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Introduction

New Horizons in the Europe of Knowledge

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This special issue introduces the themes and dynamics of European integration in an increasingly important and rapidly evolving policy domain on the global political agenda: *knowledge* policies. Knowledge policies such as research and higher education remain under-examined issue areas in mainstream European studies. Yet their centrality to the governance of academic life, economic growth, market positioning, innovation capacity in Europe and beyond have only grown in significance throughout the last decade. Hence, to work in academe and to understand Europe, it is essential to know the Europe of Knowledge in the making.

This editorial introduces the notion of the Europe of Knowledge and places it in the European integration research agenda. We first describe what the concept means before suggesting how to approach the Europe of Knowledge as a new case for investigating European integration dynamics. This discussion revolves around the evolution of policy developments in research and higher education to show how knowledge policies are compound and manifest distinct dimensions of differentiated integration and experimentation, both fruitful theoretical research agendas. We then summarise the articles to show the respective Europe of Knowledge themes they highlight. We conclude by considering how the Europe of Knowledge in the making encourages testing established empirical and analytical assumptions about European integration and experimenting with emerging ideas about regional cooperation from around the world.

BOUNDARIES OF THE EUROPE OF KNOWLEDGE IN THE MAKING

The phrase "Europe of Knowledge" is a veritable 'complex and malleable term' (Elken et al. 2011: 5). While we can trace its political and supranational origin to the European Commission's 1997 Communication on 'Towards a Europe of Knowledge' (European Commission 1997), national and supranational policy actors have, in the main, interpreted the term differently since then. For instance, in the 1997 Communication, we see the European Union (EU) executive referring to the Europe of Knowledge as 'an open dynamic European educational area' (European Commission 1997: 2), while in 2000 it used the term 'Europe of innovation and knowledge' as a synonym for the European Research Area (ERA) (European Commission 2000). By contrast, national policy actors such as the European education ministers, at their signing of the 1998 Sorbonne Declaration, contrasted the Europe of Knowledge against the "Europe of the Euro" (Sorbonne Joint Declaration 1998). As Meng-Hsuan Chou and Åse Gornitzka (2014: 8) conclude, at least four visions can be associated with the Europe of Knowledge: 'as the basis for a knowledge-based economy [or society]; as an instrument for invigorating and increasing the competitiveness of European science; and as a tool for informed policy-making and implementation'.

So how can we begin to understand and study the Europe of Knowledge? We argue that it is best to approach it as "an area in the making" with contested boundaries. Specifically, we delineate three sets of boundaries as useful starting points for investigation: *policy* boundaries (research vs. higher education vs. others); *political* boundaries (national vs. supranational vs. transnational); and *geographical* or *membership* boundaries (EU vs. "Europe" vs. global). Below, we discuss how each set of boundaries has changed over time. It is at these boundary intersections that European integration students would find most interesting for theoretical examination and experimentation – a point to which we shall return in the concluding section.

Policy boundaries

Which policy sectors make up the Europe of Knowledge? The conventional understanding is that the Europe of Knowledge has two main policy pillars, each also a "European area" in the making: the European Research Area and the European Higher Education Area (EHEA) (cf. Elken et. al. 2011; Chou and Gornitzka 2014). The argument goes that ERA and EHEA policy developments constitute the formation of the Europe of Knowledge. Yet knowledge policies are not so clear-cut. Several European research and higher education initiatives (e.g. Framework Programmes, FP; Scientific Visa) are closely related to, or implemented in, other EU policy sectors (regional; information and communication technology; enterprise; migration; development; or external action). Moreover, from a sequential perspective, the emergence and evolution of the Europe of Knowledge can be debated. Indeed, the ideas of creating a common "scientific" space (Guzzetti 1995; Chou 2014) or a "European University" (Corbett 2005) have been in circulation since the beginning of European integration. Furthermore, the Innovation Union agenda has included the "delivery of the ERA" as part of its overall objectives since 2010 (European Commission 2010). Our narrative about the Europe of Knowledge does not aim to settle these debates. Instead, we provide the broad strokes of these developments and invite readers to investigate the details of these stories.

The Founding Fathers saw research policy cooperation as essential for European integration, especially as the "engine" for Europe's then economic recovery and subsequent industrial growth. Indeed, we find references in the Paris and Rome Treaties for European research and technology policy cooperation. The member states were, however, keen to retain control over this cooperation and thus pursued joint collaboration on selected thematic areas (e.g. health, environment, agriculture, energy). They alone, sitting in the Council of Ministers, decided the range and scope of European research policy cooperation; the European Parliament and the Commission would play limited advisory roles (Chou 2012). By January 1974, the research ministers adopted four resolutions that led to the creation of the Scientific Technical Research Committee (now European Research and Innovation Area Committee) – an advisory body; the European Science Foundation (ESF) outside of the supranational framework; a research programme for forecasting, assessment, and methodology; and an initial outline programme in science and technology (de Elera 2006: 561). Álvaro de Elera (2006: 561) concludes that 'For almost a decade the cooperation in the field of research was to be based on these four resolutions: a feeble basis that brought similarly feeble results'.

It is important to point out that the European governments established many multilateral research collaborations *outside* of the supranational framework. For instance, joint research infrastructures (reactors, accelerators, telescopes, laboratories) and funding schemes such as the: European Organization for Nuclear Research (CERN) in 1954; European Southern Observatory (ESO) in 1962; European Space Agency (ESA) in 1964; Institut Laue-Langevin (ILL) in 1967; European Cooperation in Science and Technology (COST) framework in 1971; European Molecular Biology Laboratory (EMBL) in 1974; EUREKA intergovernmental organisation for market-driven industrial research and development in 1985; European Synchrotron Radiation Laboratory (ESRF) in 1994; X-ray Free Electron Laser (European XFEL) and the European Spallation Source (ESS) currently under construction (Hallonsten 2012).

The intergovernmental nature of European research policy cooperation notably changed in the 1980s when the Commissioner for Industry proposed bundling up existing programmes into the multi-annual research Framework Programme. Known sequentially (FP1, FP2 etc.) up to 2014, the "Horizon 2020" became the eighth FP with a budget of nearly €80 billion to be distributed until 2020. This "programmed" approach to European cooperation, according to Thomas Banchoff (2002), consumed the Commission Directorate-General (DG) of Research's bureaucratic capacity. He argues that this, together with the research community's enthusiasm for European funding, made reforming European research policy beyond the FP structure difficult (cf. Banchoff 2002; Chou 2012). The ERA initiative,

which the Commission launched in 2000 with the member states' support, sought precisely to usher in the reforms that would change European research policy from a "spending policy" to one that regulated research practice. The EU executive's attempt failed early on (see below) and a "softer" multi-layered and partnership approach has been preferred to this day.

The EU has no regulatory competence in education policy, which the Founding Fathers saw as central to constructing their nations and cultivating civic belonging among their nationals. The Treaty on the Functioning of the EU continues to uphold this subsidiarity principle:

> The Community shall contribute to the development of quality education by encouraging co-operation between Member States and, if necessary, by supporting and supplementing their action, while fully respecting the responsibility of the Member States for the content of teaching and the organisation of education systems and their cultural and linguistic diversity (Official Journal of the European Union 2010: C 83/120).

How then do we account for the EU's growing involvement in the education policy sector? Chou and Gornitzka (2014: 9) tell us that 'One pathway of European involvement in higher education was through its policy towards mutual recognition of professional degrees and free movement of skilled manpower'. European integration scholars would be familiar with the spill-over effects as a result of realising the four freedoms. Most scholarly works on European higher education policy cooperation trace this competence "tug-of-war" between EU member states and the Commission, and credit task expansion (Neave 1984; De Wit and Verhoeven 2001) and policy entrepreneurs (especially the Commission) (Corbett 2003; 2005) in paving the way for further supranational intervention.

Mobility and training programmes such as "Erasmus" and "Marie Curie", incorporated into the FP structure in the 1980s, came to symbolise European higher education policy cooperation until the 1990s. Similar to other aspects of the FPs, negotiations for their renewal were slow and laborious. Through these programmes, the Commission/EU incentivised students, university staff and academics, stakeholder associations (e.g. European University Association), transnational expert communities and national administrations to see the supranational dimension as legitimate in the education sector (Beerkens 2008; Gornitzka 2009). This is not to say that the Commission did not attempt to push for more supranational intervention earlier. Indeed, it proposed a Memorandum on Higher Education in 1991 (European Commission 1991), but the member states 'opposed the economic orientation and utilitarian view of higher education supposedly permeating this document' (Chou and Gornitzka 2014: 10). The Commission was seen to be trespassing on nationally sensitive policy issues (e.g. teacher training).

What is remarkable about research and higher education policy developments is that they generally proceeded within their organisational domains, especially in the Commission DGs. This meant that, unless policy coordination was enforced, these constituent knowledge policies operated within their own "sectoral vacuum". This resulted in what Chou and Gornitzka (2014: 4-7) called "inter-sectoral" or "horizontal" tensions when the Lisbon Strategy, adopted in March 2000, sought to improve policy coordination between knowledge policies so that the EU can become the – much quoted – 'world's most competitive and dynamic knowledge-based economy'. As we shall see next, this debate also concerns delineating the Europe of Knowledge's political boundaries.

Political boundaries

Who are the key decision-takers in the Europe of Knowledge? Are they nationally rooted (i.e. European research, education, or innovation ministers)? Or do they have a supranational affiliation (e.g. European Commission) or a transnational status (stakeholder groups)? Do their roles change

depending on the knowledge policy venue where discussions and decisions take place even though their affiliation remains the same? These questions go to the heart of identifying the Europe of Knowledge's political boundaries and, as students of EU policy developments know well, animate European cooperation. By political, we refer to the question of regulatory competence classically phrased as: Who governs? Chou and Gornitzka (2014: 3) identified the tensions resulting from redrawing jurisdictional boundaries as "vertical" tensions, which reflect 'prevailing ideas about common problem-solving capacity across member states and in different societal sectors, and the legitimacy of governing modes'.

Prevailing ideas about education policy were made most apparent in 1998 when the German, French, Italian and the British higher education ministers signed the Sorbonne Declaration, launching the Bologna Process in 1999 outside of the supranational institutional framework. Through the mechanisms of comparable degrees and a two-cycle system for improving student mobility and employability, the Bologna Process sought to establish an attractive EHEA by tackling a most sensitive issue: diverse degree structures (Ravinet 2009; Gornitzka 2010). While remaining a transnational process, the Bologna Process has changed over time (see also membership below). Participation is voluntary, but Pauline Ravinet (2009) tells us that Bologna's non-binding characteristics and modes of translating agreed objectives have achieved far more than what the Commission could have ever considered feasible within the EU's institutional structure. Its effectiveness, in terms of contributing to policy convergence among Bologna member states, should not be automatically assumed (Witte et al. 2009). Indeed, as Martina Vukasovic (2014) finds, governments and universities alike have explored the ambiguities of Bologna implementation to usher in various domestic reforms (see "Bologna brand" in Scott 2012).

The EU member states' reluctance to cede regulatory competence to the supranational institutions is also visible in the research policy sector. Indeed, even following the launch of the European Research Area in January 2000, which sought to move away from what the Commission designated as the "15+1" approach (i.e. the then number of EU members and the Commission), the member states only endorsed the Open Method of Coordination (OMC) for constructing the ERA. The OMC is a "soft" approach to policy cooperation, relying on voluntary compliance following agreed objectives, benchmarks, and guidelines [see special issues on the OMC in the *Journal of European Public Policy* (2004) and *Journal of Contemporary European Research* (2006); on "soft modes of governance" in the *Journal of European Integration* (2007)]. The OMC's effects on European research policy cooperation have been mixed (cf. Chou and Real-Dato 2014; European Commission 2014).

By contrast, the OMC had a strong impact on the (higher) education policy sector when the EU adopted the work programme on "Education and Training 2010"; its renewal as "Education and Training 2020" in 2009 continues to shape the "modernisation" of European (higher) education systems. DG Education saw the OMC as 'a method for us' because the Commission now has an entry to Bologna coordination, which was 'enlisted as an integral part of the education sector's contribution to Lisbon [now renewed as Europe 2020]' (Chou and Gornitzka 2014: 15). Finally, a Europe of Knowledge's defining feature is the presence of transnational actors who mobilise across policy venues (e.g. from Bologna to the EU) and, in so doing, contribute to re-drawing its political boundaries (cf. Elken and Vukasovic 2014). These networks of (academic) experts, stakeholders, and agencies (e.g. quality assurance) are promising empirical cases for generating testable hypotheses concerning the role of expertise in complex multi-level governance and integration dynamics [see special issue on 'The Role of Expert Knowledge in EU Executive Institutions' in *Politics and Governance* (2015)].

Geographical boundaries

Does the Europe of Knowledge refer to a specific geographical area? If so, to where does it extend? These questions concern membership and access to European policy cooperation – its benefits as well as costs. Similar to EU membership criteria, the membership to the Europe of Knowledge is not strictly defined by geographical location. Indeed, many initiatives concerning the Europe of Knowledge are manifestations of differentiated integration where 'the territorial extension of European Union membership and EU rule validity are incongruent' (Holzinger and Schimmelfennig 2012: 292). For instance, FP7 included EU member states and 13 Associated Countries (European Commission 2013: 29). In addition, third countries also participate in specific FP funding schemes such as the ERA-Net scheme for facilitating coordination among national research funders; in a survey carried out in 2006, 20% of the responding ERA-Nets had at least one non-EU partner (Edler 2010: 142). If we consider the many intergovernmental initiatives in the research policy area, membership becomes very complex.[1] Similarly, members of the Bologna Process (and thus the EHEA) include 48 states, the European Commission, and eight Consultative Members.

Taken together, the geographical spread of the Europe of Knowledge goes far beyond the EU and wider Europe to encompass Israel, Central Asia (e.g. Kazakhstan) and even Russia. If we add to this the inter-regional initiatives the Commission launched with other regions (e.g. with Latin America and the Caribbean – 'Towards the EU-LAC Knowledge Area') and FP initiatives such as ERA-Nets, which include collaboration with China and Canada, its reach can be considered global. While membership to the Europe of Knowledge (inclusion, exclusion[2], and suspension[3]) would certainly interest most scholars (see forthcoming special issue on 'The terrains of the Europe of Knowledge' in *European Journal of Higher Education*), we hope that the policy and political boundaries discussed here would in particular engage those working on regional integration – in Europe and beyond.

SPECIAL ISSUE OVERVIEW

The six research articles, two practitioners' commentaries and three book reviews in this special issue complement each other to provide a broad overview of the topical issues on the Europe of Knowledge. Together, these contributions represent an interdisciplinary effort to draw on the theories and approaches from European studies, political science, science and higher education studies, sociology and law. Multiple data sources (surveys, interviews, official documents, and case studies) as well as research methods (qualitative and quantitative) are used to reveal the contested policy, political, and geographical boundaries of the Europe of Knowledge.

The first three articles address changing concepts, ideas, and values in European research policy. Mitchell Young opens with an account of how the concept of "excellence" has changed from FP7 to Horizon 2020. Through the role of "excellence" on issues of distributive justice and quality management, Young finds that its conflicting conceptualisation has contributed to a more divided Europe of Knowledge. Continuing, Inga Ulnicane analyses how the main objectives of the European Research Area have changed from its launch in 2000 to 2014. Applying a research policy framing approach, Ulnicane argues that ERA's ideational framework has broadened from its initial focus on economic competitiveness to include ideas of scientific excellence and societal challenges; relationships between these diverse policy ideas is an important question for future European research policy. Combining a legal and policy perspective, Andrea Gideon demonstrates how shifting research policy ideas may lead to unintended (legal) consequences. Showing the growing "commodification" of research in Germany, the Netherlands, and England, Gideon suggests that blurring the boundaries between public and private sector funding could subject the research carried out in higher education institutions to EU primary law. She argues that this may require higher

education institutions to behave more like commercial entities, which could intensify existing tensions between the economic and social rationales of public policies.

The next three articles turn to European (higher) education policy developments and the role of "ambiguity" in policy implementation. Mari Elken examines the policy instrument adopted in 2008 for increasing the transparency of educational qualifications: the European Qualifications Framework (EQF). Identifying this instrument's "vertical", "horizontal", and "internal" tensions, Elken explains how ambiguity was essential for its implementation across heterogeneous national systems. She concludes that, although the EQF's impact has been uneven, its gradual acceptance points to successful EU intervention in a nationally sensitive policy area. Continuing, Amélia Veiga, António Magalhães, and Alberto Amaral study the Bologna Process as an instrument for establishing the European Higher Education Area. They extend the concept of differentiated integration to include policy translation or "enactment"; this analytical extension allows them to account for how national and institutional factors contributed to the emergence and subsequent evolution of the EHEA. Finally, Laura Cruz-Castro and Luis Sanz-Menéndez analyse the implementation of Spanish university reforms in the last 15 years. They show how Spanish universities responded differently to common policy pressures even though the general trend concerning academic human resources has seen a rise in temporary employment contracts.

Two commentaries from practitioners anchor this special issue on the Europe of Knowledge. Drawing on his former experience as a scientific advisor to the then President of the European Research Council (ERC), Thomas König tells us how the tensions between scientific and administrative expectations were reconciled in the ERC's day-to-day activities. As a British academic in a world-leading university in the Europe of Knowledge, Julie Smith reflects on her experiences concerning research networking, funding, and assessment. She highlights the ever-growing tensions between attempts to deliver "excellence" and "impact" that would be familiar to colleagues who underwent the recent UK Research Excellence Framework.

Lastly, the three book reviews offer glimpses into the broader research conducted on the Europe of Knowledge: vocational training and higher education in Austria, Germany, and Switzerland; the role of global university rankings and the many challenges they pose for European higher education (policy and practice); and comparing European research and higher education policy developments from an institutional perspective. Together, the contributions in this special issue address questions concerning the three sets of "boundaries" of the Europe of Knowledge as well as raise new ones for future research.

RESEARCHING THE EUROPE OF KNOWLEDGE: AN EMERGENT AGENDA

What does the Europe of Knowledge in the making offer to practitioners and students of European integration? This special issue's contributions have emphasised the increased significance of heterogeneity. Countries and universities differ considerably in their historical traditions and performance (European Commission 2014). Consequently, European research and higher education policies have had different effects on participating countries (Sharp and Pereira 2001), research groups, and scientific disciplines (Primeri and Reale 2012). Even in instances where national knowledge policies converge, the need to pursue tailor-made approaches for country-specific challenges is highlighted (Izsak et al. 2014). Analysing European research and innovation funding in times of crisis, Reinhilde Veugelers (2014: 2) identifies 'an increasing intra-EU split, with the stronger countries forging ahead and the weaker countries further cutting their R&I support'. Similarly, Ulnicane (2015) finds that the recent global economic crisis may further widen the performance gap between the "leading" and "catching-up" countries. The heterogeneity of actors and policy initiatives

in the Europe of Knowledge has many forms and effects that range from beneficial interactions to unresolved tensions and potentially detrimental polarisation.

A *leitmotif* of European integration is how heterogeneity and integration is reconciled or lead to (further) reconfiguration. This makes the Europe of Knowledge a particularly interesting case for on-going theoretical debates about European integration. For instance, as noted earlier, the changing membership to the Europe of Knowledge offers opportunities to conceptualise the causes and effects of differentiated integration; specifically, to refine models of multispeed Europe, flexible integration, and variable geometry (Holzinger and Schimmelfennig 2012). Similarly, those interested in the concept of experimentalist governance would find the design and implementation of OMC instruments in the Europe of Knowledge to be new empirical grounds for assessing multi-level governance as 'a recursive process of provisional goal setting based on learning from the comparison of alternative approaches to advancing them in different context' (Sabel and Zeitlin 2012: 169). Indeed, experimentalist governance can be a very promising approach to studying the Europe of Knowledge as an iterative cycle that 'transforms diversity from an obstacle to integration into an asset for its advancement' (Sabel and Zeitlin 2012: 175).

This special issue's contributions have also highlighted the roles of ideas, values, and "ambiguity" in constructing the Europe of Knowledge and why research on the cognitive dimension is needed. Evaluation has become an important part of accountability in today's academia and research funding, but it is crucial to reflect on the underlying aims of research and higher education policies – national or European. For instance, is the increasingly quantitative approach to knowledge production and assessment, as exemplified by global university rankings and the UK's Research Excellence Framework, meeting student needs or solving "grand" societal challenges? Another fascinating area of research would be investigating how European policy ideas interact with the (self-)interests of involved actors, organisations, and countries. In his study of large-scale European science facilities, Olof Hallonsten (2012: 303) finds that 'most countries realize that collaboration is necessary to achieve goals beyond the reach of any one of them, but strong traditions of sovereignty create a constant tension between self-interest and the common good'. To what extent is this also the case for universities, research groups, individual researchers, and scholarly networks?

Finally, this special issue identifies the Europe of Knowledge in the making as part of a global phenomenon of knowledge policy governance. This is hardly surprising given that grand challenges rarely acknowledge national or regional boundaries. The launch of new initiatives (e.g. Global Research Council for coordinating global knowledge policy governance in 2012) and the rise of emerging economies[4] on the global higher education and research landscapes suggest that it is essential to look beyond Europe. Indeed, it is necessary to compare regional initiatives and examine the roles of cities, universities, research institutions, large-scale research facilities, public and private research funding, university rankings, and scholarly networks in the global governance of knowledge. How Europe adjusts to these myriad factors and actors could very much be the future of European integration.

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[1] For instance, CERN, EMBL, and ESRF each has 21 member states; ESO has 15; ESA has 20; ILL has three founding countries and 12 members; XFEL has 10 partner countries; COST has 35 members; EUREKA has 41 member countries (including the EU); and ESF has 66 member (research funding and performing) organisations from 29 countries. Sources: organisational websites. Accessed 4 January 2015.

[2] Israel has twice applied to become a member to the Bologna Process (in 2007 and 2008), but its application has been rejected on the basis that it has not signed the European Cultural Convention (a membership criteria).

[3] In 2014, the EU temporarily suspended discussions with Switzerland concerning its participation in Horizon 2020 when a Swiss referendum (50.3 per cent) supported the reintroduction of quotas on the free movement of EU nationals. Source: http://www.bbc.com/news/world-europe-26225121. Accessed 6 January 2015.

[4] The OECD (2014) estimates that around 2019 China would become the world's top research and development spender, overtaking the EU and the United States.

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Research Article

Shifting Policy Narratives in Horizon 2020

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Abstract

The European Commission claims that Horizon 2020 represents a break from previous framework programmes. This paper examines that claim in terms of the public management narratives that underlie the discourses of research policy at the European level. It is argued that the framework programmes go beyond their explicit role as a funding distribution instrument to serve discursive and regulatory functions. Using an analytical framework based on three types of public administration narrative: New Public Management, Network Governance, and Neo-Weberian Bureaucracy, this article examines the ways in which the evaluation and distribution of research funds and the conflicting conceptualizations of the term excellence have moved EU policy towards a New Public Management narrative and a more divided Europe of Knowledge.

Keywords

For nearly 30 years, beginning in 1984 with the first framework programme and continuing through 2013 with the end of the 7th Framework Programme (FP7), the framework programmes have been called simply by their sequential number; however, for what would otherwise have been called the 8th Framework Programme, the European Union (EU) has chosen a unique name: Horizon 2020. An explanation for this is given in a speech by the Commissioner for Research: 'We want the CSF [Common Strategic Framework] to mark a clear departure from business as usual. We are not simply moving from the 7th to the 8th Framework Programme. And what better way to demonstrate this shift than with a new name?' (Geoghegan-Quinn 2011). This assertion needs more careful analysis. Given that the framework programmes are often considered to be one of the more successful activities of the EU, why is there a perceived need for a major break? This article uses the concept of public policy narratives to examine how and why there has been a shift between FP7 and Horizon 2020, and what implications that has for the European integration project. The concept of policy narratives allows us to characterize this shift as the result of an increased presence of the New Public Management (NPM) narrative within the framework programmes discourse. The subsequent policy solutions and tools affecting distributive justice, governance steering techniques, and evaluation of results are reshaped as a consequence of the ideas embedded in and legitimized by this narrative. Looking individually at the EU member states, we find a diverse landscape of research policies that have undergone significant changes in the period since the first framework programme. Past studies have shown a wide range of steering mechanisms that shape research on a national level, which can be attributed to the acceptance of different narratives, path dependencies, and localized reform trajectories (Ferlie, Musselin & Andresani 2008; Paradeise et al. 2009; Kogan et al. 2006; Amaral, Jones & Karseth 2002). Less attention has been paid to the steering mechanisms and policy narratives at work on the European level.

