice, particularly in the light of empirical evidence from the third chapter illustrating the limited role of purposive organisational action (via engagement with professional staff) in enhancing university performance. In line with other studies emphasising the limitations of purposive organisational action (Keith 2001; 1999; 1994), we have seen that universities' reputation overshadows institutional level efforts of strategising for performance. This finding has direct implications for the suitability of performance-based budgeting, the distribution of public funds based on performance criteria being disadvantageous for less prestigious universities. That is, policies relying on assumptions of institutional potency (by means of strategic organisational action) when this may not be the case, can have a dramatic impact on the survival of universities that do not benefit from a cultural (reputational) advantage, with stability over time. In order to address this challenge policy makers and practitioners may use caution in distributing resources based on institutional outputs, or develop measures of counteracting the overshadowing effect of reputation. Alternative league tables that rank universities based on their improvements relative to their previous scores can shed light on those HEIs that are more efficient in improving their performance as opposed to prestigious universities that benefit from the stability of institutional reputation over time.

At the macro level, universities' organisational expansion (see chapters one and two) bears profound implications for the society as a whole. While HEIs are being characterised by a general readiness to provide their rational actorhood in the pursuit of socio-economic development (employability, social mobility through demographic

inclusion etc), it becomes increasingly evident that such goals and missions transcend the university environment. Consider the example of graduate employability. Universities are perceived as central in the development of skills, thus unemployment among graduates is often being attributed to pitfalls in the strategy of individual institutions (Grotkowska et al. 2015). At the organisational level, this nurtures further formalisation following universities' attempt to articulate their commitment to employability. At the societal level, the emphasis on individual skills and HEIs as agents of change may undermine broader investigations into the structural deficiencies characterizing the labor market (e.g. the availability of graduate jobs) (Keep 2003).

Limitations and Further Research Directions

The availability of detailed staff data plays a major role in scholars' ability to investigate administrative and professional growth in higher education (Schneijderberg and Merkator 2013). While the current research bringing together data from a variety of sources makes an important step in this direction, several limitations can be identified as follows.

First, the cross-national analysis explores administrative and professional staff as one category i.e. non-academic staff. The unavailability of breakdowns interferes with the possibility of providing an in-depth picture into how different administrative categories are being impacted by universities' organisational expansion. Increasing awareness regarding the importance of breakdowns in administrative staff may inform the data collection practices in tertiary education (e.g. ETER). In this sense, further research could replicate the current analysis on different sub-categories of administrative staff.

Second, the national level analysis captures the growth in professional staff in UK universities from 2003 (the earliest available time point) to 2011. After 2011, HESA data on professional staff could no longer be extracted due to this type of personnel being recorded together with academic staff as one category of "higher education

professionals”. Further research may engage in a process of data collection from individual universities, and aim to extend the timespan of analysis by reconstructing the category of professional staff (excluding academic staff), after 2011.

Further research may also pursue a more in-depth understanding of organisational expansion not only from the perspective of personnel but also through mapping the organisational structures that the new higher education professionals inhabit (Equality and Diversity Networks, International Offices, Career Centers etc). This may stimulate further investigations into the relationship between formalisation and practice, assessing the chronically under-investigated assertion that managerial approaches to organisation increase university performance. Such an investigation may also be accompanied by qualitative inquiries (in the form of in-depth interviews or ethnographic investigations) aiming to uncover whether institutional level action is exclusively structured by the newly created offices and organisational sub-divisions, or whether more informal and personalised patterns of activity continue to play a role (Krücken 2011). As an example, students may seek employability advice from their teachers (e.g. as part of the learning process) despite universities expanding their provision of professional services in this area (e.g. through specialised career centers). Such research may enlarge the pool of potential explanations for why universities’ engagement with professional staff does not increase students’ graduate prospects, but the recruitment of more academic staff does (see chapter three).

Finally, the HESA definitional change is highly illustrative for the development of higher education professionals as a core professional community in higher education (alongside academic staff). The merging of the two categories reflects the fast pace at which changing meanings of the academic profession are being institutionalised. This highlights the importance of pursuing a timely awareness of the various models of

institutional identity that universities enact in their process of adapting to changing socio-cultural environments. In this sense, the current research sets up the premise for further empirical investigations into the diffusion of formal organisation and its impact in shaping universities' pursuit of knowledge and truth as we know it.

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