The framework programmes are by definition funding distribution mechanisms; they set the rules and priorities for how the block of funds that the EU dedicates towards research is to be allocated. This article argues, however, that the framework programmes have taken on regulatory and discursive functions going beyond their distributive role and can therefore also provide insight into more general

policy change. This was not the case for the early framework programmes, which were more narrowly focused on strengthening industry competitiveness particularly *vis-à-vis* the gap between Europe, the USA and Japan, and did not directly incorporate discussions of distributive justice or quality management. Over time the framework programmes have evolved significantly in their rationale, structure and tools (for a history of these changes, see Guzzetti 1995; Barker and Cameron 2004; Sanz and Borras 2001; Banchoff 2002). By the 6th Framework Programme they have become deeply institutionalized, so much so that Thomas Banchoff (2002) argues that they have actually inhibited the broader efforts at European research policy creation, harmonization and consolidation. Horizon 2020 attempts to reverse that situation and aims to mobilize its strongly institutionalized power towards building the ERA. In order to succeed without resorting to hard law regulations or directives, which arguably might not be within the EU's purview, the programme needs to go beyond its formal role as a funding mechanism in order to (in the words of the EU) strengthen 'coordinating efforts across the Union' (European Union 2013: 109) and be a 'vehicle for leveraging […] investment' (European Union 2013: 110).

Decisions over how to distribute funding presuppose political framing and ideas that are related to different public management narratives. This study uses an analytical framework with three types of public management narrative to examine the shift in public management narrative. The article begins by laying out the typology of public management narratives and identifying research policy expectations for each type. It then uses this framework to examine the overall discourse of Horizon 2020 through a number of internal and external changes in policy ideas, solutions, and the political-economic environment. The analysis continues with a case study on the concept of excellence and its role in issues of distributive justice and quality management. Recognizing the strength and influence of the different types of public management narratives that are used in the discourse of the framework programmes provides insight into what sort of outputs and outcomes are likely to result from those programmes not only in terms of scientific results, but also in terms of the geography of the Europe of Knowledge. The article concludes by addressing the implications of a shift in public management discourse on European integration by linking it to the concept of differentiated integration. Will the European Research Area become an exclusive space dominated by a small set of leading research countries and institutions in which research is concentrated or will it be a broadly inclusive and densely networked space? Put in terms of the concept of differentiated integration (Stubb 1996; Avbelj 2012; Leuffen 2013): are we developing a two-speed Europe in research?

THEORY AND METHODOLOGY

In order to analyse the public management narrative, this article employs a variation on a tripartite ideal-type model developed by Ewan Ferlie, Christine Musselin and Gianluca Andresani (2008). Their paper sought to broaden the academic discussion on higher education policy by bringing in more traditional political science and public management theories and concepts (see Pollitt and Bouckart 2011) to an area that was largely dominated by theories of university-state dynamics (based on Clark 1983; see Dobbins 2009). For this purpose, it introduced a framework of ideal-type narratives that underlie public management reform: New Public Management, Network Governance (NG), and Neo-Weberian Bureaucracy (NWB). For this article, their framework has been adapted to the supranational level, focused on the particularities of research policy and used to evaluate various elements of the Horizon 2020 policy discourse. The framework programmes incorporate a significant number of different policy instruments (i.e. Societal Challenges, European Research Council, European Institute of Technology, ERA-NETS, Marie Curie actions, etc.) and given the limited space available, this analysis will not attempt to address those tools individually. Instead, the focus will be on the overall programme, the discourse surrounding its development, and the way it incorporates the concept of

excellence which has become one of the key concepts for understanding European research policy (Enders and DeBoer 2009; Radosevic and Lepori 2009).

The analysis is conducted primarily through EU policy documents at three stages of development: early 2011 documents around the green paper and consultation process in which the programme began to take shape, later documentation from the end of 2011 in which the initial policy proposal and impact assessment documents were put forward by the Commission, and the final regulation of 2013 establishing Horizon 2020. Reports by expert groups were reviewed and an interview was conducted with a EU official in Directorate General (DG) Research who was involved with the public consultation process and development of Horizon 2020. Equivalent documents were examined for FP7. The focus in analysing these documents was on their conceptualization and presentation of the problems which European research faced and the general objectives and tools by which they proposed to solve them. The research also examined the position papers submitted in the public participation process seeking insight into how national policymakers and a broader set of stakeholders viewed these issues. All the national government contributions to the green paper process were reviewed, as well as all the documents submitted from the new member states, i.e. those joining in 2004 and later. From the older member states, documents were reviewed from a selection of different countries (United Kingdom, Sweden, Germany, France, Ireland, Spain) with the aim of balancing research leaders and followers as well as countries that had followed different path trajectories (European Commission 2013a; Paradiese et al. 2009). The analysis focused on answers to the green paper questions that were related to the way framework programme funding should be allocated and the measures of success and quality.

Public management narratives provide a way to conceptualize a broad public management story that incorporates technical, political and normative elements (Ferlie et al. 2008). Note that these narratives should not be understood as overarching blueprints by which policy is linearly conceived, constructed and then implemented; any expectation of finding this would be misguided and a number of studies demonstrate quite clearly that this is not present on a national level in Europe (Paradeise 2009; Pollitt, van Thiel & Homburg 2007) and is thus unlikely to be found in the EU. This does not imply that, however, these narratives cannot be found exerting strong influence on the overall policy outcome, particularly by incorporating fragmented elements, ideas, and tools that are deeply rooted in particular policy narratives. Christopher Pollitt (2007) shows that this has happened in Europe with NPM.

The first ideal-type narrative, New Public Management, can be characterized as making public administration function more like business administration. More specifically, it embodies two principles that Christopher Hood (1991) calls the "freedom to manage" and the "freedom to compete". The freedom to manage brings corporate management practices into public administration, the central purpose of which is to gain more control over the production of public services. A variety of mechanisms can be used to achieve this: indirect steering through the setting of goals, objectives and targets, coupled with monitoring of how effectively those are met which creates a strong audit culture (Power 1997); the use of contracts and principle-agent models to structure relationships; as well as directly borrowing specific practices from business, such as total quality management. The freedom to compete posits the idea that competition is the driver of effective governance. Steering systems are thus constructed in ways that enhance competition, or in cases where there is none, make it possible. This can require the disaggregation of the public sector into smaller entities that are able to compete with one another, and, further, to establish a quasi-market if there is not an existing economic market in which they can compete. These competitive entities must also have the ability and incentive to differentiate themselves, which requires the autonomy to determine strategies and make decisions. In sum, an NPM approach relies on strategic management within competitive markets as its primary mode of governance; steering is vertical but is done by setting targets, performance contracts, and stimulating or creating markets (see Table 1). Competition

is the key facilitating mechanism, and NPM is most useful for achieving efficient results in situations where the desired outcomes are clearly quantifiable.

Table 1: Key Elements in the Public Management Narratives

	New Public Management	Network Governance	Neo-Weberian Bureaucracy
Primary means of governance	Strategic management within competitive markets	Self-steering and organizing networks on multiple governance levels	State law and bureaucracy
Key facilitating mechanism	Competition	Negotiation	Planning (inclusive of stakeholders)
Steering	Vertical, indirect, government uses targets and performance contracts, creates and stimulates markets	Horizontal, indirect, government establishes and sets objectives	Vertical, direct, steering by creating rules, defining processes and spending
Strengths of the approach	Efficient results when outputs can be quantified	Coordination and cooperation in dealing with complex multi-level problems	Outcomes which are oriented towards social needs, maintain democratic legitimacy
Distribution mechanisms	Based on performance: past outputs, efficiency, potential	Determined through negotiation and compromise	Top down based on politically determined principles
How quality is maintained	Through explicit, quantifiable objectives and auditing systems	Through professional self-regulation and diffusion of good practices	Through rules and procedures determined *ex-ante*

The second narrative, Network Governance, is derived from the concept of the "hollowed out state" (Rhodes 1997) that depicts the nation-state as having lost (or relinquished) power, functions and legitimacy to other actors, such as corporations or non-governmental organizations (NGOs), local and regional government, and supranational organizations. Supporting this concept is the idea that some problems can be better solved if they are addressed at different governance levels with a broader constellation of actors involved. The theory of multi-level governance (Hooghe and Marks 2001; Piattoni 2010) provides a structure for analysing that differentiation by identifying three primary levels of governance and the interactions between them: sub-national, national, and supranational, which includes the EU. The hollowing out of the national level results in strengthening both the sub-national and supranational level and their interrelationship, while the state adjusts to serve as a facilitator rather than exerting direct power (Ferlie et al. 2008). This facilitation happens in and through networks that can be oriented towards different functions: policy creation, coordination, or implementation; and these networks can, but need not, be self-steering and/or self-organizing (Klijn 2008). In sum, an NG approach relies on (semi-)independent networks of stakeholders as the primary mode of governance; steering is horizontal and the government involvement is mainly through the establishment and setting of objectives for the network. Negotiation is the key facilitating mechanism, and NG is most useful for achieving coordination and cooperation in dealing with complexity and so-called wicked problems that laterally cross-political borders and policy-area delimitations.

The third narrative, Neo-Weberian Bureaucracy, is about the revitalization of a nevertheless traditional bureaucratic conception of public administration. In this narrative, the state is central. Whereas in the other two narratives it relinquishes power, because of its perceived inability to solve societal problems, NWB re-establishes the role of state administrative control and problem-solving through a democratically legitimated bureaucracy, but one which is modernized ("neo"). The modernization can be seen in a shift from an internal orientation on rules to a more external orientation on meeting societal needs. Further, it seeks to maintain its electorally established legitimacy through on-going interactions and consultations with the public. There is also a shift towards a more results oriented, professional managerial culture, which may overlap with the NPM narrative, but which differs in that the role of administrative law and process is the central mode of steering. In sum, a NWB approach relies on bureaucracy and implementation as its primary mode of governance; steering is vertical and is done directly by creating rules, determining processes and spending. Planning is the key facilitating mechanism, and NWB is most useful for achieving a sense of legitimacy that preserves diversity and robustness and targets outcomes that are oriented towards greater societal needs.

In the case study on excellence we can see how the narratives play out in the area of resource allocation and quality. Funding distribution is a political decision and the public management narrative plays an important role in determining the legitimacy of various approaches. Each of the three ideal-type narratives provides a different perspective on how funds should be distributed. For an NPM narrative, funds should be distributed based on performance standards, which means that past results, preferably quantified and transparently measured ones, are the basis on which funds should be competitively apportioned. Also, preferably, the distribution will take place through an agency, not directly by the government. The NG narrative not only puts this decision in the hands of the stakeholders but the process by which it happens is one in which compromise is sought through negotiation and cooperation. In the NWB narrative, the government retains the decision-making power, keeping the distribution decisions in a democratically representative body that will presumably act with broader social interests in mind. We may not find these ideal-types in pure form in practice, but even when distorted by politics, interests and lobbying, the basic driving forces behind them are discernible.

HORIZON 2020: WHAT SORT OF BREAK?

As presented at the outset of this article, the Commissioner has claimed that Horizon 2020 represents a break with the past. The justification for calling Horizon 2020 a break may come from a number of internal changes to the new programme based on new policy ideas and proposed solutions. It also may come from external events, namely the crisis, which has impacted the political environment. On closer inspection, however, there are significant path dependencies and continuity with past policy. If the changes discussed below are constitutive of a break, then it would be more in their potential to disrupt past structures, rather than directly and immediately changing them. Change is rooted in their symbolic relationship to different policy narratives. This section looks at several areas where change that may appear superficial on the surface, can in fact suggest a larger shift in the underlying public management narrative.

Changes of an internal nature

First, Horizon 2020 has been expanded to cover the entire innovation cycle. All of the research and innovation activities that are directly implemented by the EU have been brought together under one umbrella. In particular, Horizon 2020 incorporates the Competitiveness and Innovation Framework

Programme (CIF) and the European Institute of Innovation and Technology (EIT) that had in the past been managed separately from the framework programmes. However, despite bringing a broader range of tools together, there is no comprehensive integration of these tools as might be suggested by the discussion on creating a unified funding programme for all aspects of the innovation process. That is, these tools can still be identified as distinct elements with histories. Rhetorically, the Commission may be moving away from a linear model of innovation and accepting an integrated (or chain-link) model of innovation, but in actuality the framework programme is still divided into three distinct pillars, each of which corresponds to a major stakeholder in research policy: government, industry, and universities/research organizations. This structure allows the government to use a top-down, NWB type governance method for choosing research priorities in the grand challenges section; the research community is able to use a bottom-up method for determining what to fund in the excellent science pillar which contains elements of both NG and NPM in its use of a broad spectrum of stakeholders at different governance levels, quantification of performance measures, and use of agencies; finally, the industrial leadership pillar allows for a mixture of tools, but with a strong focus on the applied and development aspects of innovation. There is thus both a top-down NWB approach to the selection of enabling and industrial technologies that will be funded and a push towards the use of public private partnerships and loan and equity-based market mechanisms that are popular NPM-type tools.

Second, Horizon 2020 is unified and simplified bureaucratically. It is a unified programme in the sense that there is a single set of rules for participation and dissemination for all types of participants. While this may be an administrative improvement, it is hard to see how it can be a break except perhaps in its symbolic unification of the participant types. The programme is also simplified in terms of its administrative burden on participants, but this change comes with strings attached. In the public consultation and lead-up to Horizon 2020, there was a strong push to increase trust and to reduce the high levels of administrative oversight and bureaucratic requirements, which funding from past framework programmes had entailed. In the Horizon 2020 debate there were strong calls from the university and research community to introduce a system that would incorporate a higher degree of trust. In 2010 the *Trust Researchers Initiative* was launched: 'The key message of this recent and bottom-up declaration is that funding of European research should be based on trust and responsible partnering. Research has to be funded according to the nature of research while at the same time ensuring an appropriate level of accountability' (Cordis 2010). The acceptance of more accountability as a prerequisite for more autonomy, as embodied in trust, is a sign of an audit culture that is deeply rooted in the NPM narrative (Power 1997). Trust in this manner becomes institutionalized in quantitative measures that are accessible to non-specialists, which can be observed in the expanding use of benchmarks, scoreboards, and quantifiable indicator-based objectives.

Third, Horizon 2020 has the objective of implementing the Innovation Union initiative. This can be understood to mean that it 'reflects the ambition to deliver ideas, growth and jobs for the future' (European Commission 2011c: 2). While the Innovation Union is recent, the ideas and discourse behind it are a continuation of a line of thinking that began in the 1990s and are strongly rooted in the knowledge-based economy discourse that was popularized by the Organisation for Economic Co-operation and Development (OECD) (Godin 2006). The framework programmes have traditionally had a strong industry orientation; going back to the second framework programme, sixty per cent of the funding went to businesses (European Commission 2011e). However, we can see that the knowledge-based economy discourse is changing over time and becoming more focused on outputs and the efficient promotion of breakthroughs that fall in line with an NPM model.

Fourth, in Horizon 2020 there is an emphasis on a less prescriptive approach to defining research topics. This is important in that it indicates a change in public management philosophy. It signals a move from a top-down prescriptive model in line with a NWB narrative to a more hands-off model where steering is done from a distance, which is in line with an NPM narrative in which more freedom

is given to actors to make their own strategic decisions within a competitive context. Even in the broadly top-down grand challenges, whose topics are defined by the EU, there is an effort to be less prescriptive in predetermining how proposals for those funds should frame their research questions and methodologies.

Changes shaped by external influences

Whereas FP7 was developed in the optimistic climate of post-millennial globalization during the years 2004 to 2006, Horizon 2020 was developed in the shadow of the financial crisis in the years 2011 to 2013. Many of the key policy documents for Horizon 2020 were being discussed and drafted in parallel with new developments in the Eurozone crisis. Although these were under different Directorates General, the leadership and overall climate was deeply affected by the crisis that become the top priority for lawmakers on all levels. In November 2011, the Commission stated: 'Since the launch of the Seventh Framework Programme (FP7), the economic context has changed dramatically...The key challenge is to stabilise the financial and economic system in the short term while also taking measures to create the economic opportunities of tomorrow' (European Commission 2011d: 1-2). In this section we will examine three ways in which the crisis influenced the development of Horizon 2020: Increased fear over the future of Europe, support for austerity measures, and a growing acceptance of differentiation.

The political climate that accompanied the crisis included a fear that Europe's future – as a globally leading economy – was bleak. This thinking migrated into discussions about research policy as the Research Commissioner's foreword to the Innovation Union Competitiveness report states: 'The main messages presented in the executive summary...confirm that Europe is in a state of "Innovation emergency"' (European Commission 2011a: I). This so-called state of *emergency* is not referred to again after the bulk of the Eurozone crisis has passed. Concern over global competitiveness and the threat of emerging economies both broadly as well as narrowly in the university sector, however, continued to be an important political issue throughout Horizon 2020's development. Austerity became the preferred solution to the Eurozone crisis both at the national and European level. This concept was central to many countries' argumentation during 2013 when the budget for Horizon 2020 (as part of the larger multi-annual budget) was being negotiated. It became clear that some key member states would not accept an increase in the overall European budget (EurActiv 2013). The fact that Horizon 2020 has increased in overall funding from FP7 can be said to symbolize confidence in the importance of investing in research; on the other hand, the level of increased funding is still insufficient to stabilize the funding level from the final year of FP7. The first two years of Horizon 2020 together have 15 billion, whereas FP7 had over 8 billion in 2013 alone.

Finally, the discussion and growing acceptance of differentiated integration in Europe gained traction as part of the financial crisis. There are a wide range of ways to express this concept, and Dirk Leuffen (2013) shows how various actors from different political perspectives, such as David Cameron and Francois Hollande, have supported an idea of Europe in which the member states are not treated uniformly in regards to common policies. A broadly used typology distinguishes three forms of differentiated integration: Multispeed, where there are initial differences but an expectation that over time countries will eventually integrate; variable geometry, where integrations occur outside of the common policies; and *à la carte*, where countries can decide to opt out of common policies (Stubb 1996). All three types of differentiated integration may be seen as sharing a common denominator, that is, 'the situation in which, within the scope of EU competences, not all member states are subject to the same or uniform EU rules' (Avbelj 2012: 193). However, when we look at differentiation within research policy, the picture is more complex. First, most research policy is subject to soft law and Open Method of Coordination (OMC) governance mechanisms to which member states have agreed, but are not all meeting in practice. Countries are opting-in to the ideas and objectives of the Europe 2020

strategy through common soft law benchmarks, but opting-out in practice by not meeting those (European Commission 2013a). Second, the mode of differentiated integration arising from the framework programmes is caused by *being* subject to the same rules, but not having equal footing on which to compete. When unequal actors compete on equal terms, the result is often that research funds become concentrated in the smaller group of countries better equipped to compete from the outset. The EU refers to this problem as the "innovation divide" and has devoted resources towards solving it. However, the bulk of these resources come from the Cohesion Funds, which are outside the framework programmes and do not promote the international standards and benefits of cooperation the FPs bring. In the next section, we will see how public management narratives shape the understanding of excellence and affect the outcomes and differentiation in the EU.

EXCELLENCE AND DISTRIBUTIVE MECHANISMS

Funding is essential to the conduct of research, yet it is a limited resource becoming increasingly scarce. Different fields and disciplines may require different amounts of funding and investment in infrastructure, but all are faced with the same basic need. Without funding, research cannot be undertaken which makes the choice of distribution mechanism of critical importance, all the more so as the chances of becoming a recipient decline. FP7 represented about 10 per cent of the overall spending on research in Europe (European Commission 2011b) and unless there are unexpectedly rapid increases in member state spending, that level will be similar in Horizon 2020. However, competition for that funding is dramatically increasing; the Commission predicts that the success rate of applicants will drop from approximately 22 per cent in FP7 to about 15 per cent in Horizon 2020 (Greenhalgh 2014). This is based not only on the expectation of increased participation overall, but in particular more intensive business participation as well as the possibility that reduced spending on the national level caused by austerity budgets will encourage more applications.

Excellence is a term, which comes up repeatedly in the official documents for Horizon 2020 and the discourse surrounding its development; however, it is not clearly defined nor is it evident that the actors share a common understanding. This section will focus on how excellence is understood in Horizon 2020, not only by the EU by also by the member states. In the policy papers coming from the green paper process, nearly all participants use the term and claim to support excellence. But are they truly in agreement? What does excellence mean in an EU context and is that same definition shared among all actors?

I argue that the term excellence is part of two distinct discourses and has varied meanings even within those. This ambiguity allows actors to project their own understanding of excellence onto the term even when it is being used in conflicting ways by other actors. Further, excellence is self-justifying. It is extremely difficult, if not impossible, to argue against excellence *per se*.

The term excellence occurs in the discourses of distribution and quality. In a distributive sense, excellence is a term used politically to counter arguments for distributive justice. This is very often how it is used in the framework programme debates. As described by an EU official who worked on Horizon 2020 in DG Research at the time: 'If you hear us speak of excellence here in Brussels, then it is typically this opposition between what is pre-allocation of the structural funds, where we say up front that x million Euros will go to that and that country, and the absence of any *juste retour* or considerations like that in the framework programme; that is on a very general level what we mean by excellence'.[1] In a political sense, it is the negative definition that predominates; the avoidance of redistribution systems that support the catching-up of weaker member states or *juste retour*.

In the quality discourse, the term excellence is used to describe the highest level of quality – in the evaluation or output results of research. Here, the EU has a different understanding of what is meant

by the concept. According to the same Commission official: 'For us generally, what excellence means is that we fund the best, whatever way you want to look at it...We won't make any balances in terms of geography or university versus industry and so on'.[2] In this comment we see how the quality discourse actually connects back into the distributive discourse. However, the fundamental idea of "we fund the best" makes it clear that excellence in terms of quality is a relative, competitive concept. The criteria for the best may be set by different groups or specialists, and can vary across different instruments, but the point of excellence is finding and funding the best. The focus on the best can be found directly referred to throughout the Commission's proposals for Horizon 2020 as seen in the following examples. There is an overarching focus which refers to selecting proposals: 'Union level intervention enables continent-wide competition to select *the best* proposals, thereby raising levels of excellence and providing visibility for leading research and innovation' (European Commission 2013f: 3). Here, we see the word used to reinforce the link between competition and excellence. But the best is not only used in reference to proposals, it also is used as a focus for many parts of the programme. There is the best science ('Europe has fallen behind in the race to produce *the very best* cutting-edge science', European Commission 2013f: 32), the best researchers and ideas ('The ERC was created to provide Europe's *best* researchers, both women and men, with the resources they need to allow them to compete better at global level...*The best* researchers and *the best* ideas compete against each other', European Commission 2013f: 33), the best infrastructures ('Union investments in ICT research infrastructures have provided European researchers with *the world's best* research networking and computing facilities', European Commission 2013f: 45), and the best scientists, here described in relation to the importance of major infrastructures ('They promote mobility of people and ideas, bring together *the best* scientists from across Europe and the world and enhance scientific education', European Commission 2013f: 38).

This raises a number of issues that deserve further research. First, while the EU wants to fund the best research, it can only logically fund the best proposals. To what extent are the best proposals representative of the best research? How confident can we be in *ex-ante* forecasting of research results? Or to state it another way, is it correct to assume that the best research comes from the best proposals? Given that many, if not most, of the rejected proposals are never undertaken, there is unfortunately a lack of comparative data by which to investigate this. Second, is the best always excellent? This is not likely a problem on the EU level, but especially in smaller member states, the best research in many areas may simply not meet qualitatively defined criteria of excellence. Third, the best is a singular term, which implies that there is only room for one research project in a given area. This fits well with the EU's desire to avoid waste, but does it fit well with finding solutions to research problems? We have already seen a move away from the term "best practice" in general parlance towards the more inclusive "good practice".

The EU's understanding of excellence in the quality discourse is what I call zero-sum excellence. Zero-sum excellence rests on the assumption that excellence is a limited resource decided by relative and competitive means. There can only be so much excellence, and as researchers improve, the excellence target moves with them. The logic here follows the logic of a ranking system, which is also how most of the funding instruments work: evaluation of proposals leads to a ranked list, for which a cut-off point is chosen. This methodology results in the best, i.e. the most highly ranked proposals are funded. It is also possible under this same conception to predetermine the excellence cut-off, for example by saying that it exists for results above a certain percentage level. This is also used by the EU, for example, in the way it identifies excellent publication results as those that are within the top 10 per cent of the most cited articles worldwide within their field (European Commission 2013b). This understanding of excellence corresponds well with an NPM narrative.

There is a second understanding of excellence, which I call threshold excellence. It is based on the assumption that excellence is unlimited and is defined by its inherent quality rather than its relative position among its competitors. By this understanding, excellence could involve one hundred per cent

of all the proposals provided they meet the quality standard that the judges define as excellent, or conversely, none of the proposals if they did not. This second type of excellence is a stable target, not a moving one and is compatible with distributive justice arguments. It allows us to recognize that multiple proposals may all be excellent, rather than trying to determine the most excellent projects as the first type demands; and, further, funding decisions may legitimately include other factors once the excellence criteria has been met. This understanding of excellence is more attuned to the NG or NWB narratives, as it allows more planned and negotiated results within a less quantified and audit driven context.

Table 2: A Typology of Excellence

		Type of Excellence	
		Threshold	**Zero-Sum**
Discourse	*Quality*	excellence means: of a predetermined standard	excellence means: the best
	Distributive	excellence coexists with other criteria	excellence is the sole criteria

An example of how these different meanings become intertwined and used in the policy discourse can be found in the way that the 12 countries, which joined the EU in 2004 and 2007 (hereafter EU-12), approached the Horizon 2020 programme. In February 2011, during the Hungarian presidency of the EU, they issued a joint position paper stating:

> Finally, the EU-12 MS underline that the principle of excellence should continue to be the cornerstone criterion for the next Framework Programme. Notwithstanding that, it should be stressed that the interim evaluation report of FP7 states that: 'Too narrow focus on research excellence can overshadow the benefits of full-scale involvement of EU12 in the FP and this should not be neglected'. In the design of the next FP other principles could be taken into account like inclusiveness, cost efficiency, relevance of research and contribution to growth and jobs (EU-12 2011: 2).

Here we see the requisite support for excellence but the main argument is for allowing other principles to be taken into account so as to enable a broader distribution of funds. This leads to an as yet unanswered question: What degree of concentration in research funding is optimal? Should research funds be concentrated in only a relatively small number of centres or should they be widely spread throughout Europe? And following from that, should "Europeanized research" be evidenced by high levels of mobility for researchers allowing broad access to these concentrated centres or by broadly spread funding supporting research in all member states? Which of these better serve the broader Lisbon and EU 2020 strategies' goals of a globally competitive Europe is unclear.

In its summary conclusion supporting the idea of excellence, the EU chose to use a quote from the Estonian position paper to highlight and reinforce its point. It is worth unpacking this short quotation and examining how the EU interprets and employs it. The Estonian government states: 'The excellence of projects should remain the primary criterion in the adoption of decisions on financing scientific research. All EU researchers should have the opportunity to reach excellence and compete for the best financing opportunities (Estonian government)' (European Commission 2011b). The first part of this quote clearly supports the concept of excellence, though not as the sole criterion, since it uses the word primary thus implying that there are others. Reading the second sentence suggests that we should characterize it as threshold excellence, compatible with what was stated in the EU-12

document. The idea of "the opportunity to reach excellence", rather than excellence per se, and the opportunity to "compete for the best financing", can also be interpreted in several ways. One view is that this should be possible within the framework programme, while the other is that these opportunities should come from outside of the framework programmes. This second interpretation is clearly the EU's preferred one. Here is the statement in the summary analysis of the green paper process for which the EU used the Estonian quote as support:

> There is a clear signal coming from the consultation that excellence needs to remain the key criterion for distributing EU research and innovation funding. Respondents stress that projects funded through the Common Strategic Framework need to continue to be selected on a competitive basis and through peer review. At the same time, respondents stress that the Structural Funds should be used to unlock the full research potential of Europe (European Commission 2011b: 11).

The segregation of the framework programme and the structural funds is the EU's preferred solution to the problem of excellence as conceived by the EU-12 member states. Later in the green paper evaluation this is addressed even more explicitly with the idea of a "stairway to excellence" (European Commission 2011b: 16) which is a mechanism to help low performing countries reach excellence and compete for framework funds, thus following a multispeed model of differentiated integration. However, the structural funds and national funding opportunities are relatively weak in terms of NG, and do not usually offer the same international cooperative dimension as the framework programmes, which can leave researchers without the infrastructural support needed to achieve this leap. After debates in the European Parliament, a new tool, "Spreading Excellence and Widening Participation", was added to address this, though it still remains separate from the three main pillars.

CONCLUSION

The analysis in this paper looked at how the public management narrative is changing within the framework programmes. Although there is not a single public management narrative at work, but rather elements of all three major narratives, a trend can still be seen towards an increasing influence of the NPM narrative. This trend is particularly strong in the areas of competition, quality and output measurements, and distributive justice ideas. Being aware of the strengthened role of an NPM narrative in European research policy is important both in recognizing how this area is being steered and for anticipating potential problems.

The move towards a stronger NPM narrative unsurprisingly bolsters the step towards a more differentiated Europe of Knowledge based on competition and concentration of resources and rewards. This step appears to parallel what Robert Frank and Philip Cook (1995) describe as a winner-take-all market, which is one characterized by two primary features: rewards being given according to relative rather than absolute performance, and rewards being concentrated in a few top performers despite the differences between these performers and others being small. While the framework programmes fund many researchers, the countries in which they are based is more concentrated. The focus on excellence, coupled with decreasing odds of success, creates an iterative process of funding that further concentrates funding in the leading countries. It can be argued that there is nothing wrong with this; quite the opposite, it is important and necessary to create research-intensive regions that are concentrated in only a small group of countries. The EU has, however, neither stated its intention to do this nor provided evidence that would justify that approach.

Frank and Cook describe several problems that winner-take-all markets are known to create: inefficiencies, overcrowding, and wasted investment in performance enhancement. Research policy is not yet a true winner-take-all market, but due to its tendency in that direction, examining these

problems can serve to highlight some key issues that research policy should take into account. First, inefficiency is a top priority the EU is attempting to eliminate. Care should be taken in moving in a direction that could increase or exacerbate inefficiencies. Two, overcrowding is clearly not an issue. The EU repeatedly mentions the need to increase the numbers of researcher in Europe. However, if the EU wanted to use a winner-take-all market to achieve this, the rewards would likely need to be much higher. Finally, there is wasted investment in performance enhancement. Frank and Cook (1995: 130) refer to studies showing that up to one fourth of the potential reward is invested in performance enhancement, i.e. changes that are oriented towards increasing the likelihood of success. We are beginning to see significant investment from universities and other research organizations in administrative functions aimed at increasing the chance of obtaining EU funding.

Differentiation, as discussed earlier, comes in a variety of forms that may or may not incorporate expectations of an equally integrated end. European research policy also appears ambivalent about whether to strengthen its leading parts and allowing those to drive the overall competitiveness of the Union or to attempt to broadly improve research across all member states. In part, this may be a result of the paradox identified earlier in the discussion on the stairway to excellence. It appears that bringing low performing countries up to a common standard cannot be accomplished within an equal framework, but neither can it be done independent of one. This ambivalence is reflected in polices that attempt, in different ways, to address both sides; however, the increased influence of the NPM narrative raises the threat of what might be termed *un-differentiated disintegration*, i.e. a passive process in which a common tool exacerbates already existing differences and leads to a less integrated Europe.

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[1] Interview conducted in 2013 with an official in DG Research.
[2] Ibid.

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Research Article

Broadening Aims and Building Support in Science, Technology and Innovation Policy: The Case of the European Research Area

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Abstract

The aim of this article is to analyse the evolution of the ideational framework of the most ambitious initiative in supranational research governance so far – the European Research Area (ERA), launched by the European Commission in 2000. In order to do so, the ERA initiative is analysed against the background of the long-term development of the science, technology and innovation policy ideas. The analysis reveals that over the course of 14 years, the policy aims of, and support for, the ERA initiative have considerably broadened. While economic competitiveness goals initially dominated the Commission's initiative to launch the ERA, the initiative has gradually expanded towards social and scientific aims as well as stronger involvement of member states and stakeholders. Recent "big ideas" of excellent science and Grand Challenges help increase support for the ERA initiative among the research community and society. In the broadened ERA ideational frame, diverse aims of scientific freedom, societal relevance and economic competitiveness co-exist but attention to the relationships between them has been limited. Further exploration and conceptualization of the relationships between diverse policy ideas is an important challenge for future research policy studies and practice.

Keywords

There is tension between those who stress the importance of an autonomous "Republic of Science" and those who emphasise that considerations of social and economic value and cost, judged in considerable part by non-scientists, should play a major role in determining basic research allocation decisions. The controversies here shade over into a semantically adjacent area – the relative emphasis that should be placed on basic versus applied research. (Nelson 1977: 65)

Toward what is the European Union's (EU) research policy aiming? Is the EU supporting research so it can become the most competitive economy in the world? Does it want to promote research of the highest scientific quality? Or does it see research as a tool to solve major societal problems in areas such as health, environment and energy? How compatible are these different aims and what roles do the long-standing tensions and controversies, as indicated in the opening quote from Richard Nelson (1977), play in the current EU research policy? What are the values, ideas and interests involved in the diverse aims of EU research policy? These are timely questions considering the EU's increased involvement in the field of research policy. While the majority of research funding is allocated at the national level, the EU's involvement has gradually increased over the decades (Borrás 2003; Peterson and Sharp 1998). This article will focus on the most ambitious EU project in this field so far - the European Research Area (ERA) initiative, launched in 2000. The ERA initiative covers a broad set of activities including reforms of national research systems, cooperation and coordination among national research funding activities, improved career systems and mobility of researchers.

While a number of previous studies have addressed the emergence of the ERA initiative in the context of the EU's research policy (Chou 2014; Delanghe et al. 2009; Edler et al. 2003; Prange-Gstöhl 2010), the novelty of this analysis is to study the evolution of the ERA initiative and its main goals from the launch of the initiative in 2000 until 2014, in light of the long-term development of science, technology

and innovation (STI) policy[1] ideas. Analysing the ERA initiative against the background of the long-term evolution of the STI policy frame enables us to also shed light on how old policy ideas appear in the ERA initiative in new forms, helping to mobilize support for the initiative. Additionally, applying a historically developed research policy frame for the interpretation of recent ERA developments draws attention to further conceptual work needed. This article proceeds as follows: firstly, the concept of framing is introduced and the historical evolution of the STI policy frame is discussed; secondly, the evolution of the ERA initiative from 2000 until 2014 is analysed with a particular focus on its main aims and actors involved; and finally, the concluding section conceptualizes the evolution of the ERA ideational framework in the context of the long-standing STI policy ideas.

SCIENCE, TECHNOLOGY AND INNOVATION POLICY FRAMING

To study the main ideas, rationales, interests and values guiding STI policy, the concept of "frame" is used, 'in which facts, values, theories, and interests are integrated' (Rein and Schön 1993: 145). According to Donald Rein and Martin Schön (Rein and Schön 1993: 146), 'framing is a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analysing, persuading, and acting. A frame is a perspective from which an amorphous, ill-defined, problematic situation can be made sense of and acted on'. According to Rein and Schön, frames are developed in interactions among individuals, interest groups and institutions and can be used strategically for problem-solving, agenda-setting and decision-making. Thus, the concept of the frame is useful for exploring changes in the content of STI policy.

While diverse ideas on the role of science, technology and innovation in society have been debated over centuries, STI policy as a distinct public policy area was established after World War II (Elzinga and Jamison 1995). Scholars depict the evolution of this policy field as a cumulative three-step expansion from "science policy" to "technology policy" and later to "innovation policy", where every subsequent step is broader and incorporates ideas and instruments from the previous ones (Borrás 2003; Lundvall and Borrás 2005). Expansion of this policy field has also been conceptualized as evolution of policy paradigms and frames (Biegelbauer and Borrás 2003; Sanz-Menendez and Borrás 2001), generations (Boekholt 2010) and periodizations (Elzinga 2012), helping to make sense of changing ideas. It is important to keep in mind that this is a cumulative process and not a succession of strictly delineated and clear-cut historical stages.

The evolving STI policy frame has been spread internationally by an epistemic community of experts and policy-makers that has largely operated via the Organisation for Economic Cooperation and Development (OECD), which has played a leading role in the development of STI policy (Lundvall and Borrás 2005; Elzinga and Jamison 1995). The international policy frames have influenced the development of the STI policy of the EU and its member states (Borrás 2003; Sanz-Menendez and Borrás 2001) and appropriate policy instruments (Boekholt 2010). Today's debates about the objectives, values and governance of the ERA can be better understood by taking a long-term view of how the policy ideas in this area have emerged and evolved.

Science policy frame

The initial "science policy" frame emerging in the 1940s was largely shaped by the experience of the two world wars, where science played an important but also widely debated role. One of the best-known early manifestos calling for the establishment of science policy is the 1945 report "Science The Endless Frontier" by Vannevar Bush. Building on the vital role science had played during the war, the report calls for the establishment of a science policy in the United States that would support the use

of the scientific knowledge accumulated during the war for civilian purposes such as "war against disease" and public welfare. Such a policy would also support research activities in public and private organizations as well as discover and develop scientific talent. The report is well known for its call to support "basic research" (Pielke 2012), which, according to Bush, would later lead to new products and processes. Therefore, the report advocated what became known as the "linear model of innovation", according to which support for basic research leads to the development of new products and processes which are afterwards introduced into production and market, thus fuelling economic growth (Kline and Rosenberg 1986). An emphasis on support for basic research in the report was accompanied by a call to preserve freedom of inquiry, stating that '[S]cientific progress on a broad front results from the free play of free intellects, working on subjects of their own choice, in the manner dictated by their curiosity for exploration of the unknown' (Bush 1945: 12).

A number of ideas in Bush's report were closely related to the major controversy about the role of science between the views of John Bernal advocating the social function of science (1939) and Michael Polanyi stressing the importance of academic freedom (1962). Writing between the two world wars, Bernal (1939) emphasised that recent events 'have led to a critical examination of the function of science in society' (Bernal 1939: xiii). According to him, the social function of science implies that science has to assist human needs and be the chief agent of change in society (Bernal 1939: 383). Bernal defines science as 'an integral part both of the material and economic life of our times and of the ideas which guide and inspire it. Science puts into our hands the means of satisfying our material needs. It gives us also the ideas which will enable us to understand, coordinate, and satisfy our needs in the social sphere' (1939: 408).

While Bernal responded to the attacks on scientists' involvement in wars by advocating its social function, his contemporaries emphasised internal norms of science. One of the best-known contributions comes from Robert Merton, who stated in his 1942 essay on the normative structure of science that 'the institutional goal of science is the extension of certified knowledge' (Merton 1942: 270) and that the ethos of modern science consists of four sets of institutional imperatives: communism (i.e. common ownership of findings by scientific community), universalism, disinterestedness and organized scepticism[2].

The main critique of Bernal's call for the social function of science came from Polanyi's 1962 essay "Republic of Science", which emphasised the freedom for scientists to choose their research problems and to self-organize. According to Polanyi, 'the pursuit of science by independent self-coordinated initiatives assures the most efficient possible organisation of scientific progress. And […] any authority which would undertake to direct the work of the scientist centrally would bring the progress of science virtually to a standstill' (Polanyi 1962: 56). He assigns the main role to the scientific authority that scientists exercise over each other, while central political authority can, in his view, only assist or hamper spontaneous developments of science but cannot shape its advance.

While these debates on the social function and freedom of science emerged in a certain historical context, they have shaped the development of research policy worldwide and have been major points of reference in the on-going discussions about the governance of science (Borrás 2012; Pielke 2014). Arguments of Polanyi and Bernal have been used for discussing a wide range of issues from anticipation of emerging technologies (Guston 2012) to analysing the changing character of research councils (Rip 1994), evaluation and funding (Ziman 1983). Another important term that emerged during the post-war era was "big science" (Price 1963), which describes the increased role of the large scale research infrastructure and collaborations which today require complex strategic partnerships and are known as "megascience" (Elzinga 2012).

To summarize, the initial science policy frame started to evolve when this policy field was established after World War II. The big questions asked about the use of scientific knowledge for civilian purposes (Bush 1945), the social function of science (Bernal 1939), scientific norms (Merton 1942) and scientific

freedom (Polanyi 1962) are still important in shaping scientific debates today (Borrás 2012; Pielke 2014). This initial frame also sets out some of the key policy instruments which are still relevant today such as support for basic research, public and private research organizations, scientific talent and infrastructure.

Technology policy frame

During the 1970s, the STI policy frame expanded towards a more dedicated focus on science-based technologies (e.g. nuclear power, computer and space technology). Bengt-Åke Lundvall and Susana Borrás (2005: 609) note that technology policy represents 'a shift from broader philosophical considerations to a more instrumental focus on national prestige and economic objectives'. At this time, technology policy thinking was strongly influenced by economic ideas (Edler 2003) and was perceived as a useful tool for solving wider economic problems in the aftermath of the oil crisis (Biegelbauer and Borrás 2003). As perception of global industrial competition increased, national governments used technology policy for promoting their "national champions" in specific sectors (Lundvall and Borrás 2005). The widely used rhetoric of national and European competitiveness has been criticised by Paul Krugman (1994) as a meaningless concept when applied to national economies because countries do not go out of business like companies and the international economy is not a zero sum game. Krugman calls competitiveness "a dangerous obsession", because it can lead to wrong policies and wasteful government spending while ignoring the real causes of economic problems.

Concerns about the impact of science and technology were raised by the new social (anti-war, feminist and environmental) movements that emerged in the late 1960s. They facilitated focus on democratization, public participation and the social relevance of science and technology and contributed to interest in technology assessment and foresight of broader impacts of future technologies (Elzinga and Jamison 1995). One of the major contributions to discussing social questions of technology at that time was Nelson's 1977 book "The Moon and the Ghetto", which focussed on uneven technological progress whereas some socio-political issues have been tackled more successfully than others:

> a country that recently had accomplished the truly remarkable feat of sending a man to the moon and bringing him back to earth safely, had wiped out scourges of infantile paralysis, and more generally had achieved an historically unprecedented standard of living for the middle class, for some reason seemed unable to provide an effective education for ghetto kids, halt or significantly slow down the rising cost of medical care, keep the air and water clean or cut down on the incidence of drug addiction and drug-related crime (Nelson 2011: 681).

To summarize, the technology policy frame presents science and technology as instruments to achieve economic competitiveness. Simultaneously, growing societal concerns over new technologies lead to increased public participation, technological forecasting and attention to the social implications of technological development.

Innovation policy frame

Gradually the policy frame evolved and expanded further to what became known as innovation policy in the 1990s. Building on earlier ideas about innovation, this policy frame emphasised collaboration, diffusion and the need for a systemic approach. The linear model of innovation was replaced by a chain-link model incorporating feedback loops and multiple paths of innovation (Kline and Rosenberg 1986), demonstrating that rather than being a smooth and linear process, innovation is complex, uncertain and somewhat disorderly. A related idea on the importance of policy supporting the

diffusion of innovation was put forward by Henry Ergas (1987), who made a famous distinction between mission-oriented policies promoting the development of new technologies and diffusion-oriented policies supporting the widespread dissemination of capacities of firms to respond to new technologies.

Particularly influential in this policy frame is the innovation systems approach[3] focussing on the role of historically developed institutions and interactions between them in explaining innovation (Lundvall 1992). The crucial role of interaction among diverse institutions has been emphasised by a number of other approaches emerging approximately at the same time, such as triple helix, third mission and Mode 2 knowledge production. According to the Triple Helix model (Leydesdorff and Etzkowitz 1996), university-industry-government relations play a crucial role in knowledge production, and universities – also known as entrepreneurial universities - undertake important economic functions. Similarly, the concept of the "third mission" of universities (Goransson et al. 2009) envisages an extension of the university's role beyond teaching and research to include its socio-economic contribution as well. The idea of Mode 2 knowledge production (Gibbons et al. 1994) argues that Mode 1, characterized by knowledge production in an academic context, disciplinarity, homogeneity, autonomy and traditional quality control (peer review), is being replaced by the Mode 2 where knowledge is produced in the context of application, transdisciplinarity, heterogeneity, reflexivity, social accountability and novel quality control. Innovation policy translated these ideas into instruments supporting networks and capacity building, small and medium-sized enterprises and intellectual property rights. Susana Borrás (2003: 17) distinguishes between a narrow innovation policy agenda focussing directly on supporting innovation and a wide innovation policy agenda including policies such as education and training, competition and infrastructure.

A lot of the economic thinking that had influenced STI policy ideas since the 1970s was reinforced during the 1990s through the introduction of the New Public Management (NPM) ideas, which promoted the introduction of private sector management techniques in public policy. For STI policy, NPM meant an increased focus on the evaluation of quantifiable results and competitive resource allocation (Elzinga 2012: 426). The appropriateness of NPM ideas for STI policy has been widely debated because they differ considerably from sociological views on the organization of the research community (Hagstrom 1965; Merton 1942). The limits of organizing research systems according to market principles have been pointed out (Georghiou 2006).

To summarize, the innovation policy frame aims for a more systematic approach to knowledge production and diffusion. Accordingly, it emphasises accountability and collaboration among research organizations, business, government and society. While the main focus of the innovation policy frame is on interactions and linkages between heterogeneous actors involved in the innovation process, the cumulative expansion of the STI policy frame means that this frame includes ideas from the previous frames (e.g. importance of research infrastructure, foresight, training of young scientists), though some of these ideas have been revised (e.g. chain-link model of innovation replacing linear model) or integrated in a new context (e.g. basic science organizations being one of the institutions in the innovation system rather than playing a dominant role as in the earlier science policy frame).

The main ideas of an evolving STI policy frame are summarized in Box 1. This historical review of the broadening STI policy frame helps to interpret ideas, rationales, values and interests involved in today's research policy 'by drawing attention to the continuation and deepening of old issues in new forms' (Elzinga 2012: 426).

Box 1: Stylized evolution of the main ideas of science, technology and innovation policy

Science policy	Technology policy	Innovation policy
since 1940s	*since 1970s*	*since 1990s*
Social function of science	Science-based tech	Innovation system
Scientific freedom	Economic goals	Chain-link model
Big science – infrastructure	Global competition	Diffusion
Education of young scientists	National prestige	Mode 2
	National champions	Triple Helix
	Foresight	Third mission
	Social concerns	New public management

As pointed out by Borrás (2003: 13), this three-step evolution of STI policy is 'an analytical model for heuristic purposes' which has not always been strictly followed in practice. For example, while policy thinking in recent decades has emphasised the non-linear character of innovation and social accountability associated with Mode 2 knowledge production, in policy practice and debates it is still possible to encounter the linear model of innovation and Mertonian norms of disinterestedness. Borrás elaborates on the complexity of capturing policy evolution, stating it is

> "a stylized fact" of the transformations taking place through history. In this evolution there is not necessarily an overall predetermined rationality constantly improving it, as if there was an "end of history" where policy achieves a perfect, ultimate, formulation. Policy changes are the fruit of many complex factors, which are socially, politically, and economically embedded, and that are not necessarily improvements of one single course of history (Borrás 2003: 14).

Accordingly, this article will use the main long-standing ideas from STI policy discussed above for analysing the evolution of the ideational framework of the ERA initiative. In this analysis, policy evolution is understood not as a predetermined rational and purposeful process but rather as a constant adaptation to a changing social, political and economic environment (Borrás 2003).

EVOLUTION OF THE EUROPEAN RESEARCH AREA INITIATIVE

The policy framing perspective is seen as particularly relevant for structuring political conflict and competition at the European level, characterized by competing constituencies and contested competencies (Daviter 2007). Some earlier studies have analysed the cognitive dimensions of the EU research policy and called for "bringing ideas back in" to account for its evolution (Sanz-Menendez and Borrás 2001). Taking a bird eye's view of the history of EU research policy since the establishment of the EU, Borrás (2003: 12) claims its evolution 'can be portrayed as the transition from science policy, to technology policy, and finally to innovation policy'.[4] In particular, she takes a close look at the transition from EU "technology policy" to "innovation policy'" in the mid-1990s, arguing that while the main EU innovation policy documents at that time take a narrow view on innovation policy, actual EU

activities towards supporting innovation go far beyond this narrow view and include areas such as education, small and medium-sized enterprises, regional policy, information society and competition policy (Borrás 2003: 17-20). An important role in this "innovation turn" in EU policy framing was played by expert communities in the OECD and national and Commission policy fora (Sanz-Menendez and Borrás 2001). Additionally, some studies have analysed the framing of the specific EU initiatives; for example, Jakob Edler (2003) studied the influence of economic ideas on the EU research programme BRITE (Basic Research in Industrial Technologies for Europe) in the 1980s.

The ERA initiative launched in 2000 emerged during the most recent innovation policy frame. The earlier discussion of the long-term development of STI policy ideas helps to make sense of the development of ideas, values and interests involved in the ideational framework of the ERA initiative. This paper traces the evolution of the ERA initiative and its main goals from its launch in 2000 until 2014 by studying relevant literature and the main documents defining the ERA initiative (e.g. the Commission's Communications and the Council's Conclusions)[5]. The chronology of the key events of the ERA initiative is outlined in Box 2.

Box 2: Evolution of the ERA initiative

2000	Launching ERA and Lisbon strategy
2002	Barcelona target of R&D funding of 3% of GDP
2002	Communication "The European Research Area: Providing a new momentum"
2005	Mid-term review and re-launch of Lisbon strategy
2007	ERA Green paper – public consultation
2007	'Fifth freedom' in the single market
2007	European Research Council focussing on excellence established
2008	Ljubljana process on ERA governance as enhanced partnership
2009	Lisbon treaty enters into force providing treaty basis for ERA
2009	Lund declaration on Grand challenges
2010	Europe 2020 & Innovation Union
2012	ERA reform agenda and ERA Stakeholders Platform
2013	First ERA Progress Report
2014	Deadline for completing ERA
2015	ERA roadmap has to be developed

The two main phases in the development of the ERA initiative and its main ideas are distinguished here. The initial phase, from the launch of the ERA initiative in 2000 by the Commission with the endorsement from the Lisbon Council until the mid-term review of the Lisbon strategy in 2005, is characterised by the dominance of economic ideas and limited involvement of member states and stakeholders. The second phase, starting from the public consultation on the ERA in 2007, is characterised by dedicated efforts to develop a partnership with the member states and stakeholders and a broadening of the ERA goals to scientific excellence and societal relevance.

Phase I (2000-2006): The Commission's initiative dominated by economic ideas

The European Commission launched the ERA initiative in January 2000. The initial ERA document (EC 2000) sets out rationales for establishing the ERA and lists activities it should cover. However, it does not provide a definition of what the ERA actually is. The urgent need for European action was framed in terms of improving Europe's competitive position and closing the gap with the United States (US) and Japan. The document provides data demonstrating that the EU lags behind the US and Japan on indicators such as public and private expenditure on research and development, employment of researchers in industry and trade in high-tech products. Concerns of the EU lagging behind the US have been a major driving force of integration of European research policy since the 1950s (Sanz-Menendez and Borrás 2001: 34). An important problem identified in the initial ERA document is a lack of coordination between national and European research policies.

To address these problems and establish the ERA, the document suggests seven action lines: optimisation of resources and facilities at the European level, more coherent use of public instruments and resources, more dynamic private investment, a common system of scientific and technical reference for policy implementation, more abundant and mobile human resources, a dynamic European landscape that is open and attractive to researchers and investment, and an area of shared values. These seven broad lines cover diverse activities from designing effective tools to protecting intellectual property and encouraging risk capital investment to developing a shared vision of the ethical issues of science and technology. The use of policy instruments such as financial, legal and coordination measures was envisaged. While the EU was – to different degrees - already dealing with the actions listed, the novelty was bringing them together and the ambition was to develop them further under the large-scale framework of the ERA. The Commission stated at the outset that the ERA 'will not come into being instantly in its final form. It will develop gradually' (EC 2000).[6]

Borrás (2003: 40) sees the range of topics in the initial ERA document as 'rather impressive' and interprets it as a sign that 'the Commission has wholeheartedly embraced the "systemic approach", making the production and dissemination of knowledge the cornerstone of a truly EU "research system", well beyond the delimited framework programme'. Heiko Prange-Gstöhl (2010: 3) points out that the list of activities was important for narrowing down the ERA concept in a situation when the Commission did not provide a definition of the ERA. Thus, while a broad range of activities listed in the ERA initial document largely fit with the dominant innovation policy frame of this time (although questions can be asked about linkages and interactions between different activities), its main aims are articulated in line with ideas about economic competitiveness, already familiar from the technology policy frame. This can be explained by the specificity of innovation policy frame, i.e. its main focus on facilitating interactions and linkages in knowledge production and diffusion, paying less attention to earlier "big questions" about the ultimate aims of policy.

The dominant economic rationales for the establishment of the ERA were strongly supported by the Lisbon strategy, launched two months thereafter. The Lisbon strategy set an ambitious goal for the EU in the next decade: 'to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion'

(LEC 2000). The strategy endorsed the ERA initiative and assigned it an important role in achieving the strategy's main goal. Specific steps for the establishment of the ERA were outlined, including encouragement to develop an open method of coordination for benchmarking national research policies, identifying indicators for assessing performance and setting up a European innovation scoreboard (LEC 2000). This focus on quantitative indicators is in line with the New Public Management approach.

Accordingly, the Lisbon strategy established a number of quantitative targets including the so-called "Barcelona target" defined in 2002 to achieve research and development (R&D) funding of three per cent of gross domestic product (GDP) with one third coming from government funds and two thirds contributed by the private sector (BEC 2002). The "3 per cent target" was set taking into account the higher R&D investment levels in the US and Japan (see Graph 1) which had already concerned EU policy-makers for some time. While increasing R&D funding is seen as important, the need to pay attention to quality, efficiency and composition of funding has been emphasised as well (CEU 2014).

Graph 1: Gross domestic expenditure on R&D in the Triad, 2000-2010 (% of GDP). Source: Eurostat
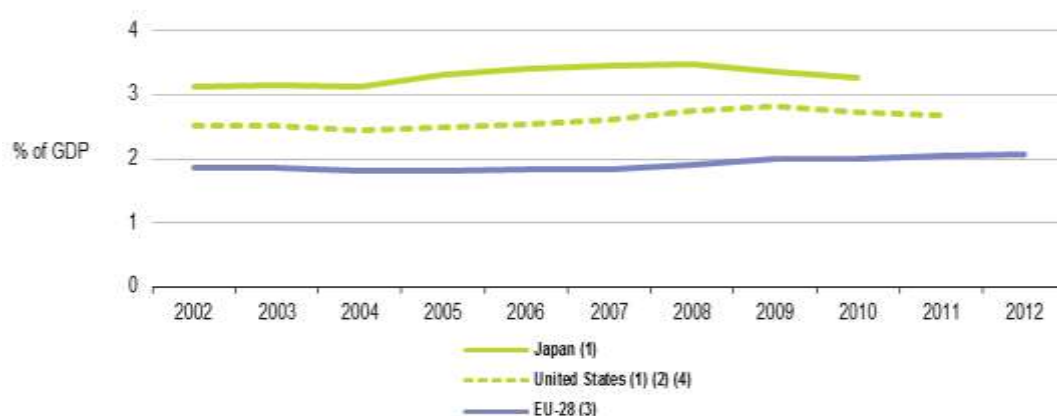
Less than three years after launching the ERA initiative, the Commission undertook an early review aiming to reinvigorate it (EC 2002). In this document, the ERA concept began to emerge more clearly as defined by three related and complementary ideas: an "internal market" for research with free movement of knowledge, researchers and technology; improved coordination of national research policies; and development of European research policy that goes beyond funding activities.[7] The document states that one of the main factors hampering progress for the ERA is insufficient participation from the member states. A low overall level of member state involvement is seen as a major barrier to tackling weaknesses such as the fragmentation of activities and the limited degree of coordination between national research policies. Achieving a substantial increase in member state involvement is one of the main objectives, along with the need for increasing the impact of the activities underway and consolidating the conceptual and policy framework in which the project is being implemented. Similar to the initial ERA document, the Commission presented a long list of activities to be strengthened that largely repeated those mentioned in 2000 (e.g. mobility and infrastructure), but also emphasised some new aspects such as the international dimension of the ERA and its openness to the world.

In 2005, the mid-term review of the Lisbon strategy found limited progress towards its ambitious aims to become the most competitive economy. The strategy was re-launched as the Growth and Jobs strategy based on a close partnership between the Commission and the member states[8]. These developments further influenced the evolution of the ERA initiative.

Phase II (2007-2014): Developing partnership and broadening aims

After the initial review of the ERA initiative in 2002 and the mid-term review of the Lisbon strategy in 2005, the ERA initiative gradually started to be better defined, to involve more actors and to broaden its ideational scope. While the Commission and economic ideas still played an important role, the member states and stakeholders were increasingly involved, and ideas on scientific excellence and addressing societal challenges acquired more prominence. The status of the ERA was strengthened by providing the concept a basis in the Lisbon treaty, which was signed in 2007 and entered into force in 2009. Article 179 states that the EU has an objective to achieve the ERA 'in which researchers, scientific knowledge and technology circulate freely' (EU 2010).

Simultaneously, the ERA aims were more closely linked to the core of the European integration process, namely the single market and its four freedoms. The communication on the single market (EC 2007b) introduced knowledge and innovation as its new frontier, saying 'the single market originally conceived for an economy reliant on primary products and manufactured goods has to adapt to foster openness and integration in a knowledge-based, service-oriented economy'. The document stated that in addition to the four established freedoms of the single market – free movement of people, goods, services and capital – "the fifth freedom" of free movement of knowledge and innovation has to be promoted.

Important changes in the ERA initiative were triggered by the 2007 ERA Green Paper (EC 2007a) that launched a public consultation on the ERA, activating European and national policy-makers as well as public and private research organizations to work on the creation of the ERA (Prange-Gstöhl 2010: 8). The Green Paper states that the scientific community, business and citizens need the ERA to have the six following features[9]: an adequate flow of competent researchers, a world-class research infrastructure, excellent research institutions, effective knowledge-sharing, well-coordinated research programmes and priorities, and a wide opening to the world.

The ERA Green Paper mentions a number of new ideas and institutions that became significant in the following years. In particular, the social aims of research became more visible in this document. In the context of globalization and the emerging scientific and technological powers of China and India, the Green Paper presented the ERA as a cornerstone for a European knowledge society. The document states the importance of research in fulfilling EU economic, social and environmental ambitions and referred to the need of identifying major societal challenges[10] jointly and for establishing joint programmes for society-driven research. Additionally, it emphasised that European research policy should be deeply rooted in European society and that besides the pursuit of scientific excellence, it should support policies for sustainable development in fields of major public concern such as health, energy and climate change. In the context of the recent deadline (set in 2010) to complete the ERA by 2014, it is interesting that the Green Paper suggested that the ERA vision may not be fully realised for 10 or 20 years – around the year 2020. The document envisaged an important role for the two new ERA institutions – the European Research Council (ERC) and the European Institute of Technology.

The ERC launched in 2007 became a crucial element of the ERA, contributing to widening and strengthening the ERA initiative through new ideas and support from additional stakeholders[11]. It was largely built on the ideas of scientific elite about high quality research, academic freedom and self-governance of the research community (Luukkonen 2014). Thus, while excellence was not prominent on the initial ERA agenda, it has become a visible part of it since 2007 (Luukkonen 2014: 33-34). The ERC has been widely appreciated by the scientific community, which had previously been dissatisfied with the perceived quality, applied orientation and top-down nature of the EU Framework Programmes and wanted more funding for basic research in Europe (Luukkonen 2014: 40). The establishment and success of the ERC broadened the ERA ideational frame with long-standing ideas about the role of basic research and self-organization in the academic community that have been popular since the early days of the science policy frame. The broadened STI policy frame raises

questions about how such support for basic research (now called "frontier research") interacts with other institutions in knowledge production and diffusion process.

The increased engagement of a broader set of actors in the ERA triggered by the public consultation on the Green Paper (EC 2007a) was strengthened by the launch of the so-called "Ljubljana process" during the Slovenian presidency in 2008 (Prange-Gstöhl 2010: 9). Its core idea was to strengthen the ERA governance as an enhanced partnership between the member states and the European Commission with broad support from stakeholders and citizens (CEU 2008). Additionally, within the long-term vision for the ERA, the Council emphasised the role of the "knowledge triangle" of research, innovation and education (CEU 2008).

At this time, the social aspect and public support received increased attention within the ERA framework, in particular through the Grand Challenges concept[12]. In 2008, the ERA expert group recommended that the ERA should be constructed as an essential element of Europe's response to a series of Grand Challenges. According to them, a focus on Grand Challenges would provide substance to the ERA and increase support for the initiative and research in general, as Grand Challenges would 'capture public and political imagination, create widespread interest among scientific and business communities and NGOs and inspire younger people' (ERA expert group 2008: 37).

During the Swedish presidency in 2009, the concept of Grand Challenges was put high on the European research policy agenda by the Lund Declaration, saying 'European research must focus on grand challenges of our time moving beyond rigid thematic approaches. This calls for the new deal among European institutions and member states, in which European and national instruments are well aligned and cooperation builds on transparency and trust' (Lund Declaration 2009). The declaration stated that solutions have to be found in areas such as global warming, tightening supplies of energy, water and food, ageing societies, public health, pandemics and security. To respond to the Grand Challenges effectively, the ERA was seen as important for developing 'processes for the identification of Grand Challenges, which gain political support and gradually move away from current thematic approaches, towards a structure where research priorities are based on these Grand Challenges'. The focus on Grand Challenges in STI policy has spread around the world during the last 10 years. It has many similarities with earlier STI policy ideas about the social function of science and social concerns and it re-emphasises the importance of "big ideas" in the innovation policy frame, which initially paid little attention to the "big" policy aims.

When the Lisbon strategy expired in 2010, it was replaced by the Europe 2020 strategy for smart, sustainable and inclusive growth (EC 2010a). The Europe 2020 strategy adopted many ideas from the Lisbon strategy including the target to invest three per cent of GDP in R&D. The ERA initiative is particularly important for one of the seven so-called flagship initiatives of the Europe 2020 strategy, namely the Innovation Union flagship (EC 2010b), which sets 2014 as the deadline for completing the ERA. This target date has received some criticism for either being set too early[13] or for being of limited use for such a complex and far-reaching initiative as the ERA; as stated by a major stakeholder organization Science Europe, the ERA 'is a long-term project, and to strive for its "completion" would be to lack ambition' (Science Europe 2013).

The deadline to complete the ERA by 2014 is an important focus of the ERA reform agenda launched by the Commission in 2012 (EC 2012). This document provides a consolidated definition of the ERA based on the Lisbon treaty and the Council Conclusions stating that the ERA is 'a unified research area open to the world based on the Internal market, in which researchers, scientific knowledge and technology circulate freely and through which the Union and its Member States strengthen their scientific and technological bases, their competitiveness and their capacity to collectively address Grand Challenges' (EC 2012). Additionally, the document sets out five ERA priorities which combine earlier ERA action lines (EC 2000, 2002, 2007a): more effective national research systems, optimal

transnational cooperation and competition, an open labour market for researchers, gender equality, and optimal circulation of scientific knowledge including via the digital ERA.

As a pragmatic approach towards implementing these priorities, a reinforced partnership between member states, the Commission and research stakeholder organizations has been suggested (EC 2012). While the gradual involvement of the stakeholders has developed since the public consultation on the ERA Green Paper in 2007, the reinforced partnership envisages a new explicit role for the stakeholders. This new role led to the Commission signing the first joint statement with major stakeholder organizations (EARTO et al. 2012) to work together towards the achievement of the ERA. In 2013 this partnership was renewed (EARTO et al. 2013) by six stakeholder organizations: the European Association of Research and Technology Organisations (EARTO), the European University Association (EUA), the League of European Research Universities (LERU), a Nordic research funding organization NordForsk, an association of European research funding and performing organizations Science Europe and the Conference of European Schools for Advanced Engineering Education and Research (CESAER). The ERA Progress Report 2014 mentions that the Stakeholders Platform is a good instrument, contributing to ERA policy-making and implementation (EC 2014). According to the report, this platform could be expanded to include additional research players.

Additionally, the 2012 reform agenda envisages the development of the ERA monitoring mechanism (EC 2012). The first comprehensive ERA Progress Report was prepared in 2013 (EC 2013). After reviewing it, the Council (CEU 2014) invited the member states and the Commission to develop an ERA roadmap by mid-2015 at the European level to provide a shared understanding and facilitate national efforts in implementing ERA objectives. The ERA Progress Report 2014 (EC 2014) presents the development of the roadmap as a major step in strengthening the implementation of the ERA. The launch of the new funding programme Horizon 2020 in 2014 is seen as providing new momentum for the ERA implementation (CEU 2014). The three priorities of Horizon 2020 (EC 2011) are excellent science, societal challenges and industrial leadership[14], which are related to the diverse STI policy ideas of scientific freedom, societal relevance and economic competitiveness.

The ERA Progress Report 2014 (EC 2014) concludes that the conditions for the completion of ERA are now in place, and 'it is now up to Member States and research stakeholders to implement the necessary ERA reforms and make ERA work'. While 2014 was previously set as a deadline for completing the ERA, the 2014 progress report states that 'the completion of ERA, like the internal market, remains a gradual process'[15] (EC 2014). To summarize, the ERA initiative has indeed developed gradually since its launch in 2000. Initially, the Commission presented a rationale for the ERA and a long list of activities it involves but did not even define it. It took approximately a decade for the ERA initiative to acquire some of its essential features such as a treaty basis in 2009, explicit partnership with stakeholders in 2012 and its first comprehensive monitoring report in 2013. Thus, during 14 years, the ERA initiative has developed from the Commission's project dominated by economic rationale to a broader initiative involving member states and stakeholders and having a wider range of economic, social and scientific aims.[16]

The initial ERA initiative has been criticized for being a collection of activities with no vision and no mission (Delanghe et al. 2009). Such an approach largely fits with the innovation policy frame that emerged in the 1990s focusing mainly on interactions and linkages among institutions and actors involved in knowledge production and diffusion rather than on "big questions" about the vision and mission of policy that dominated during earlier science and technology policy frames. However, during the last ten years this innovation policy frame has been changing and "big ideas" such as the need for research to address Grand Challenges has become popular around the world. Today the ERA is still largely characterized by a collection of activities (reforming research systems, supporting collaboration and competition, facilitating mobility), which are regularly monitored but "big

questions" of vision and mission such as societal challenges play an increasingly important role in defining the ERA.

CONCLUSIONS AND OUTLOOK: FROM TENSIONS TO INTERACTIONS?

The long-term evolution of STI policy ideas discussed earlier helps to analyse the ideational development of the ERA initiative and the strategic use of "big ideas" (such as excellent science and Grand Challenges) to broaden support for the ERA among the research community and society.

The ERA initiative was launched at the time of a broad STI policy frame emphasizing a systematic approach to knowledge production and diffusion. While the innovation policy frame that emerged in the 1990s influenced the ideational framework of the ERA initiative, it does not fully explain its development from 2000 to 2014. The initial list of ERA activities covering research, innovation and societal involvement (EC 2000) largely corresponded to the innovation policy frame, even if the links between different activities were not always explicit. However, the original rationale of the ERA initiative was framed more narrowly, emphasising economic competitiveness (EC 2000), an idea, which has been widely used in policy framing for several decades despite criticism it has received (Krugman 1994). While the initial document (EC 2000) mentioned the need for a broad-based debate[17], social and scientific aims (known in science policy since the 1940s) were not invoked in framing the key reasons for launching ERA.

The strong initial focus on economic aims corresponded to the goals of the Lisbon strategy with which the ERA initiative was closely linked. Historically, economic rationales had already been at the core of European integration. Accordingly, the ERA initiative was framed in the context of the internal/single market and its four freedoms, i.e. as an internal market for research (EC 2002) and as the fifth freedom (EC 2007b), although in research policy literature, the limits of organising research systems according to market principles have been pointed out (Georghiou 2006). However, initial reviews of the ERA (EC 2002) and the Lisbon strategy showed limited success in achieving economic goals and demonstrated the need to involve the member states.

An important change in the ERA initiative came with the Green Paper in 2007 (EC 2007a), which launched a public consultation. In addition to economic aims it also emphasised social and scientific goals of the ERA. The scientific elite has been supportive of the ERC funding research on topics chosen by scientists themselves and judged by their scientific peers (Luukkonen 2014). Thus, the ideational framework of the ERA has been extended to include long-standing ideas from an early science policy frame such as academic freedom and self-governance (Polanyi 1962). Another institution, the European Institute of Innovation and Technology, has been established to implement ideas of the knowledge triangle between education, research and innovation. The concept of the knowledge triangle largely builds on innovation policy ideas such as innovation systems (Lundvall 1992), triple helix (Leyedesdorff and Etzkowitz 1996) and the third mission of universities (Goransson et al. 2009).

The strategic use of ideas to strengthen the ERA and enlarge its support has been particularly emphasised in recommendations to use the concept of addressing Grand Challenges as a rationale for the ERA (ERA Expert group 2008). The experts explicitly suggested the use of the Grand Challenges concept as a way to increase support for the ERA initiative among political, scientific and business communities, civil society and younger people. The Grand Challenges concept, strengthened by the Lund Declaration in 2009, has broadened the ERA goals to addressing social issues such as health, environment and climate change. The concept emphasises the social goals of research, which have been a recurring theme in expanding the STI policy frame for more than half a century, e.g. in debates about the social function of science (Bernal 1939) in the initial science policy frame, the need to

address pressing social issues (Nelson 1977) in the technology policy frame and the more recent approach of the Mode 2 knowledge production (Gibbons et al. 1994) in the innovation policy frame.

To summarize, linking the ideational framework of the ERA initiative to long-standing STI policy ideas (for an overview see Table 1) also helps to analyse the broadening of the ERA aims and to understand the ERA initiative within the broader context of research policy ideas 'by drawing attention to the continuation and deepening of old issues in new forms' (Elzinga 2012: 426).

Table 1: Main ideas in the ERA initiative and their roots in long-term STI policy ideas

Main ideas in the ERA initiative	Their roots in long-term STI policy ideas
Contribution to international economic competitiveness, internal market, 'fifth freedom'	Economic perspectives of 1970s on contribution of STI to global competiveness
Scientific excellence, frontier research, autonomy, European Research Council	Scientific freedom (Polanyi 1962; Bush 1945)
Grand/societal challenges	Social function of science (Bernal 1939), solving social problems (Nelson 1977), Mode 2
Knowledge triangle of education, research and innovation, EIT	Innovation systems, triple helix, third mission
Monitoring: Lisbon strategy, Europe 2020, Scoreboards, Progress Reports	New Public Management, quantification of objectives

Thus, the broadened ERA ideational frame[18] as found in a recently consolidated ERA definition (EC 2012) and Horizon 2020 priorities includes 'distinct, yet mutually reinforcing, priorities' (EC 2011) of scientific excellence, societal challenges and economic competitiveness. While these different ideas coexist and ensure a broader support for the ERA initiative, links and relationships between them are underdeveloped. It remains to be seen if and how the ERC grants supporting excellent science could be mutually reinforced with projects addressing societal challenges and promoting industrial leadership. This lack of interactions between diverse ideas in science, technology and innovation policy is not unique to the ERA initiative. Research policy studies have paid relatively little attention to the interactions among these diverse ideas. While tensions among them have been emphasised (Borrás 2012; Nelson 1977), possibilities to combine diverse ideas of excellence and relevance (Irwin 2014; Rip 2011) need to be further explored and conceptualized. Further articulation of tensions and interactions among diverse policy aims and specific instruments designed to implement them could facilitate the development of a more comprehensive ERA frame.

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[1] In this paper, the terms "science, technology and innovation policy" and "research policy" are used as synonyms.

[2] Known by their abbreviation as CUDOS norms, see Elzinga 2012.

[3] Including national, regional, sectoral and trans-national innovation systems.

[4] For an elaboration of a similar argument see Sanz-Menendez and Borrás 2001.

[5] The Commission has prepared detailed documents on specific aspects of the ERA initiative such as mobility, infrastructures and networking of national programmes (EC 2002). An analysis of all of these numerous documents is far beyond the scope of this paper, which focusses on the key documents defining overall objectives and activities of the ERA initiative. Detailed information on specific aspects of the ERA initiative can be found on the official ERA website http://ec.europa.eu/research/era/index_en.htm. Accessed 2 August 2014.

[6] Lepori et al. (2014: 401) state that 'the ERA represented in 2000 an empty frame of reference'. However, this statement is not based on the analysis of the ERA initiative and relevant documents but on the study of one specific element of the ERA, namely joint European research programmes, the majority of which were launched after 2000. Against the background of the ERA initial document (EC 2000) listing numerous ongoing activities, their general statement about the ERA can be questioned.

[7] This approach to the ERA concept as combining these three elements is also used later in the ERA Green Paper (EC 2007a).

[8] For more information on the Lisbon strategy for Growth and Jobs see its official website http://ec.europa.eu/archives/growthandjobs_2009/. Accessed 2 August 2014.

[9] These six features largely consolidate action lines mentioned in the initial ERA documents (EC 2000, 2002).

[10] At this time, the concept of "Grand/Societal Challenges" was becoming popular in STI policy around the world, in particular after the Gates Foundation launched its Grand Challenges in Global Health initiative in 2003. Available at http://grandchallenges.org/. Accessed 27 October 2014.

[11] In the ERA reform programme (EC 2012), the ERC is mentioned as one of the examples of progress in building the ERA.

[12] The concept of "Societal Challenges" (used in STI policy interchangeably with "Grand Challenges") was already mentioned in the ERA Green Paper (EC 2007a).

[13] It is earlier than 2020, as mentioned in the ERA Green Paper (EC 2007a).

[14] The details on the implementation of these three priorities are provided on the Horizon 2020 official website http://ec.europa.eu/programmes/horizon2020/h2020-sections. Accessed 2 August 2014.

[15] The idea that the ERA will develop gradually was mentioned already in the initial document launching the ERA initiative (EC 2000).

[16] To implement these aims, a range of financial, coordination and legal instruments are used including new funding schemes within the recent EU Framework Programmes (Edler and Kuhlmann 2011), joint funding programmes among the member states (Lepori et al. 2014) and Open Method of Coordination (De Ruiter 2010). A variety of policy instruments addresses issues such as research careers (Chou and Real-Dato 2014), citizen participation and infrastructure (Ryan forthcoming). An analysis of these instruments and their implementation is beyond the scope of this article.

[17] It was stated that this broad-based debate 'should unfold first and foremost in the European institutions'; only afterwards was it mentioned that 'it is also essential to hear the views of the scientific community, the world of industry and, more broadly "civil society"', and the member states would be invited to organize debates at national and regional levels (EC 2000).

[18] The findings on the broadening of the main aims of the ERA initiative in this paper are similar to the observations of Meng-Hsuan Chou (2014) on the ideational widening of the ERA concept and Terttu Luukkonen (2014) on the evolved ERA concept.

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Research Article

Blurring Boundaries between the Public and the Private in National Research Policies and Possible Consequences from EU Primary Law

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Abstract

National research policies in Europe have, in recent years, increasingly encouraged public-private collaboration, commodification of research results and have made public funding increasingly competitive. Such moves blur the boundaries between public and private sectors and could subject research in higher education institutions (HEIs) to European Union (EU) primary law. This might lead to unintended consequences. In particular, the application of economic provisions of EU primary law might require even further commodification. To explore this perspective, the article analyses national research policies of three countries (Germany, the Netherlands, and England), which have moved towards commodification of HEI research as to the potential of spill-over from EU competition law into these national policies. In doing so, it employs an interdisciplinary approach combining policy and legal analysis.

Keywords

Despite European Union (EU) research policy having increasingly gained in importance since its introduction and the prominent place the "Europe of knowledge" has in the Europe 2020 Strategy, regulatory research policy is still mainly a prerogative of the Member States. As will be seen below, encouraged by the Lisbon and later the Europe 2020 Strategy, these have, albeit to different extents, increasingly placed emphasis on cooperation between the public and the private sector as well as on entrepreneurship and the impact of public research. Some Member States have also begun to fund public research increasingly through competitive mechanisms thereby distributing more public funding based on strategic considerations. These developments have blurred the boundaries between public and private sector research, which could in turn subject public research to the constraints of economic EU primary law.

This article analyses whether research policies of European countries, which have moved towards mobilizing the private sector in their approaches, could be vulnerable to spill-over from the economic provisions of EU primary law. This question is investigated from an interdisciplinary perspective using the research systems of Germany, the Netherlands and England as examples. The study starts by setting out its conceptual framework. It then evaluates the post-crisis research funding systems in the selected countries with a focus on HEI research. Finally, a legal doctrinal analysis is conducted to investigate how far national research policies regarding HEI research could become vulnerable to EU competition law as an example of seemingly unrelated economic EU primary law. This part is thus a speculative – albeit highly relevant for practitioners – analysis of potential consequences for HEIs based on the law and recent legal developments such as case law.[1]

EU COMPETENCES, NATIONAL COMPETENCES AND RELATIONS TO OTHER PROVISIONS OF EU LAW

Despite no explicit competence for research initially being foreseen in the Treaties, a European research policy started to develop from the 1970s onwards when the importance of research and development for European competitiveness became increasingly apparent (Jones 2001: 325 seq; Hummer 2005: 33 seq, 70 seq; Walkenhorst 2008). Nevertheless, the competences to set research policy remained limited until the entry into force of the Treaty of Lisbon, which turned the previously provided complementary competence into a shared competence (Article 4 TFEU); thus allowing the Union to pass legislation beyond the Framework Programmes/Horizon 2020 in order to achieve the European Research Area (Article 182 (5) TFEU). However, even since, there has been no significant harmonisation of national research policies and the caveat that 'the exercise of the [shared] competence shall not result in the Member States being prevented from exercising theirs' in Article 4 TFEU indicates that the main responsibilities still lie with the Member States.

Following a general trend in research policy, especially HEI policy, towards closer ties between public and private sector research, increase of research with directly identifiable impact, exploitation of public research results, increases in external funding and competitive public funding (Connell 2004; Deiaco, Holmen and McKelvey 2009; Wissema 2009: 17 seq, 34 seq; Palfreyman and Tapper 2009; De Weert 2009), Member States have, to varying degrees, begun to introduce more economic elements and competitive features. This development was encouraged by EU research policy which, considering the start of the European integration project as economic integration and the aim of the Lisbon Strategy for Europe 'to become the most competitive and dynamic knowledge-based economy in the world' (European Council 2000: para. 5), focused on encouraging cooperation between the public and the private sector, exploitation of research results, increasing competitive funding and supporting mobility (Jones 2001: 327; Hummer 2005: 70 seq; Beech 2013). Additionally, the financial crisis also influenced national research policies. While some Member States increased research spending as a result, others cut public funding necessitating public research organizations, especially HEIs, to look for funding from other sources including the private sector.[2]

These developments blurred the boundaries between the public and the private in the research sector, as has been especially observed for HEI research. Already in the 1970s, critical voices noticed that the logic of the market place had become increasingly dominant in US universities as aptly summarised in the term "commodification" (Shumar 1997: 15 seq). Slaughter and Leslie (1997: 11), examining four English speaking countries, later coined the term "academic capitalism" in this respect which, according to them, comprises of "market like behaviors" consisting of competition for external funding through activities such as spin-offs, exploitation of intellectual property or university-industry collaboration without the aim to necessarily accumulate profit and "market behaviors" consisting of similar activities with the clear aim of profit generation. Noticing that developments such as the installation of 'quasi markets, an increase in competition from private institutions, [and] a partial shift from basic to commercialisable research' had changed "public/private boundaries" in national research policies, Marginson (2007, especially p. 321) developed a tool for 'recognising private goods within national systems' even in systems which traditionally consider themselves as producing public goods such as most European countries. Recently, Radder (2010: 4) perceived the interpretation and assessment of processes on the basis of economic criteria as the main characteristic of commodification of academic research; thereby equally capturing more than mere for-profit activities.

Similarly, the term "commodification" will be used here to describe the process by which an activity is changed in order to become a service potentially tradable on the market. This process thus turns research from a public good into a commodity. The general trends in research policies observed above, such as private sector collaboration and competition in the public research "market" or the increased

production of exploitable research results can thus be seen as characteristic for the commodification of research policies, especially with regards to HEI research.

Such commodification trends are not without risk, as, despite the Member States still being mainly responsible for research policy, their policies and the behaviour of the organizations conducting research still need to comply with directly applicable EU law (cases *Van Gend; Costa*) and the likeliness of applicability of the more economic provisions of EU law such as the free movement provisions and competition law increases when public organizations act like private sector entities. There is no overarching definition in EU law of when an institution has to be considered as private and when as public. Instead, the individual provisions have their own criteria (defined in more detail by the Court) of when they become applicable and the applicability then does not necessarily cover a whole organization, but might just comprise certain activities. Article 56 TFEU on the free movement of services, for example, requires a "service" which is 'normally provided for remuneration' (Article 57 TFEU) and the competition law provisions only apply to "undertakings" defined by the Court as 'every entity engaged in an economic activity, regardless of the legal status of the entity and the way in which it is financed' (case *Höfner*, para. 21). The competition law provisions will be examined in more detail below. However, both these examples already demonstrate that the applicability criteria of these provisions might capture the more economically relevant behaviour of public research organizations.

Once directly applicable EU law does apply to these organizations, it can require them to change their behaviour or for a Member State to change its policy, as the relevant provisions would otherwise be breached. The provisions can thus interfere with the seemingly unrelated area of research policy. From the point of view of European integration theory (neo-functionalism) such developments are referred to as spill-over (Schmitter 2004; Niemann and Schmitter 2009; Sandholtz and Stone Sweet 2012). As regards the educational rather than the research component of HEIs, such spill-over could already be observed; Austria and Belgium had to change their university entry requirements for foreign EU students as the Court regarded them as infringing Union Citizenship (cases *Commission vs. Austria; Commission vs. Belgium)*, Germany had to allow tax advantages for individuals teaching higher education courses abroad as the denial would infringe the free movement of services (case *Jundt*) and various Member States had to accept/extend the portability of student grants as the current schemes, according to the Court, infringed the free movement of workers or Union Citizenship respectively (Union Citizenship: cases *Morgan and Bucher; Prinz and Seeberger; Thiele, Elrick;* free movement of workers: cases *Commission vs. the Netherlands; Giersch*). Especially with increasing commodification, it seems likely that HEIs might equally have to expect spill-over from directly applicable EU law with regards to their research component and that the same could happen to other public research organizations. Indeed, the General Court already had to consider a case where a competitor accused a public research organisation of providing state aid and demanded to annul a Commission decision in which the Commission had exempted the potential aid (case *UOP*). While this case has been dismissed because the competitor was found not to have standing, it shows that public research organizations are not beyond the reach of directly applicable EU law. This article investigates explicitly whether the research policies of Germany, the Netherlands and England could be vulnerable to spill-over from the economic provisions of EU primary law.

RESEARCH POLICIES IN GERMANY, THE NETHERLANDS AND ENGLAND

In the following, the research policies of the three countries will be examined in order to prepare the legal doctrinal discussion of potential EU competition law interferences with these systems in the next section.[3] Germany, the Netherlands and England have been chosen as examples because they have all adopted measures blurring the boundaries between public and private sector research, however, to a different degree with England having advanced furthest into this direction and Germany having taken only the first steps (Candemir and Meyer 2010: 511; Jansen 2010: 43; Enders 2007). This

diversity in national research policies might influence their respective vulnerability to EU competition law. The three Member States are also interesting because they are governed differently. While Germany is a federal state, the Netherlands is governed mainly centrally and the UK consists of four devolved countries with a high degree of independence in a variety of policy areas. As regards the UK, the focus will be on England as the tendency towards economic factors in research policy is particularly pronounced there.

Table 1 provides an overview of the most important aspects of the overall research systems of the three countries. The subsections then provide an overview of current policy aims and proceed with a more in-depth examination of research in HEIs. The latter will focus on public and non-public funding streams and assess costing systems for research.

Germany

Despite relatively high research expenditure as a percentage of GDP and strong and clearly defined research performing actors, a variety of policies have recently been initiated to enhance efficiency of the German research system and to distribute additional funding following the financial crisis. These policies aim at enhancing synergies between various public actors and the private sector, bringing basic and applied research closer together, increasing funding efficiency by introducing competitive factors, coordinating national and international funding, enhancing international cooperation, increasing independence for public research organizations, facilitating innovation more effectively and introducing incentives for start-ups (Hinze 2010; Edler and Kuhlmann 2008; Schubert and Schmoch 2010; Enders 2007; Wissenschaftsrat 2007: 7 seq, 63 seq).

These policies, which contain elements of commodification, also affected research in HEIs. While HEIs still receive the majority of their funding as generic funding from the states (Bundesministerium für Bildung und Forschung 2012: 389, 486, table 26), this has decreased in real terms in recent years (Schubert and Schmoch 2010: 251) and some states have lately relied on performance indicators in generic funding allocation (Jaeger and In der Smitten 2010: 6, figure 1). Therefore, the importance of non-generic funding from the federal level, the states or non-public funders increased. The most important public non-generic funder is the German research foundation *(Deutsche Forschungsgemeinschaf*t, DFG), but also other federal institutions (mainly *Bundesministerium für Bildung und Forschung*) play an important role (Statistisches Bundesamt 2011, p. 127). While DFG provides funding for basic research in all disciplines (Wissenschaftsrat 2007: 65 seq), funding from other public sources is used to implement steering policies (Schubert and Schmoch 2010; Enders 2007; Wissenschaftsrat 2007: 64) and therefore is less open. Next to the public funders, HEIs receive funding from (in order of importance) the private sector, the EU and the third sector (Statistisches Bundesamt 2011: 127). Interaction with the former can take a variety of forms. The most important ones are contract research, research co-operations and long-term public-private partnerships (PPPs), common research centres, the establishment of start-ups, spin-offs and so-called *An-institute* (separate usually not-for-profit companies affiliated with the HEI), clusters (where research organizations are located), exploitation of intellectual property rights (IPRs), privately funded chairs and staff exchanges (Wissenschaftsrat 2007: 34 seq; Rohrbeck 2010: 435 seq; Enders 2007: 22 seq).

Table 1: Overview of the research systems of the three countries

		Germany	The Netherlands	UK (England)
Overall Research Expenditure as % of GDP[1]		Continuous increase since 2000 2.92% in 2012	Fluctuating since 2000 2.16% in 2012 - highest point	Relatively stable since 2000 1.72% in 2012
Overall Research Expenditure per sector	**Private**	66%	50%	46%
	Public	30%	36%	29%
	Foreign	4%	11%	20%
	Third sector	<1%	3%	5%
Competences		Mainly at state level, with only limited competences at federal level[2]	Centralised, yet consociational allowing involvement of a variety of actors[3]	Partly devolved (e.g. as regards HEIs), centralised within England[4]
Governmental Structure		<u>Responsibility</u>		
		Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung*) Other ministries might be involved for their area of responsibility. There are a variety of bodies to aid the coordination of the federal level and the states as well as advisory bodies.	Ministry for Education, Culture and Sciences (*Ministerie van Onderwijs, Cultuur en Wetenschap*) Ministry of Economic Affairs (*Ministerie van Economische Zaken*). Other ministries might be involved as concerns their portfolio. There are a variety of coordination and advisory bodies.	Department for Business, Innovation and Skills Other departments might issue research policies concerning their portfolio. Advice is provided by a variety of advisory bodies, academies and learnt societies. Generic research funding for HEIs is administered through the Higher Education Funding Council for England (HEFCE). Additional bodies are responsible for technology and innovation and long term strategy.
		<u>Main non-generic funding body</u>		
		German research foundation (*Deutsche Forschungsgemeinschaft*) financed cooperatively by the federal level and the states and fulfils advisory functions next to its role as research council (mainly for basic research).[5]	Netherlands Research Council (*Nederlandse Organisatie voor Wetenschappelijk Onderzoek*). There are several other intermediate organisations responsible for policy implementation and administering competitive funding.[6]	Seven research councils for different subject areas.[7]

Public research conducting organisations	HEIs
	
	Ministerial research institutes
	
	Four major public research organisations:
	
	   Max-Planck-Gesellschaft (basic research)
	
	   Frauenhofer-Gesellschaft (applied research and development)
	
	   Helmholtz-Gemeinschaft (long term studies with large scientific installations)
	
	   Leibniz-Gemeinschaft (strategic research on specific themes)[8]
		HEIs
		
		Research institutes more or less affiliated with ministries
		
		Institutes in advisory and intermediate organisations
		
		Publicly funded research organisations focussing on applied research (e.g. the Netherlands Organisation for Applied Scientific Research)
		
		Collaborative research organisations (e.g. Top Consortia for Knowledge and Innovation focussing on nine *topsectoren*)[9]
			HEIs
			
			Research institutes in research councils
			
			Less significant other public research institutions[10]

HEI system	<u>Binary</u> 108 universities, 205 *Fachhochschulen* (more vocational HEIs) and 145 more specialised HEIs. <u>Financing</u> 308 public, 150 private (including 37 religious institutions)[11]	<u>Binary</u> 14 research intensive universities, roughly 40 *Hogescholen* (more vocational HEIs) and other, more specific HEIs. <u>Financing</u> The 14 universities and the *Hogescholen* are publicly funded, financing of other HEIs differs[12]	<u>Unitary</u> 166 UK HEIs (almost 80% in England) including some specialised HEIs. <u>Financing</u> Autonomous institutions which receive public funding[13]
Research as statutory task of HEIs	Yes[14]	Yes[15]	No (merely a task HEIs may do and may receive funding for)[16]
Academic freedom	Constitutionally protected[17]	Protected in statute for HEIs[18]	Not explicitly protected, but some weighing with governmental aims in statute[19]

1. EUROSTAT 2013
2. Article 74 (1) no. 13 and 91b Basic Law
3. Van der Meulen 2010
4. Research Information Network 2010: 5 seq
5. Hinze 2010; Edler and Kuhlmann 2008
6. Van der Meulen 2010; Mostert 2012; Jongbloed 2010; Rathenau Instituut 2013 sections 'politicians and government' and 'Advisory bodies'
7. Research Information Network 2010; Department for Business Innovation and Skills 2012
8. Hinze 2010; Schubert and Schmoch 2010: 255 seq; Edler and Kuhlmann 2008
9. van der Meulen 2010; Mostert 2012; Jongbloed 2010; Braun 2006: 4, 8; Rathenau Instituut 2013; section 'Organisations'; Rijksoverheid 2012a
10. Office for National Statistics 2014: 7, table 1, 2; Candemir and Meyer 2010: 500, 506
11. Statischtisches Bundesamt 2013: 159
12. Article 1.3 and 1.9 (3) Higher Education and Research Act; Jongloed 2010; Mostert 2012: 15; Chiong Meza 2012: 2 seq
13. Kelly, McLellan and McNicoll 2009: 7 seq; Candemir and Meyer 2010: 500; Farrington and Palfreyman 2012: para. 1.22; Zoontjes 2010: 123; Palfreyman 2003
14. Articles 2 (1) and 22 Framework Act for Higher Education
15. Article 1.3 Higher Education and Research Act
16. s 124 Education Reform Act (ERA) 1988, s 65 Further and Higher Education Act 1992 (FHEA)
17. Article 5 (3) Basic Law
18. Article 1.6 Higher Education and Research Act
19. e.g. s 68 (3) FHEA and s 202 (2) ERA

While the increasing role of competitive funding has partly been intended in the course of the policy reforms, it might also have had other reasons. As can be seen in Table 1, most competences for research funding are located at state level. This is a result of the removal of federal competences during the federalism reform in 2006 triggered by a decision of the German Constitutional Court declaring that the federal level had overstepped its competences (case *Juniorprofessur*). It has been argued that the removal of federal competences has led to underfunding in some states and that increasing federal competitive funding, especially the Excellence Initiative which provided competitive institutional funding based on excellence, had a reparatory purpose (Seckelmann 2010).[4] A proposal to change Article 91b Basic Law to allow more cooperation has recently been approved by both legislative bodies (Bundesministerium für Bildung und Forschung 2014).

The increasing importance of non-generic funding, especially the requirements attached to EU funding, as well as the Commission's previous version of the Framework for State Aid for Research and Development and Innovation (hereafter Research Framework)[5] required that German HEIs implement full costing systems. However, full costing systems are rather alien to German governmental accounting and many HEIs, therefore, still have not implemented real full costing system, relying, instead, on general overhead rates as an interim solution. In some states, there has been coordination as regards costing systems at state level, while others left this to the HEIs themselves. The implementation process thus differs between HEIs (Estermann and Claeys-Kulik 2013: 19 seq).

The Netherlands

The consociational system in the Netherlands, allowing involvement of a variety of actors in research policy (van der Meulen 2010), enables the actors to utilise synergy, but also makes processes slow and the multitude of actors makes the system confusing. One current policy focus is to establish excellence in elite institutions, create impact agendas, improve policy coordination and strengthen institutional autonomy while initiating external steering policies (van der Meulen 2010; Leisyte, Enders and De Boer 2008). Another concern is the relatively low private sector investment/innovation, which attempts have been made to improve through general tax incentives, commercialisation agendas, the setting of research priorities with practical relevance and a focus on increasing innovation (Leisyte 2011; Mostert 2012; Jongbloed 2010: 318 seq; Leisyte, Enders and De Boer 2008). Finally, it has also been identified as necessary to utilise European funding streams more efficiently and to increase international cooperation and investment (van der Meulen 2010).

Considered 'the cornerstone of the Dutch public research system' (van der Meulen 2010: 515), universities[6] have been affected by commodification as part of the policies currently pursued. While generic funding is still the most important research income (*eerste geldstrom*), universities also increasingly receive competitive public funding (*tweede geldstrom*), contract research income from government, funding from the private sector, the third sector and from abroad (*derde geldstrom*) and philanthropical donations (*vierde geldstrom*) (Rijksoverheid 2012; Chiong Meza 2012: 8, 14 seq; Schneider et al. 2009 part IV: 12; den Hertog et al. 2012: 16). Generic funding allocation only contains limited recourse to performance indicators (*Uitvoeringsbesluit WHW* 2008, Article 4.23; see also Schneider et al. 2009 part IV: 7; Mostert 2012: 19; Chiong Meza 2012: 8), despite consecutive governments having tried to increase the importance of quality considerations, due to successful resistance by the universities (Jongbloed 2010: 300). Public competitive funding is partly open (e.g. in the prestigious *Vernieuwingsimpuls* programme) and partly enforcing steering policies (Mostert 2012: 10; Jongbloed 2010: 294; Chiong Meza 2012: 23 seq; Leisyte, Enders and De Boer 2008: 378 seq). As regards non-state funding for HEIs, the third sector, the private sector, and international funding (especially EU funding) play an almost equally important role (Centraal Bureau voor de Statistiek 2013). Forms of private sector funding/collaboration are similar to those in Germany: HEIs conduct

contract research and consultancy work, maintain research co-operations (sometimes as institutionalised PPPs), exploit IPRs, establish spin-offs and start-ups, participate in science parks (in Germany called clusters), exchange staff and collaborate in more informal ways such as common advisory boards or co-publications (Mostert 2012; Jongbloed 2010; Vereniging van universiteiten 2012: 24 seq, 89 seq; Braun 2006; Leisyte 2011; Directie Kennis 2012: 106, 111; Rathenau Instituut 2013, section 'Innovation policy'; den Hertog et al. 2012: 30 seq, 53, 99 seq). The increase of non-generic funding, especially of funding implementing steering policies and non-public funding, has been criticised as a potential threat to academic freedom (Leisyte, Enders and De Boer 2008).[7]

Due to EU funding requirements and in order to achieve financial sustainability, which had been threatened by matching requirements for increasing non-generic funding, universities in the Netherlands have implemented full costing methodologies on their own initiative, but following common standards agreed in the Dutch University Association and in continuous exchange since 2006. However, based on the calculated full costs, universities still negotiate the prices individually or funders determine which costs they cover (Estermann and Claeys-Kulik 2013: 19, 23, 30, 47 seq; European University Association 2008: 7, 28, 40, 65; Herlitschka 2009: 41, 49; Jongbloed 2010: 309; Tweede Kamer 2000: 97, 108). In order to avoid possible underfunding as well as problems associated with state aid law, the government passed a number of rules and guidelines requiring that when cooperating with the private sector at least full costs need to be charged (Article 41 (2) *Kaderbesluit EZ-subsidies*; section 4.5 *Kader Financieel Beheer rijkssubsidies*; Ministerie van Onderwijs Cultuur en Wetenschap 2011: 11 seq, 107 seq; section 2.3.8. *Regeling onderwijscontroleprotocol OCW/EZ 2012*). These rules, however, generally do not seem to apply to public or third sector partners, even though it has recently been demanded that the Netherlands Research Council (*Nederlandse Organisatie voor Wetenschappelijk Onderzoek*) should fund at full economic cost levels (Estermann and Claeys-Kulik 2013: 48).

England

The UK has a longer tradition of linking research in the private and public sectors and encouraging the commercialisation of public research (Candemir and Meyer 2010: 505, 511). Nevertheless, knowledge transfer between the sectors, increasing innovation, and addressing the relatively low spending are regarded as areas for improvement. Since 2000, reform initiatives have thus been undertaken; public funding has become increasingly competitive, private sector needs are considered in policymaking and the attraction of additional international funding has become a priority (Candemir and Meyer 2010; Elsevier 2011: 5). After the change in government in 2010, all public funding has been cut (Office for national statistics 2014: 7, table 4); thus encouraging attracting non-public funding and cooperation with the private sector.

HEIs especially felt the changes introduced by policy initiatives. They only receive a little less than one third generic funding (Office for national statistics 2014, table 1), which is allocated by the Higher Education Funding Council for England (HEFCE) on the basis of a variety of factors including performance indicators and government priorities (HEFCE 2010: 10, 41 seq, 49; Farrington and Palfreyman 2012: para. 4.22 seq, 4.30 seq). Less than another third is gained through public competitive funding from the research councils (Office for national statistics 2014, table 1), which has become increasingly important and is subject to government priorities (RCUK 2012; Candemir and Meyer 2010: 510; Berry 2010: 5, 27, 31). HEIs generate the rest of their funding from outside this so-called "dual support system", especially from the third sector and foreign (in particular EU) sources, but also from the private sector and additional specific public competitive funding streams (Office for national statistics 2014, table 1; Candemir and Meyer 2010: 509; Farrington and Palfreyman 2012: para. 1.01; Kelly, McLellan and McNicoll 2009: 8 seq, 21). Private sector funding has increased in recent years and collaboration is encouraged by government (HEFCE 2012a: 2 seq). Collaboration forms are

similar to the other two countries including contract research and consultancy, renting out of research infrastructure or prototypes, co-operations, exploitation of IPRs, spin-offs and start-ups, staff exchanges, externally funded chairs or lectureships, science parks, research clubs or networks (ranging from dissemination platforms to clubs with actual facilities for common projects) and informal exchange (HEFCE 2012a: 3 seq, 10 seq, 17; Howells, Nedeva and Georghiou 1998; Abreu et al. 2008; Kelly, McLellan and McNicoll 2009: 8; Farrington and Palfreyman 2012, para. 14.31 seq; Elsevier 2011: 72 seq).

Due to rising non-generic funding, sustainable costing of research became important already in the 1990s and the Transparent Approach to Costing including an annual reporting process and a full costing approach has been centrally implemented in England over the following years, with the full costing element having been introduced in 2004. Research councils fund at a rate of 80 per cent, while other public non-generic funding is provided at 100 per cent of full costs and non-public funding prices are negotiated individually or funders have their own funding rules. As the introduction of the Transparent Approach to Costing has already led to more sustainable finances, a next step of using the information acquired through it to cut costs is planned (J. M. Consulting Ltd 2005 (last updated 2012), executive summary, part I section A, part V; Estermann and Claeys-Kulik 2013: 51 seq; HEFCE 2012b; RCUK/UUK 2010: 4 seq and annex C). However, there has also been criticism from research councils pointing to projects becoming much more expensive than assumed and academics complaining that their projects themselves do not seem to be better supported, but that the additional funding is "disappearing into the university" (Corbyn 2008).

HEI RESEARCH IN THE THREE COUNTRIES AND EUROPEAN COMPETITION LAW

In the following, it will be assessed from a legal doctrinal perspective in how far HEI research in the three research systems is vulnerable to potential constraints from EU competition law.

Economic activity

As has been briefly mentioned above, European competition law is only applicable to "undertakings". These have been defined as 'every entity engaged in an economic activity, regardless of the legal status of the entity and the way in which it is financed' (case *Höfner*, para 21). An economic activity is taking place when goods and services are offered on the market (case *Commission vs. Italy*, para. 7). An entity does not have to act economically for all its activities to be classified as an undertaking, as 'the notion of "undertaking" is a relative concept in the sense that a given entity might be regarded as an undertaking for one part of its activities while the rest fall outside the competition rules' (Opinion of the Advocate-General in case *Ambulanz Glöckner*, para. 72). To examine whether the research activities of HEIs could come into conflict with competition law, it is therefore necessary to, first, assess if they are undertakings for (parts of) their activities. This seems unlikely when it comes to research financed through public generic funding. Researchers are free to decide what they research and this does not have to have any practical uses or immediate impacts. Even in England where generic funding will soon be dependent on, among other factors, impact, the researcher is still free to decide the direction of research and the impact does not have to be immediate or economically relevant nor is a service defined. It is therefore hard to imagine how to conduct such research under market conditions. Instead this would have to be regarded as 'independent R&D for more knowledge and better understanding', which the new Research Framework classifies as a non-economic activity in para. 19a.

Public competitive, international, and third sector funding, on the other hand, might have to be regarded differently. If such funding is provided merely on academic merit and researchers can decide

freely about the direction of research as in German DFG funding and under the Dutch *Vernieuwingsimpuls* scheme, the assessment would probably have to be the same as with public generic funding. Even if the calls pre-define a topic area broadly, this would probably still not amount to an activity that could be conducted under market conditions. However, the more pre-set the conditions, the more practical the research, and the more identifiable potential users become, the more likely that one can argue that the activities could be carried out by commercial entities on a market. In particular, actual contract research for these funders would be an economic activity (para. 21, 25, 31 seq Research Framework).

Private sector collaboration, contract research and renting out infrastructure are clearly market activities (para. 21 Research Framework). IPR exploitation is, according to para. 19b of the Research Framework,[8] a non-economic activity if the invention has been made and is exploited by a public research organization and all income is reinvested into its non-economic research activities. Otherwise, for example, if external investors are involved, IPR exploitation could be an economic activity. More generally, knowledge transfer by, jointly with or on behalf of an HEI (if contracted out by open tender) all profits of which are re-invested into the primary activities are, according to para. 19b, non-economic activities. Under knowledge transfer the Commission includes, next to IPR exploitation, consultancy, spin-off creation and staff exchanges in its definition in para. 15v. Yet in the same definition, it is said that knowledge transfer can generally be both economic and non-economic in nature. This makes these provisions somewhat ambiguous. It would seem especially strange to conclude that consultancy, a service not dissimilar to contract research, would now always have to be regarded as a non-economic activity if conducted by a research organisation which reinvests the profits. Clarification on this point might be derived from future decisional practice.

In any case, even though one would have to conclude from the above that merely creating a spin-off for exploitation can be considered a non-economic knowledge transfer, future activities of the spin-off (individually or in collaboration with the HEI), as well as of other similar collaboration forms such as *An-institute* or start-ups, could be economic in nature. This would have to be assessed in the individual case. Due to the fact that, in clusters/science parks the individual undertakings are separated, each would have to be defined individually rather than this collaboration form as such. With the more blurred collaboration forms such as research co-operations, PPPs, common centres, private funding for a chair or informal collaboration, it would also depend on the individual case. If the research does not involve a particular aim and contains a large degree of freedom to decide upon its direction for the researchers, it will be of a non-economic in nature. If collaboration is taking place to essentially conduct a service for the private sector, it might have to be regarded as an economic activity (para. 25, 27 Research Framework).[9]

Potential problems

If competition law is applicable, HEIs must not, according to Article 101 (1) TFEU, enter into any form of anti-competitive collusion nor must national law bring them into a position where they would do so (case *INNO vs. ATAB*, para. 30 seq). An especially severe form of anti-competitive collusion is price-fixing. As HEIs in England and the Netherlands have real full cost methodologies relating actual costs to a research project these do not seem to pose any concerns under EU competition law. In Germany, where general overheads are still often in place, HEIs could infringe EU competition law if they would fix overhead rates or exchange information concerning them. Pre-set funding rules from external funders could also potentially be regarded as price-fixing if an economic activity is taking place. Aside from price-fixing, Article 101 (1) TFEU also prohibits undertakings to agree on any other special conditions without an economically justified reason if operating in an area of economic activity. This could potentially cause tensions with government policies requiring HEIs to prefer SMEs or local companies such as innovation voucher initiatives. Facility sharing with only certain partners (HEIs or

non-HEIs) could also be a problem, if not economically justified. Furthermore, the provision prohibits market division. This could cause problems if HEIs focus on local economies or if they share the market according to subject areas.

Article 102 TFEU prohibits the abuse of a dominant position.[10] HEIs could come into conflict with this provision if, in the area of economic research and if dominant, they do not charge full costs and reasonable profit, as this could be regarded as predatory pricing. Furthermore, if HEIs operate unilaterally as dominant undertakings and offer special conditions or cooperate only with specific partners they could potentially come into conflict with Article 102 TFEU rather than with Article 101 (1) TFEU in the cases outlined above. Finally, dominant undertakings might be prevented from refusing access to essential facilities or to refuse licenses for IPRs or attach specific conditions to them. HEIs would thus need to be aware of these potential problems and avoid them in contracts if operating as an undertaking.

If an economic activity is conducted, the state may also not offer advantages exclusively to particular undertakings as this could constitute state aid according to Article 107 TFEU. HEIs could specifically come into conflict with this provision if they do not charge full costs and reasonable profit for research, the market price, or the maximum economic benefit negotiated at arm's length which at least covers the marginal cost respectively, as the receiver of the research could otherwise be regarded as being subsidised. In all three countries, prices are often still negotiated individually or follow the funder's rules. In the Netherlands, a variety of national legislation specifically points out that full costs usually need to be charged from the private sector. Nevertheless, there could still be problems with Article 107 TFEU. Firstly, in the area of economic research, full costs are usually insufficient, but market prices or full costs and reasonable profit respectively need to be charged (case *Altmark*). Secondly, the concept of undertaking goes beyond private sector companies. Third and public sector organizations can also be classified as undertakings and, if HEIs cooperate with them in what can be considered an economic activity, they equally need to charge full cost and reasonable profit. In addition to such indirect state aid through charging prices below market price, public funding (contracts or calls) that could be classified as being an economic activity might potentially not be limited to certain types of undertakings. Instead, such activities would have to be commissioned according to the rules set out by the Court in *Altmark*, which usually requires a public procurement procedure allowing private and foreign providers to tender (see also para. 32 seq of the Research Framework). Furthermore, it could also be problematic from a state aid perspective if, in an area of economic activity, additional public funding is provided to HEIs and other partners in collaborations or innovation vouchers are given out by HEIs, as this way public funding would exclusively reach specific undertakings. Finally, if knowledge transfer has to be regarded as economic in nature and is provided free of charge or for preferential conditions exclusively for the benefit of one other undertaking, this could be equally regarded as state aid.

Indeed, there has recently been the first competition law case before an EU Court in this respect. In the Dutch case *Sarc,* a lecturer from an HEI had developed a software and spun out the company Delftship to exploit it. According to the competing company Sarc, Delftship only paid a low royalty to the HEI which allowed it to offer its software at a low rate on the market; thus putting Delfship at an advantageous position compared to its competitors. The General Court in this case decided against Sarc, mainly because it considered Sarc only to have standing as to the safeguarding of its procedural rights and not as to the merits of the challenged Commission decision allowing the practice. This meant that the Court could only check for obvious errors in the decision for which it did not see enough evidence. However, Sarc's arguments (e.g. royalties paid to UK universities are around ten times as high, the HEI had exclusively negotiated with Delftship and that independent assessments had come to the result that Delftship had received an advantage) were rather strong. It therefore seems possible that, had the Court applied Article 107 TFEU itself, the result might have been different. On the other hand, the fact that the Commission and the Court found the HEI's practice acceptable might point to

a more considered approach in an area where not only the main responsibility remains with the Member States, but also a research policy is being followed which is encouraged at the EU level (namely the interplay between the public and the private). Either way, this case shows that such blurring boundaries are felt by competitors as infringing their rights and open the practices of public research organization to EU level scrutiny and thereby potentially to spill-over from primary law.

Exemptions

Article 101 and 107 TFEU and secondary legislation provide for exemptions for certain breaches of competition law that could be relevant for HEIs many of which depend on market share or the amount of aid. Overall, the new General Block Exemption Regulation (Commission Regulation 651/2014/EU) and the new Research Framework have made it easier to benefit from exemptions for state aid for research, especially for HEIs. Article 102 TFEU does not include exemptions. If the research service in question is of general interest, HEIs might also be able to benefit from Decision 2012/21/EU which exempts aid below 15 million Euros per annum for services of general economic interest. Finally, the research activities of HEIs might more generally be exempted as services of general economic interest under Article 106 (2) TFEU. The latter requires a service of general interest to be entrusted to the undertaking in question which would then be obstructed by the application of the competition rules (Neergaard 2011). While in Germany and the Netherlands, legislation is making research a statutory task of HEIs, this legislation might in itself not be sufficiently precise to be regarded as an entrustment act and thus a more specified act for a certain research service in question would be required. Whether or not the service in question is in the general interest, the application of the competition rules does obstruct it and the proportionality would have to be examined individually.

CONCLUSION

Despite increasing activity at the EU level, research policy is still the main responsibility of the Member States. These have recently, potentially influenced by the developments at EU level, begun to implement policies blurring the boundaries between the public and the private sectors. However, the extent to which this path has been followed differs between Member States. At the same time, general EU law is still applicable to entities conducting research and can influence national research policy. Three research systems, which have, to a varying extent, introduced policies blurring the boundaries between the public and the private have been examined to analyse the potential of primary law interference with research in HEIs.

In Germany and the Netherlands, HEIs still receive the majority of their funding as generic funding with only limited recourse to competitive factors. In England, generic funding, which is calculated on a formula involving performance indicators and government priorities, only takes up about a third of research funding for HEIs. In all systems, the importance of non-generic funding has grown over recent years which might limit the academic freedom of the researchers. How far the latter is true again differs; while public competitive funding is partly open to any directions of research in Germany and the Netherlands (DFG, *Vernieuwingsimpuls*), the research councils follow government priorities in England. All countries examined have begun to introduce full costing methodologies. England is particularly advanced here with the Transparent Approach to Costing having been introduced early. As regards the potential application of competition law, research conducted with generic funding in all three countries will probably not have to be regarded as an economic activity. In the case of other funding, it would largely depend on the individual case and in on how far an activity is funded that could be provided under market conditions. If an economic activity does take place, competition law becomes applicable and can cause certain problems.

That considerations about potential problems should not be considered as mere speculations is substantiated by the two General Court cases, mentioned above, where a research organization and an HEI have already been accused of providing state aid. Further, the Commission equally seems to have recognised that potential problems for public research organizations could arise and thus extended the exemptions for research organisations in the field of state aid in its brand new Research Framework and General Block Exemption Regulation. Additionally, the Office of Fair Trading, the former UK competition authority, has already conducted an enquiry into the educational aspect of HEIs; finding certain problematic areas (Office of Fair Trading 2014). It seems plausible that the research aspect will equally be scrutinised in the future. However, this is not only a problem that can occur with regards to the HEI sector. The health care sector, for example, is another public services sector where constraints from primary EU law have been analysed (Hatzopoulos, 2009; Mossialos et al. 2010; Odudu, 2011; Wendt and Gideon, 2011). More generally, the potential tensions between (economic) EU law and (national) public/social policy concept have received increasing attention over the last decade (e.g. Dougan and Spaventa 2005; de Búrca 2005; Neergaard, Nielsen and Roseberry 2009; Schiek, Liebert and Schneider 2011; Cantillon, Verschueren and Ploscar 2012; Neergaard et al. 2013; Schiek 2013). Public research in HEIs is thus just yet another, so far virtually unexplored area, were such tensions can arise.

To avoid competition law problems, HEIs would have to apply full costing and charge reasonable profit, public funders might have to start commissioning research services and HEIs might need to draft contracts in collaborative research carefully. This, in turn, might lead them to become more like commercial entities blurring the boundaries between the public and the private even further. The extent to which this might occur depends on the national systems; with systems in which HEIs already operate more like private sector entities being more vulnerable to an acceleration of commodification triggered by the application of primary law.

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Appendix: Cases

Court of Justice	26/62 *Van Gend* [1984] ECR 3763
	6/64 *Costa* [1964] ECR 585
	13/77 *INNO v ATAB* [1977] ECR 2115
	118/85 *Commission vs Italy* [1987] ECR 2599
	C-41/90 *Höfner* [1991] ECR I-1979
	C-475/99 *Ambulanz Glöckner* [2001] ECR I-8089
	C-280/00 *Altmark* [2003] ECR I-7747
	C-65/03 *Commission v Belgium* [2004] ECR I-6427
	C-147/03 *Commission v Austria* [2005] ECR I-5969
	C-11-12/06 *Morgan and Bucher* [2007] ECR I-9161
	C-281/06 *Jundt* [2007] ECR I-12231
	C-542/09 *Commission v the Netherlands* Judgment 14 June 2012 nyr
	C-523-585/11 *Prinz and Seeberger* Judgment 18 July 2013 nyr
	C-20/12 *Giersch* Judgment 20 June 2013 nyr
	C-220/12 *Thiele* Judgment 24 October 2013 nyr
	C-275/12 *Elrick* Judgment 24 October 2013 nyr
General Court	T-198/09 *UOP* Order 7 March 2013 nyr
	T-488/11 *Sarc* Judgment 12 June 2014 nyr
National Courts	BVerfGE 111, 226 of 27 July 2004 (*Juniorprofessur*)

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[1] See Tiller and Cross (2006: 518 seq) on legal (doctrinal) analysis.

[2] For an overview of research spending as percentage of GPD 1990-2012 see EUROSTAT (2013). For an overview of reactions to the financial crisis regarding HEI funding see European University Association (2013).

[3] As potential constraints arising from EU law on national policies are analysed, the Framework Programmes (being EU programmes) and other international funding sources will not be discussed in detail. As regards the EU funding programmes the Commission in its new 'Framework for State aid for research and development and innovation' (Communication from the Commission OJ [2014] C 198/01) even explicitly excludes these from the scope of the state aid rules (section 1.1.). It thus seems conceivable that the EU institutions might more widely conceive EU research policy as *lex specialis* to general EU law. In any case, the aim of this article is to investigate spill-over on national policy concepts.

[4] Whether this is in itself constitutional has also been questioned (for a summary see Kühne 2010).

[5] Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01).

[6] As regards *Hogescholen,* their research and educational activities are regarded as one (Article 1.9 (1) Higher Education and Research Act).

[7] Leisyte, Enders and De Boer's (2008: 382 seq) empirical research, however, seems to indicate that researchers manage to nevertheless pursue their own research aims through creative proposal writing which would then question the effectiveness of governmental steering policies.

[8] The new Research Framework only entered into force on 1 July 2014. The Issue Paper 'Revision of the state aid rules for research and development and innovation' (available at: http://ec.europa.eu/competition/consultations/2013_state_aid_rdi/index_en.html) preparing the drafting of the new framework also mentioned that the exploitation should be in the non-economic area of research and be non-exclusive.

[9] The new Research Framework also contains a provision providing that an economic activity may be regarded as non-economic if it is purely ancillary to a non-economic main activity (para. 20).

[10] To determine if an undertaking is dominant in a particular market, market definition has to be conducted, which is beyond the scope of this paper. See Amato and Farbmann (2010) and Gideon (2012) for market definition and HEIs.

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Research Article

New EU Instruments for Education: Vertical, Horizontal and Internal Tensions in the European Qualifications Framework

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Abstract

Traditionally constrained by the Treaty to subsidiary action, a number of innovative approaches for joint European coordination in the area of education have emerged in recent years. This article analyses a particular new European Union (EU) instrument for education – the European Qualifications Framework (EQF) – by examining the vertical, horizontal, and internal tensions within the instrument. Analysis of the vertical dimension identifies widening EU capacity for joint coordination through an informal widening of the subsidiarity principle and opportunities for diffusing EU preferences. Analysis of the horizontal coordination processes suggest that there is still some fragmentation in terms of coordinating the EQF across relevant sectors, even if emerging coordination can be identified in some areas. The internal tensions are related to the nature of the instrument that covers all levels and types of education. It is argued that these internal tensions remain, but the EQF has facilitated the development of a new arena for discussing policy coordination (EQFAG) that can, in the long run, reduce these tensions. While the impact of the EQF has been uneven and its implementation proceeded with various speed at this point, it nevertheless is a successful case of a particular Commission policy preference that has been gaining widespread acceptance across Europe in an area where coordination previously had been met with resistance.

Keywords

Education; Qualification frameworks; Coordination

As the European Union (EU) increasingly encompasses a heterogeneous set of member states, both politicians and researchers agree that there is a need to view the integration processes according to a differentiated framework (Holzinger and Schimmelfennig 2012). Indeed, it can be seen that the level and scope of integration varies from sector to sector – for instance, monetary policy with the single currency has been highly integrated, whereas common security policy is coordinated through intergovernmental negotiations (Börzel 2005). With the exception of vocational training, education (including higher education) has traditionally been an area where political will for more European integration has been scarce. Integration efforts in higher education have a long history dating back to early days of the EU, but have over time achieved piecemeal and incremental integration (Corbett 2005). Despite more policy outputs in the area of education (Pollack 1994), there has not been widening supranational legal capacity for action and joint action is undertaken primarily under the subsidiarity principle. Progress is characterized by frequent contestations on the vertical (national-European) and horizontal (coordination between sectors) integration process (Chou and Gornitzka 2014). After the introduction of the Lisbon agenda in 2000, debates about education took place in a context of increased political will, consequently creating new institutional spaces for action (Gornitzka 2007). However, the emerging picture is not one of increased supranationalism and transference of legal competencies to European level; instead, one can see a complex multi-arena, multi-actor and multi-level system in the making where there is still considerable experimentation on the appropriate kind, scope and depth of coordination.

One example of an instrument that represents an attempt for more joint coordination is the European Qualifications Framework (EQF), a policy instrument with its stated aim to create more transparency of educational qualifications across Europe. The EQF was introduced in 2008 through a joint

Parliament and Council Recommendation. Following this, there have been widespread national processes of establishing national qualifications frameworks (NQFs). The EQF encompasses all educational levels (from primary education to advanced degrees in higher education), as well as learning that takes place outside formal educational institutions (informal and non-formal learning). As the EQF is framed as an instrument for lifelong learning policy, it has relevance for both the educational and the employment sector. Consequently, it is also seen as an instrument for greater worker mobility, not necessarily only student mobility.

One can expect that policy instruments in the EU are geared towards more coordination in Europe. Hence, in order to understand the potential contribution of policy instruments for more coordination, it is essential to examine some of the existing tensions within the instruments. This article addresses the following research questions: What kind of coordination tensions can one identify in relation to the EQF as an instrument? What are the consequences of such tensions for the EQF as an instrument for increased European coordination in the area of education?

This article examines the EQF at three tension points, related to the nature of EU integration and policy processes, the nature of education as a policy sector and the nature of this specific policy instrument. These tensions are consequently related to vertical and horizontal coordination, as well as to the internal tensions within the instrument. It analyses documents (including formal EU documents in the process of adopting the EQF, commissioned reports, as well as policy documents) as well as the data gathered from 23 semi-structured in-depth interviews carried out in spring 2013 with actors who are working or have worked with the development of the EQF. The interviewees include EU officials, holding senior or junior positions in the Commissioner's office, the Commission as well as the European Centre for the Development of Vocational Training (CEDEFOP), members of the EQF Advisory Group (both national representatives and stakeholder representatives), as well as various consulted experts who have been involved in the development of the EQF. The article first outlines the analytical framework with specific focus on vertical, horizontal and internal tensions. After this, the empirical case is presented and analysed according to these three tensions, and the study concludes with further reflections on the implications of the analysis and provides further avenues for research.

ANALYTICAL FRAMEWORK – VERTICAL, HORIZONTAL AND INTERNAL COORDINATION

Since the 1990s, the EU has had two major goals: (1) deepen and widen the scope of integration and (2) strengthen the role of the EU from an economic and political perspective (Andersen and Eliassen 2001). However, integration has been taking place along various speeds and with varying levels of success across policy areas. This has to do, on the one hand, with the varying legal competence built into the Treaties, and, on the other hand, with varying legitimacy to engage in supranational activities (Olsen 2002). Thus, it has been suggested that one should focus on the specific empirical domain for action (Tallberg 2010) in order to study the specific configurations.

When discussing vertical coordination, the introduction of the Open Method of Coordination (OMC) challenges the traditional vertical zero-sum game where more European competence is perceived to lead to growing constraints on the domestic level (Börzel 2005). Furthermore, OMC marks a shift towards what has been called both "new" (Heritier 2001) and "experimentalist" (Sabel and Zeitlin 2008) governance arrangements. The use of OMC is especially widespread in areas considered 'half way communitarized', i.e. education, research, welfare and immigration (Kaiser and Prange 2003). In this way, OMC has also enabled the EU to create space for policymaking that has previously been met with resistance (Gornitzka 2007). It has not brought any formal widening of competencies in the Treaty, but it can be seen as a partial transfer of powers in terms of coordination and communication, but not legal and executive powers (Borrás 2008). While its intergovernmental nature is often

stressed, OMC has created arenas for increased EU involvement. By introducing a new voluntary, subsidiary and inclusive mode of governance (Heritier 2001), the Commission can facilitate a level of agreement on problems and solutions and further its preferences on certain issues. The OMC also has implications for horizontal coordination, as it facilitates systematic linkages between policy areas (Borrás and Jacobsson 2004). Certain EU level instruments can affect policy areas where the EU has varying legal competence. This is of relevance, as this would imply varied existing structures, pathways and institutional legacies, which in turn would create a need for horizontal coordination.

While the EU can only be seen as a state-like structure to a limited extent, it mirrors the fragmented policymaking structures of the nation states to a large extent, and the varying speed of integration further fuels the differentiation between policy sectors. Different Commission Directorates-General (DGs) are responsible for a variety of policy sectors. This means that, while the Commission is often conceptualized as a single actor, it is actually rather fragmented, with occasionally less than smooth cooperation between the various DGs (Christiansen 2001) where coherence of initiatives cannot be taken for granted (Elken and Stensaker 2012). Some issues may be addressed by several DGs and the reason as to why an issue ends up in a specific DG does not always follow a very rational logic, such as in cases of venue shopping by interest groups (Mazey and Richardson 2006). Policy sectors at the European level represent different institutional dynamics with varying legal capacity, existing practices and modes for developing policy (Wallace 2010). It is perhaps unsurprising that horizontal coordination is of an emerging interest, especially the OMC (Borrás and Jacobsson 2004).

At the same time, when policies are made in a context with multiple actors and interests requiring coordination, it is likely to lead to competing agendas and less internal consistency (Bish 1978). This is due to the inclusion of rules and conventions reflecting competing institutional logics (Owen-Smith and Powell 2007). Institutional logics here include a set of norms and vocabulary specific to a particular field. This suggests an instrument that has to simultaneously relate to diverging institutional logics would need sufficient levels of ambiguity to deal with such inconsistencies. As such, ambiguity is a necessary means to deal with unclear goals and blurred boundaries (Zahariadis 2003), allowing for multiple translations.

Consequently, the tensions identified here lie in the intersection points of (a) vertical coordination where the OMC has created new space for action that has come in addition to national processes; (b) horizontal coordination between sectors with varying legal capacity and institutional dynamics; (c) internal coordination where varying institutional logics have consequences for the internal coherence of the instrument. As education is one of the areas where the OMC has opened for more action, this suggests that it should be possible to identify a shift in terms of the vertical axis towards more Commission involvement. Given that the EQF concerns more than one policy sector, one should expect intensified horizontal coordination. Furthermore, one can also expect the EQF to inhibit internal tensions due to the various types and levels of education included. These three tensions will be further elaborated in the empirical section and provide a starting point for the concluding discussion concerning the EQF's potential as an instrument generating more integration.

THE ESTABLISHMENT OF THE EUROPEAN QUALIFICATIONS FRAMEWORK

Interest in qualifications is not new for the EU. Indeed, a process was initiated in 1986 for ensuring the comparability of qualifications (Cort 2009). The interviewed experts indicated that the initiative was later considered a failure due to it being too complicated. The EQF represents a new kind of thinking based on learning outcomes, including all levels and types of education and informal/non-formal learning. However, formal legal competencies with respect to different levels and types of education vary – while education as a whole has been an area where integration efforts have been incremental and slow, both recognition of professional degrees and vocational training were mentioned in the

Treaty of Rome in 1957 (Corbett 2005). However, the distinction between vocational and professional can be unclear and varies vastly across European countries, especially on higher levels (CEDEFOP 2011). Historically, competence on vocational training created a loophole for action after the well-known *Gravier* decision (*Gravier v City of Liège*) in 1985 where access to education was in principle equalized with access to training. In addition, in areas with clearly professional profile, the EU has adopted a directive for the recognition of professional degrees coordinated by DG Markt (Directive 2005/36/EC), thus a number of university programmes has a relatively well-established recognition system based on a legal directive.

The initial debates about the EQF followed the development of lifelong learning as a policy objective and the debates around the Bologna Process in the early 2000s. The core actors involved at the time came from the European Commission and CEDEFOP with commissioned inputs from diverse experts. The EQF was introduced as an instrument for lifelong learning and mobility. Lifelong learning as an objective can be traced back to the common vocational policy that has been under EU competence from the very beginning (Cort 2009). While the concept was included into EU policy debates in 1993 with Delor's White Paper and focus on the knowledge society, it was only after the 2001 Communication on Lifelong Learning [COM(2001) 678] that it was seriously acknowledged as the key element of becoming a competitive and dynamic knowledge society with well-educated workforce. Mobility is at the very core of the EU education agenda, described by one of the interviewees in this study as "a mantra" (Interview: an expert in the process, April 2013).

As several interviewees indicated, another important source for inspiration for the EQF was the Bologna Process with the introduction of its own qualifications framework (QF-EHEA). Introduced in 1999 as an intergovernmental process, the Bologna Process has become increasingly intertwined with EU agendas (Beerkens 2008; Maassen and Musselin 2009) and transnational in nature (Elken and Vukasovic 2014). While heterogeneity of systems after the Bologna Process has remained (Kehm et al. 2009, Witte 2008), it was viewed as a success story because it showed the possibilities for cooperation. The subsequent introduction of the Copenhagen Process (2002) by the Commission for Vocational Education and Training (VET) mirrored the Bologna Process, and it was also during this process that debates on what levels actually contained again came to focus. The development of EQF was mentioned in the 'Joint Interim Report' of the Council and the Commission in 2004 (6905/04).

In 2005, CEDEFOP published the report outlining the first possible European framework (Coles and Oates 2005). At the time, an expert group with various invited experts, stakeholder organisations, and selected national representatives with relevant expertise was working on developing a proposal for the EQF, also drawing inspiration from the Coles and Oates (2005) report. The same year, a Commission staff-working document 'Towards a European Qualifications Framework for lifelong learning' [SEC 2005(957)] was issued and subsequently sent out to a widespread consultation process with no major opposition. Another expert group was set up for continued work on this and the document, 'Recommendation on the establishment of the European Qualifications Framework for lifelong learning' was adopted in 2008 with a joint Parliament and Council Recommendation (2008/C 111/01) (Recommendation from now on), its main aim was to act as 'a reference tool to compare the qualification levels of different qualifications systems'. The Recommendation text also called for the establishment of an advisory group that would oversee the national processes to assure "coherence and promote transparency". This EQF Advisory Group was later termed as an informal advisory group for lifelong learning in general; interviewees, however, noted that it has become an important arena for further discussions on joint European policy coordination.

The initial deadlines set in the Recommendation were that all national qualifications systems should be referenced towards the EQF by 2010. According to the CEDEFOP representative, this was purposeful: 'if you had said in 2008 that you have until 2020 to do this, you would have lost momentum, the deadlines were purposefully short'; national processes in a number of countries

lagged considerably, but 15 national reports had been published on the EQF portal by the end of 2013[1]. This indicates that, even if there has been no direct legal enforcement to develop NQFs, the process is rather widespread in Europe. In addition, certain third countries have shown interest in the EQF and in 2013 there were concrete discussions on how to link up with the EQF, in particular Bologna signatory countries, but the interviewees also mentioned countries such as Australia.

VERTICAL, HORIZONTAL AND INTERNAL TENSIONS OF THE EQF

Vertical coordination: Balancing national and supranational interests

The EQF lies at the intersection between national and supranational coordination. Presented as a translation tool and a meta-framework, it has nevertheless led to reforms across Europe. However, taking into account that the instrument is a recommendation and there is great heterogeneity and high levels of institutionalization with respect to national educational systems, the processes have been rather varied, following a rather typical argument of differentiated integration due to heterogeneity of members. However, a number of additional considerations emerge. Formally, the EQF was clearly framed as an instrument for facilitating more mobility and transparency. The instrument was a European "meta-framework" to which *national* qualifications frameworks can be linked, a rather non-intrusive idea if framed like this. According to this logic, developing NQFs is a national process where national systems would only be described, and referencing such frameworks towards a European translation tool would not require any system change. The first proposal Coles and Oates (2005) outlined identified the difference between a *descriptive* (how systems are) and *prescriptive* (how systems should be) framework, and highlighted how any European qualifications framework should be former rather than the latter. An expert interviewee clarified this difference as follows:

> Descriptive should be sensitive to the different arrangements in different nations, and would seek to describe with precision and sensitivity existing arrangements, whereas a prescriptive framework would exist in order to rationalize or change existing arrangements, and essentially render them into a more rational form. (Interview: an expert involved in the process, April 2013)

The initial work by Coles and Oates (2005) identified 30 levels that were seen as necessary to sufficiently describe the complexities of educational systems in Europe and assure that the framework is used in a descriptive manner. However, in the interviews it was indicated that this system was seen as too complicated by the Commission and discarded in favour of an 8-level system, and arguably a more prescriptive framework. One explanation for this preference could be European experiences with the failed 1986 project.

However, shifting the framework towards a more prescriptive framework can be seen as an indication of more supranational coordination as it would imply that certain preferences from European level can be transferred to national level by creating a more standardized template for educational systems. As indicated in the interviews, even when describing the systems to achieve more transparency was for many countries the initial purpose, after national qualification frameworks are introduced, 'what we see is that as the national frameworks reform, the reform agendas become more important'. This suggests that, while the instrument initially proposed was relatively neutral, its content has facilitated critical debates. First, the shift towards output thinking was rather new in a number of countries[2], and the development of overarching NQFs has largely intensified the process in recent years. At the time of introducing the EQF, there was only limited number of European countries that had a qualifications framework (e.g. Ireland). Second, the focus on informal/non-formal learning, and parity of esteem between VET and HE are other debates emerging in the aftermath of the EQF. One example of such

debates can be found in Norway where the initial starting point was clearly to describe the system and discussions on informal/non-formal learning were avoided. More recently, this has changed and these issues became increasingly important policy issues following the development of NQF.

While the formulations of the intended reform are relatively conservative, there was awareness within DG EAC about this when the instrument was introduced, which a senior EU official described as:

> There are two purposes in relation to EQF, one is in terms of transparency, coherence and comparison, the other is to, it is implicit rather than explicit, that is to provide a basis for developing NQFs and further develop LLL [Lifelong Learning] and it is up to the member states whether they want to use it for reform. Not all have used it this way of course, but some have said it has meant they have to reassess existing levels, so it becomes a catalyst for reform in these countries. In other countries it is more for the purpose of increased transparency and openness but not beyond that (Interview: European Commission (former), March 2013).

This variation was described by one EU official as, 'It is now up to the member states, but it is driven at different pace' (Interview: European Commission, March 2013). This could suggest that the intention for the reforms is there. The general view of seeing the EQF as a "catalyst for change" is echoed in a number of the interviews, implying that this particular phrase has been used sufficiently to become a natural way to describe the framework. While the Commission representatives formulate this as "an option", others who have been involved in the process in the EQFAG identify a much stronger role: 'this has been a fantastically important catalyst for the modernization of some educational systems' (Interview: an expert involved in the process, March 2013). In the interviews, EQFAG representatives also reported some countries adjusting some qualifications in their system to better fit with the qualifications framework (e.g. Luxembourg).

While formally the EQF should be about finding the best match between the descriptions of qualifications on European and national level, in practice three top levels were earmarked for higher education. This in turn has spilled over to other levels: the school-learning certificate is now also informally defined on a particular level in the EQF (level 4). Some countries initially suggested their school leaving certificates either as higher (the Netherlands), or in fact lower (Estonia), but both of these countries have opted for high school diplomas to be on level 4 in their final reports, something that was also described as a political agreement following informal pressure.

One should not underestimate the potential implications of the instrument to drive reforms in the future. Despite the process being framed as a nationally driven voluntary OMC-like process, it has provided the Commission with the means to exert independent influence and share preferences. The EQFAG can be an arena for such influence, as both Commission officials and national representatives described its scope and function as being beyond the EQF referencing process, as it is increasingly seen by its members as an important arena to develop shared vocabulary and discuss possible further joint policy coordination. More recently, the group has acquired the role to oversee the Council Recommendation on the validation of non-formal and informal learning introduced in 2012 (2012/C 398/01), indicating its widening scope. One could argue that this group is an arena for a reinterpretation of the scope of what is possible within the subsidiarity principle, there is now more interest from national level to view what others are doing. One Commission official described this as:

> We all know it is difficult, but I think governments wanted to have that [EQF]. […] It was pushed by the Commission, true, we have probably pushed this to the countries, but it came at a time. […] It is a EU tool, and even if it is soft law, it influences the thinking and the approaches on an issue. […] Understanding the role of education and research has helped to overcome the traditional problems of EU competence. But it was a discussion. Each time we had advanced on instruments, […] there was resistance, a long standing battle [laughs], it still is by the way. (Interview: European Commission (former), April 2013)

The comparison to a battle suggests that there was also explicit will from the Commission to assure the success of its preferences even when met with resistance. According to another EU actor, this has in fact led to a gradual redefinition and stretching of the subsidiarity concept:

> What I see is that there is more and more space for the EU to create new tools and provide assistance. And that is requested by the member states. A few years ago that could have been thought as a breach of the subsidiarity principle, nowadays it is not. The reason is that most of the problems that the educational systems face, they are common problems. (Interview: European Commission, March 2013)

While the EQF cannot entirely account for this development, several respondents stated that the EQF has a rather important part in the process as it concerns the very landscape of educational systems. It should be noted that the development of a NQFs on paper cannot be taken to automatically imply actual impact. Furthermore, the EQF does not entail automatic recognition and it has not been taken into use by the actual users of the instruments (learners, workers, businesses, etc.). At the same time, the creation of new arenas (EQFAG) has created an arena for joint discussions and there appears to be willingness for more joint coordination. If this is the case, the vertical tension between national resistance and more supranational coordination might move towards increased communicative and coordinating power for the EU, even if formal legal and executive competencies remain unchanged, following the argument of Susana Borrás (2008) on partial transfer of competencies.

Horizontal coordination: The EQF as facilitating more sectoral coordination?

The EQF lies at the intersection of different EU policy sectors. Its dual focus on education and employment was evident in the Recommendation, as the aim of the EQF is to: 'promote both *lifelong learning* and equal opportunities in the knowledge-based society, as well as the *further integration of the European labour market*, while respecting the rich diversity of national *education systems*' (own emphasis). Furthermore, coordination process between various policy sectors is also related to varying legal EU competence and administrative structures – with its aim at increasing transparency of qualifications, its function and operation overlaps partially with the directive of professional qualifications (Directive 2005/36/EC).

The professional qualifications directive appears to be a difficult topic within the context of EQF. The directive is linked to free movement of professionals, which means that, for selected regulated professions (e.g. some medical and veterinary professions, as well as architects), qualifications from other EU member states are to be recognised on equal grounds with national ones. The directive operated with five levels of qualifications for these professions. When the EQF was initially developed, this was not well received by DG Markt, described by one high ranked Commission official at the time:

> That was a bit difficult as well, the directive […] was a key piece of the internal market. And our colleagues from Internal Market were not absolutely happy about EQF in the beginning, so we had to find a good relationship. But as the directive is difficult to apply and limited […] finally everyone was happy to have EQF to complement in a way that is more soft law. But it took time. (Interview: European Commission (former), April 2013)

The directive has, as described, been a core EU instrument, and as such there was also great caution from the side of DG EAC to not interfere, described by another Commission official as:

> DG internal market keeps a very close eye, because they manage the directive [.] They are very jealous of their domain, as they should be. Internal market is the European competence per excellence, this is a powerful instrument, so we have to be careful to not reduce the

impact of internal market instrument to promote other instruments. (Interview: European Commission, March 2013)

While the first quote here suggested that the tension has been resolved, this does not imply smooth coordination. The directive was amended in 2013, and some of the initial proposals included a suggestion to replace the existing 5 levels with the 8 EQF levels to assure more complementarity. However, this was removed during the readings in the Parliament. EQF is mentioned as process in the final amendment, and it is emphasised that the five levels the directive operates with should only be used for the general system and should not have an effect on national structures. Furthermore, the document makes references to a common training framework based on EQF levels to describe a common 'set of minimum knowledge, skills and competencies necessary for the pursuit of a specific profession'. As such, the final version does leave some opportunities to use the EQF in the context of the directive. The choice to *not align* the two instruments more closely was met with some resignation from the experts working with the EQF:

'To me it's... it does not make sense to have several European systems of classification like that. That definitely does not make transparency easier, on the contrary. I don't really understand why it is so important for some people to have another level descriptors and five levels and etc. [...] Why this is so important to keep five levels. I see this goes on, and I really don't understand why. (Interview: expert in the process, April 2013)

The actual reasons for why the EQF levels were not used in the directive would in this case be a speculation, but information from the interviews suggests that this might be due to the fact that the five levels are well known and established in these professions, whereas NQFs are still not sufficiently developed in many countries as EQF is not yet seen as a mature instrument.

Besides DG Markt, another horizontal coordination process with respect to the EQF was DG Employment. When the EQF was adopted in 2008, DG Employment was not very enthusiastic, being described by a former DG Employment actor as:

I remember saying, my god what are they doing with these people in education, why do they come with this system. [...] And then interestingly enough, this is where much more than in the past both at European and national level people dealing with employment on the one hand and dealing with education on the other, had to work together. Which was, let's say, not really obvious. (Interview: European Commission (former), April 2013)

One should note that there was also a change in leadership between DG Education and DG Employment around the time of the introduction of EQF. Individuals can act as carriers for policy ideas when they move between various organizations due to subsequent socialization processes (Elken and Vukasovic 2014). This can provide opportunities for better translation and coordination process between these two DGs. More recently, DG Employment has introduced ESCO (European Skills, Competencies and Occupations taxonomy), which is coordinated with the EQF. ESCO is jointly coordinated by DG Employment and DG Education, and supported by CEDEFOP. In principle it is about standardized translations and categorization for skills, competencies, qualifications and occupations. The project was first introduced in a staff working document [ESCO (2011a) SEC 056 final] and then developed by a team composing of representatives from the Commission, CEDEFOP and consulted experts and stakeholders. While this can be seen as an example of more coordination, for those working with the EQF outside of the Commission in the EQF advisory group, these activities are seen as fragmented:

The EQF is not just related to education, but also work. So it should be related to the DG Employment, also ESCO is about education and work. But I think still this is a long process and

long way to go. It is two different [...] [worlds]. For the citizens it is important that they are coordinated. But this is a challenge. (Interview: expert in the process, March 2013)

DG Employment and member states have traditionally understood concepts such as "qualification" or "certification" rather differently. While the EQFAG has provided the arena to develop a common language, there have also been concerns with the EQF and its opening up of the idea of qualifications, and potentially even threatening the role of formal education as a certifying institution. While the representatives from the educational sector see the EQF as imbued with ideas from the world of work, representatives of employers' organizations report of a very "educationalist" approach to the debate, where there has been insufficient attention to including employers' views. This is also related to the composition of the EQFAG that is dominated by people from the ministries of education, DG EAC and stakeholder representation that is primarily linked to education sector. Several actors highlighted that the Commission has had a much stronger preference and experience with this kind of coordination than the member states or stakeholder groups; according to advisory group member:

I think the Commission sees the EQF more in terms of employment policy than we would [...]. We would have just the QF should cover all parts of education [...] preparation for employment sure, but also preparation to citizenship. (Interview: expert in the process, February 2013)

This implies that while the coordination between these two sectors is not by any means smooth and coherent at this point, the first steps are taking place on European level, and have the potential to have a spillover to national level in the long run. These two illustrations show how the EQF is located at a tension point of horizontal coordination between sectors, in one instance (with the directive) the processes and instruments remain fragmented, whereas the example with education and employment suggests an emerging coordination process.

Internal coordination: consistency of the instrument

The EQF is also placed at the intersection of various levels and types of education because its content and scope. Different types of education have varying experience with European coordination and also varied status, history and structure at the national level. The issue of internal coordination and ownership has been high on the agenda throughout the development of the EQF. This is particularly relevant with respect to the QF-EHEA developed in the context of the Bologna Process. QF-EHEA covers higher education and is clearly formulated as a framework focused on formal educational systems. At the same time, the EQF is expected to cover all types and levels of education – and these have rather different internal logics (for instance: formal vs. informal learning; general education vs. VET vs. higher education (HE); education for citizenship vs. training for labour market). In EU documents, the two processes have been termed complementary, and one Commission official even mentioned thoughts about merging the EQF and QF-EHEA, even though it was emphasised that there would be legal complications. The relationship between the two frameworks is at the same time not completely problem free, in particular due to their open (learning in all situations) vs. closed (learning in formal settings) nature. During the initial stages of the process there was also great consciousness about this tension, as experts who had experience with Bologna were included in the initial expert group. According to one interviewee, despite initial tensions there was 'willingness from both sides to bring this together' (Interview: expert in the process, March 2013). This suggests that on the policy level there was consciousness of this internal coordination process.

Assuring internal coherence is an important objective for the Commission. According to one EU official: 'to put some more convergence between university and vocational systems, that is the long term commitment of the Commission' (Interview: European Commissin (former), April 2013).

However, this process has not been smooth and the initial stages were characterized by tensions within the Commission DG EAC between the groups working on higher education and vocational education. Furthermore, despite coordination with experts from Bologna, some European level representatives from higher education felt that the process did not include them sufficiently:

> there was a feeling that some people in the vocational education […] had hijacked this agenda, and not intended to have a LLL framework but a vocational education framework. […] In the end, the perception persisted for a very long time that this LLL framework was only in title and what was on the table is a vocational framework, with a different terminology and a different way of thinking of things. (Interview: expert in the process, February 2013)

This has been a great concern for the Commission, because from their side there have been worries about the instrument being dominated by VET both in terms of ownership and operational responsibility, whereas the stated policy objective of the instrument is related to LLL and covering all types and levels of education. One explanation provided by interviewees was that the existence of QF-EHEA created an impression that, if there was a framework for higher education, the other framework had to be about "something else" (VET). Another explanation could be related to the LLL agenda in itself has been traced back to VET and EU competencies in vocational training (Cort 2009). Furthermore, while the stated tension is often focused on VET vs. HE, there is actually little debate on general education and its role in EQF, nor is this issue discussed in the advisory group; there are no umbrella organisations at European level that would be appropriate and representative.

However, through creating the EQFAG, a new common arena for debates across educational levels and types has been created, the very existence of such an arena encompassing all these different sectors can be seen as a rather novel structure – not only on European level, but also taking into account national contexts, where various kinds of education in many cases have traditionally been rather separated (i.e. HE vs. VET). The remaining tensions that were reported in terms of VET vs. HE suggest that the EQF has to cater to very different audiences and deal with a number of interests that can at times be conflicting. Advisory group members reported on the situation where member state representatives coming from different units within the same ministry did not even know each other. By creating linkages between such units and developing a common language across education types, this can also in the long run lead to more communication and coordination.

CONCLUSION

In this article, the EQF was analysed as an instrument characterised by three sets of tensions. First, it was identified as existing in a tension point of vertical coordination due to the division of competencies between European and national levels. The case of EQF shows a much more complex division of competence than the traditional supranational vs. intergovernmental divide. In that sense, perhaps the term of partial transfer of competencies (Borrás 2008) best describes the emerging picture where coordinating and communicative competencies have been transferred but not the formal legal executive competencies. The accompanying indirect reform ideas within the EQF as well as shifting understanding of what is possible within the subsidiarity principle indicate that the balance of intergovernmental OMC processes and supranational influence is not static but in state of motion. Indeed, the practice around EQF suggests that it is a far more complex hybrid and informal structure. However, despite widespread processes of introducing NQFs across Europe, it is yet unclear what the resulting impact would be following domestic policy processes.

Second, the issue of qualification frameworks has relevance for various sectors both on European and national level and coordination between such sectors is dependent on the EQF becoming a mature instrument. The EQF case re-emphasises the Commission's fragmented nature (Christiansen 2001),

where the divide between DG Markt (directive) and DG EAC (EQF) approach to coordinating qualifications remained in place, even after the amendment process that could have, in principle, integrated the instruments. While the introduction of ESCO and links with EQF suggest more coordination of employment and education sectors, there was still a reported separation on content level with respect to education and the world of work. At the same time, there appears to be conscious effort for achieving more coordination in these areas. In this specific case, it appeared that coordinating multiple soft instruments was a smoother process than mixing policy coordination processes with EU hard law.

Third, the EQF spans the whole system of qualifications – formal and informal learning as well as various educational types and levels, pointing towards diverging traditions, logics and interests within the instrument. There appears to be some collision between VET and HE in terms of ownership and the purpose of the framework, possibly also driven by the parallel Bologna framework – QF-EHEA. The debates concerning the boundaries and content of the instrument suggest that, despite the apparent success of developing qualification frameworks across Europe, the actual content of such frameworks can be rather different. While the EQFAG has provided an arena for debates across types of education, its actual impact on national level practice remains to be seen.

These three sets of tensions imply that the EQF as an instrument is ambiguous and open for translation. This is necessary for the instrument to be able to cater to heterogeneous national contexts, which supports arguments for differentiated integration. Over a short time, the idea of having qualifications frameworks on national and European level has become relatively uncontested as there appears to be little principal objection to the very existence of such frameworks, even in cases of doubt regarding the long-term implications and impacts. While the impact of the reform agenda has been uneven and proceeded along various speed, the EQF can be seen as a successful case upholding the Commission's preference in an area where coordination had previously been met with resistance. At the same time, one can anticipate that the ambiguity of the EQF can also lead to further differentiated integration in the future. Introducing instruments on national level that look similar but contain different understanding of core concepts (due to the internal tensions) might in the long run undermine the process. This can take place when the common goal might become too ambiguous and open for translation. While one could argue that this kind of ambiguity can become a self-reinforcing process, one should not underestimate that a system and structure for joint action with respect to educational systems in Europe has been created. The EQFAG is one such arena and can be seen as one of the more concrete successes, which can provide the arena for reducing internal tensions over time.

This article has had a rather broad focus on the EQF and the three tension points. Further research could explore its potential and the role of the EQF as a new governance tool, the EQFAG as a new informal governance arena, and the implications of the informal widening of the subsidiarity principle. Furthermore, analysis could also focus on how such instruments change educational practice, the specific role that EQF has played in countries undergoing reform. Other avenues for research could focus on the relationship between the EQF and the Commission's expanding role in higher education, and the actual impact of EQF/NQF processes – both on national level and for educational practice.

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[1] http://ec.europa.eu/eqf/documentation_en.htm. Accessed on 20 August 2014.

[2] A report by S. Adam "Using learning outcomes" in 2004 for a UK Bologna seminar identified a rather varied picture with respect to the use of learning outcomes across European countries where only limited countries had substantial experience with having implemented learning outcomes at the time.

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Research Article

Differentiated Integration and the Bologna Process

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Abstract

The aim of this article is to discuss the contribution of the theory of differentiated integration to understanding Bologna as an instrument for building up the European Higher Education Area (EHEA), and to learn from that analysis what can be used to enrich the theory of differentiated integration. The analysis uses secondary data to grasp the national and the institutional appropriation of the Bologna process and to identify the dimensions that characterise the type of differentiated integration promoted by Bologna. The analysis underlines the role of national and institutional factors to understand how the EHEA, from its inception and its evolution, is a project of differentiated integration stemming from the translation of policy into action.

Keywords

In 1999, twenty-nine countries signed the Bologna declaration, setting the Bologna process in movement. The Bologna declaration was a political commitment to create the European Higher Education Area (EHEA), acting as its *modus operandi*. The declaration set out six objectives: the creation of readable and comparable degrees; a degree structure based on two main cycles; the establishment of a credit unit system; the promotion of mobility; the advancement of European cooperation in quality assurance; and, finally, a European dimension of higher education, steered by increasing mobility, employability, competitiveness and attractiveness. Following the signature of the declaration, Ministers engaged in biennial summits, both to refine priorities and to take stock of the progress made. Bologna was unique in that its influence extended to 47 states and laid down similar objectives for all, with a deadline of 10 years to achieve them.

The political goal of establishing the EHEA, as it aims at greater comparability and compatibility of European higher education systems, might be considered a case of differentiated integration as 'the territorial extension of the European Union [EU] membership and EU rule validity are incongruent' (Holzinger and Schimmelfennig 2012: 292). On the one hand, the territoriality of the EHEA goes beyond the European Union membership and, on the other hand, the EU rule validity in education policies is incongruent. Actually, the harmonisation of laws and regulations of the member states is explicitly excluded by European treaties (§ 4, article 165 of the Consolidated version of the Treaty on the functioning of the European Union) and the EU can only take action by means of incentive measures in accordance with the ordinary legislative procedures, as education policy area is not subsumed by EU law. In other words, the EHEA as a case of differentiated integration implies widening this very concept and incentive measures are to be seen as privileged instruments to create and steer policies in the field of education.

The EHEA was designed at the intergovernmental level, being reconfigured as a EU policy driver when the European Commission, already empowered to intervene in research and innovation, acquired the status of full member of the Bologna Follow-Up Group (BFUG). This reinforced role of the European Commission made higher education a pivotal area for the Europe of knowledge and the Bologna process was appropriated by the Lisbon strategy, while the Open Method of Coordination (OMC) was used to promote convergent objectives of national policies among the EU members. The EU incentive

measures are supported by and articulated with reporting and evaluation procedures through the stocktaking process. These procedures are policy instruments promoting comparison between states and pulling national governments to take action towards the accomplishment of common objectives. These mechanisms of policy diffusion support the translation of policy into action or enactment (Ball 2004). In this sense, a broader concept of differentiated integration might allow for the capture of 'challenges involved with putting EU policy into practice, and particularly informal opt-out and the discretionary aspects of transposition and implementation' (Andersen and Sitter 2006: 3).

The relationship between the Bologna process and the EHEA is enlightened by the interpretations of actors in realising policy in and through practice. Interaction (Gornitzka, Kyvik and Stensaker 2005; Veiga 2012, 2014) and iteration (Neave and Veiga 2013) are crucial to understanding the diversity of interests and diverging expectations of actors placed at various levels. Bologna as a means to consolidate the EHEA is a dynamic process of policy enactment. In this sense, the EHEA can be seen as "policy as a moving target" (Wittrock and DeLeon 1985), feeding and being fed by significant differentiation and flexibility at the European, national and institutional levels, marked by the adoption of informal arrangements based on soft law mechanisms such as stocktaking processes.

Research about Bologna made visible the specificities of the policy process in the area of education policies (Maassen and Olsen 2007; Neave and Veiga 2013; Veiga and Amaral 2006, 2012). Less is known about Bologna as a case of differentiated integration. The theory of differentiated integration has been useful to understand the decisions that are made by states under the unanimity rule, and the role of "state-level factors" and "sub-systemic factors" has been recognised as important in triggering differentiation (Schimmelfennig et al. 2011). However, limitations in theorising causes or effects of differentiated integration (Holzinger and Schimmelfennig 2012) have been identified in the literature, particularly with regard to differentiation in ordinary legislation or informal differentiation (Matarrelli 2012). Notwithstanding, the categorisation of different forms or models of flexible integration, as proposed by differentiated integration theories, is worth exploring, thus contributing to the potential broadening of the differentiated integration theory.

The objective of this article is twofold. On the one hand, it aims to answer the question of what is the contribution of the theory of differentiated integration to understanding Bologna as a process of policy enactment towards the establishment of the EHEA. On the other hand, it intends to contribute to the enrichment of that theory. In the first part of the article, we elaborate the theory of differentiated integration before proceeding to analyse data gathered in Germany, Italy, Norway and Portugal for understanding discretionary decisions and practices enacted at the national and institutional levels. We will address this by analysing the Bologna process on the basis of national agendas and of the perceptions of institutional actors. Finally, taking into consideration the models of differentiated integration (Holzinger and Schimmelfennig 2012), the analysis of diverse configurations of Bologna aims to contribute to potentially broadening the theory of differentiated integration.

APPROACHING DIFFERENTIATED INTEGRATION

From the perspective of integration, flexible integration mechanisms (flexibility or differentiation) are often used interchangeably. Leo Tindemans used economic and financial factors to explain variation and the need to assume flexibility in EU policy decision-making:

> It is impossible at present time to submit a credible programme of action if it is deemed absolutely necessary that in every case all stages should be reached by all the States at the same time. The divergence of their economic and financial situations is such that, were we to insist on this progress would be impossible and Europe would continue to crumble away (1976: 20).

Flexibility is at the core of differentiated integration as it refers to 'the possibility for different member states to have different rights and obligations with respect to certain common policy areas' and it is a means to achieve more integration in the long run (Kölliker 2001: 125). Variations and disparities between the member states are often associated with the diversity of interests, the growing complexity of decision-making and diverging expectations towards integration (Emmanouilidis 2007). National conditions of cross-national policy convergence are associated with cultural, institutional and socio-economic factors (Heinze and Knill 2008).

In the framework of differentiated integration theory, the Bologna process has been presented as an example of *Flexible Integration* (at the start) and subsequently as an illustration of the *Europe à la carte* model (Holzinger and Schimmelfennig 2012). Alexander Stubb (1996) made the first attempt to categorise differentiated integration using the variables "time" (multi speed), "space" (variable geometry) and "matter" (*à la carte*). Katharina Holzinger and Frank Schimmelfenning (2012) underlined that the variables "matter" and "space" 'are by definition involved in all types of differentiation' (Holzinger and Schimmelfennig 2012: 296) and further developed a categorisation of differentiated integration. They proposed models of differentiated integration on the basis of six analytical dimensions:

(1) "Permanent" versus "temporary differentiation" underlines that the pursuit of European goals by member states can have different rates and paces;

(2) "Territorial" versus "purely functional integration" brings in the territorial range of authority and control;

(3) "Differentiation across member states" versus "multi-level differentiation" underlines the role of institutions placed at different levels;

(4) "Differentiation takes place within the EU treaties" versus "outside the EU treaties" brings in differentiation reflecting the enactment of European goals outside EU borders;

(5) "Decision-making at the EU level" versus "at regime level" brings in the issue of legitimacy and the workings of non-hierarchical systems;

(6) Differentiation "only for member states" versus "also for non-member" underlines the geographical blurring of borders.

These dimensions are expected to provide a heuristic device for the interpretation of the tensions arising from the integration processes. The analysis of these polarised dimensions is relevant as it is leading to a critical perspective with regard to these specific models of differentiated integration. From the perspective of political integration, nine out of the 10 models assume "permanent differentiation", while "temporary differentiation" is covered by only one model, as shown in Table 1.

Table 1: Models of differentiated integration

DIMENSIONS										
1	Temporary	Permanent								
2	Territorial									Functional
3	Differentiaion at national-level								Multi-level differentiation	
4	Only inside EU-treaties				Also outside EU-treaties			Only inside EU treaties	Also outside EU-treaties	
5	EU-decision making							Club-decision making (intergovernmental)		
6	Only member states			Also non-member states	Only member states	Also non-member states		Only member states	Also jurisdictions outside EU	
	1	2	3	4	5	6	7	8	9	10
Models	**Multi-speed**	**Multiple standards**	**Avantgarde Europe**	**Core Europe, Concentric circles**	**Flexible integration**	**Variable geometry**	**Europe à la carte**	**Optimal level of jurisdiction**	**Flexible co-operation**	**FOCJ**
Examples	Many in secondary law	In secondary law, e.g. environmental policy	EMU, basic rights charta	EMU; EEA; associated states	Enhanced co-operation, Bologna (at the start)	Schengen	Bologna	Competence allocation in Lisbon Treaty	EUREGIOS	No example
References	Grabitz (1984); Stubb (1996, 2002)	Scharpf (1999)	Club von Florenz (1996)	Schäuble and Lamers (1984)	Centre for Economic Policy Research (1995)	Stubb (1996)	Dahrendorf (1979	Fischer and Schley (1999)	Holzinger 2001	Frey and Eichenbrger (1996, 1997)

Source: Adapted from Holzinger and Schimmelfennig (2012)

The model of *Two or Multiple-speed Europe* displays as a key indicator the "temporary" character of differentiation, and it appears to relate to the idea that the level of integration increases as the nation-states develop 'common rules and standards, rights and obligations through inter-unit processes' (Olsen 2001: 327). All the other models underline the character of differentiation as "permanent". The *Multiple standard* and *Avant-garde Europe* models assume that differentiation is "permanent". In the remaining dimensions these models follow the *Multiple Speed* model and ascribe a key role to nation-states. An increase of the level of integration might be expected as nation-states coordinate their policies in an *ad hoc* and pragmatic way, based on self-interest or unit-specific norms (Olsen 2001). The *Flexible Integration* model assumes that differentiation occurs "also outside the EU treaties" and involves "only member states". The key dimension of this model relates to the aim of establishing 'functional regimes with sector-specific differentiation' (Holzinger and Schimmelfennig 2012: 294), as differentiation occurs "also outside the EU treaties". The *Variable Geometry* and the *Europe à la carte* models occur "also outside the EU treaties" and involve "also non-member states". While the *Europe à la carte* model is fully based on intergovernmental decision-making, the *Variable Geometry* model underlines the role of external governance in extending the 'EU's *acquis* to non-member states' (Holzinger and Schimmelfennig 2012: 294).

The models above appear to take the EU and the nation-states as the main reference points. However, differentiated integration cannot turn a blind eye to institutional factors promoting discretionary decisions and practices nuancing differentiated integration. The models of *Optimal Level of Jurisdiction*, *Flexible Cooperation* and *Functional Overlapping Competing Jurisdictions* assume that 'legislative competencies should be allocated to the adequate levels of jurisdiction. Local problems ought to be solved at the communal level' (Holzinger and Schimmelfennig 2012: 295). These models involve a multi-level approach and include sub-national jurisdictions, although they point to a lower level of integration. For instance, the model of *Flexible Cooperation* 'implies the sacrificing of the idea of unitary states and a unitary EU and might gradually dissolve inner European borders' (Holzinger and Schimmelfennig 2012: 296). Differentiated integration as a descriptive concept is useful to understand how Bologna is building the EHEA in practice, and these models provide the theory of differentiated integration with an explanatory potential that will be further critically explored below.

DIFFERENTIATED INTEGRATION IN HIGHER EDUCATION

In spite of the fact that European higher education has traditionally been assumed as an area of national remit, in the last fifteen years the EU concern with the political coordination of the sector has increased. The development of a EU system of governance 'is the result of a process guided by the logic and practice of differentiated integration' (De Neve 2007: 504). This brings to the fore a multi-layered system of decision-making responsible for enacting and stocktaking the processes and, simultaneously, persuading relevant policy actors at the national and sub-national levels to coordinate the achievement of EU policy goals.

European higher education policies have been coordinated on the basis of soft law, namely the OMC. Bologna's policy framework, while prescribing the degree structure as a recommended configuration, acts and responds to the beliefs and expectations that actors have at different levels. Bologna illustrates what has been designated as *framing* integration when it

> neither prescribes concrete institutional requirements nor modifies the institutional context for strategic interaction, but affects domestic arrangements even more indirectly, namely by altering the beliefs and expectations of domestic actors (Knill and Lehmkhul 1999: 2).

However, the adoption of policies moving around principles (e.g. transparency, comparability, legibility and instruments such as the degree structure, the credit system or the Diploma Supplement)

induces different actors' meanings and expectations (Neave & Veiga, 2013). This *framing* integration may put at risk the establishment of a more complete and far-reaching Europe, as indeed Bologna has 'resulted in 47 Bolognas with common traits' (Rudder 2010: 18). To assess the contribution of the theory of differentiated integration for understanding Bologna, we need to take into account that, on the one hand, the Bologna process, although voluntarily enacted, has support in national and institutional elements and is promoting discretionary decisions and practices, nuancing differentiated integration, and thus allowing for flexibility. Actually, national agendas reflect, more or less directly, cultural, institutional and socio-economic factors that might enact integration or differentiation depending on the 'cognition and perceptions concerning problems and their solution' (Heinze and Knill 2008: 495). On the other hand, critical attention must be paid to the fact that Bologna has been pointed out as *Flexible Integration* (at the start) and as *Europe à la carte* on the assumption that differentiation is a long lasting feature. The national appropriation of European policies (Musselin 2009) illustrates how the Bologna process is realised in and through practice. From the perspective of integration, national institutions appear as *executors* of European policies (Neave and Amaral 2012), and the characteristics of national higher education systems emerge as 'an illegitimate brake upon the drive by Europe towards a multinational system of higher education' (Neave and Amaral 2012: 15). These national brakes correspond to the enactment of national discretionary decisions and practices feeding differentiated integration.

European, national and higher education institutions share the executive power to implement Bologna. Projecting its principles is foremost a primary responsibility of national institutions (e.g. governments) as they set up the legal framework. However, higher education institutions transpose and interpret the Bologna precepts according to their own priorities. As Johan Olsen (2001) pointed out:

> A major historic development in Europe is the emergence of differentiated and partly autonomous institutional spheres with distinct logics of action, meanings and resources. Each sphere legitimizes different participants, issues, and ways of making, implementing and justifying decisions (Olsen 2001: 340).

At the institutional level, policy actors re-construct policy as they adjust the policy framework to their own agendas (Neave and Veiga 2013) while factoring in policy enactment. The establishment of the EHEA as "permanent differentiation" will be dealt with when discussing the issues of establishing a deadline for its accomplishment as the implications of flexibility in lowering the standards required for integration, challenges integration in the long run.

METHODS AND DATA

This article uses secondary analysis to understand differentiated integration with regard to the Bologna process. To this end we gathered existing data from Germany, Italy, Norway and Portugal as these countries have experienced forms of differentiated integration. Germany, Italy and Portugal are EU member states and participate in the same projects of differentiated integration (Ondarza 2013); for instance, Eurozone, Fiscal Pact, Schengen Agreement, Chart of Fundamental Rights (Ondarza 2013). In turn, Norway is a non-EU member state but its affiliation in the European Economic Area (EEA) might be considered a form of differentiated integration (Egeberg and Trondal 1999; Holzinger and Schimmelfennig 2012). In these countries there is evidence of differentiated integration in several policy areas and in this article we want to see how far this is visible in the higher education sector, where European policies are supposed to be much more on the periphery, as they continue to be under the national remit.

The qualitative data were collected from national reports and from information provided by the ENIC/NARIC gateway www.enic-naric.net/. National reports (Germany, 2005, 2007, 2009; Italy, 2005, 2007, 2009; Norway, 2005, 2007, 2009; Portugal, 2005, 2007, 2009) were produced by the signatory countries for the periodic conferences of Ministers, including the use of stocktaking to appraise the outcomes of policy enactment. Quantitative data are also used, relying on the results of a survey carried out in 2008. The questionnaire was sent to academic staff, administrators and management staff and students in seven universities located in the selected countries. The questionnaire covered four disciplines - law, history, medicine and physics. The survey was part of an in-depth study into specific dimensions involved in the implementation of Bologna. Views were sought on three aspects of the Bologna process: its impact as a policy; its embeddedness in the university setting; and the changes introduced in teaching/learning and research. In all, 2,695 individuals were approached and 947 valid questionnaires were completed and returned - a response rate of 35 per cent (see Table 2).

Table 2: Breakdown of the answers

	SAMPLE	NUMBER OF RESPONSES	RESPONSE RATE
BY INSTITUTION	**2695**	**947**	**35%**
A-PT	385	304	79%
B-PT	385	267	69%
C-IT	385	113	29%
D-IT	385	82	21%
E-GE	385	63	16%
F-NO	385	88	23%
G-NO	385	30	8%
BY DISCIPLINARY FIELD	**2520**	**872**	**35%**
Law	630	231	37%
Physics	630	226	36%
History	630	212	34%
Medicine	630	203	32%
BY THE THREE ESTATES*	**2695**	**947**	**35%**
Academic staff	840	321	38%
Students	1680	551	33%
Administrative & Management staff	175	75	43%

PT: Portugal; IT: Italy; GE: Germany; NO: Norway
Source: Veiga 2010
* Estates are 'the constituent orders in higher education' (Neave and Amaral 2012: 39)

Descriptive statistic was used and the Kruskal-Wallis test (assuming a two-sided significance of 5 per cent) was applied to detect the existence of significant statistical differences between the views of respondents belonging to different groups, i.e. university, disciplinary field and the three categories – academic staff, students and administrative and management staff. In the analysis these variables are assumed as promoters of institutional discretionary decisions and practices and, consequently, of differentiated integration, and thus explaining the proliferation of meanings attributed by those surveyed concerning the enactment of the Bologna process.

THE BOLOGNA PROCESS AND DIFFERENTIATED INTEGRATION

This section is structured into three parts: 1) the national appropriation of the Bologna process, 2) the proliferation of meanings attributed by institutional actors to the process and 3) the dimensions characterising the type of differentiated integration visible in the enactment of Bologna.

National appropriation of the Bologna process

The idea of establishing the EHEA is meant to serve the purpose of the European integration project. However, neither Bologna nor the EHEA started in a vacuum (Corbett 2005; Neave 2009). The Bologna declaration served 'a species of package deal, reflecting issues – employability, transparency and readability, etc. – already present on the agendas of most long-term Member States of the EU' (Neave 2009: 49). The theory of differentiated integration contributes to clarify how national policies, while reflecting the issues of the 'package deal', cope with obstacles to integration in European higher education. The analysis of the national reports (Germany 2005, 2007, 2009; Italy, 2005, 2007, 2009; Norway 2005, 2007, 2009; Portugal 2005, 2007, 2009) identified the need for political coordination around quality, modernisation, the need for legal changes, the restriction and enhanced rationalisation of public spending and the competitiveness of higher education systems. The development of stricter procedures for quality was underlined in the selected countries. The increased efficiency of higher education systems to reduce dropout rates was referred in the case of Germany and Italy. Concerns about the standards of international degrees (bachelor/master) awarded by their home institutions emerged in Norway and Germany. National agendas reflect coordination problems around the topics of quality procedures, efficiency and standards for international degrees. In the case of quality assurance, for instance, a European meta-governance strategy was developed to deal with the diversity of national dynamics and to ensure coherence of evaluation policies by promoting the establishment of national quality agencies and accreditation procedures (Magalhães, Veiga, Ribeiro, Sousa and Santiago 2013). These aspects interact with national factors shaping the appropriation of Bologna.

The recognition of academic degrees and diplomas is an example of how the adoption of Bologna's elements makes visible the appropriation of the process by national governments to enact the EHEA. The recognition of academic diplomas assumed a central role as an instrument for promoting student mobility within the EHEA. The topic has been in the European political agenda for more than ten years. The only legally binding element of the Bologna process – the Lisbon Recognition Convention – is not a EU instrument but rather from UNESCO and the Council of Europe. In 2007, all countries participating in the Bologna process submitted National Action Plans (NAPs) to improve the recognition of qualifications. This is an incentive measure promoted at the European level, as reporting induces comparison between states and the accomplishment of common objectives, 'but neither the guidelines nor the recommendations are legally binding, and there are no formal sanctions for countries that fail to make progress towards common objectives' (Trubek and Trubek 2005: 349).

In 2014, the European Commission acknowledged that there was no automatic EU-recognition system of academic degrees that was still dependent on national procedures influencing differentiated integration within the EHEA. In Germany, the Central Office for Foreign Education (ZAB) provides information about the European Union's general recognition guidelines supporting higher education institutions and agencies. In Italy, the Information Centre on Academic Mobility and Equivalence (CIMEA) and the ministry manage the information about this topic. Foreign academic qualifications have no legal value in Italy and the competence for academic recognition by equivalence is awarded to individual universities. In Portugal, academic recognition is also associated with the autonomy of higher education institutions and with scientific and casuistic evaluation. The Portuguese information unit for academic recognition is part of the General Directorate for Higher Education of the Ministry of Education and Science. In Germany, higher education institutions undertake the obligation of implementing the principles of the Lisbon Convention. By contrast, in Norway, the Norwegian Agency for Quality Assurance in Education (NOKUT) is responsible for recognizing foreign degree programmes. The Norwegian Competence Centre for Foreign Education at NOKUT provides information about the recognition system and acts as the recognition centre of the Council of Europe and of UNESCO (ENIC). The selected countries and the degree of autonomy of higher education institutions promoted discretionary decisions and practices enhancing differentiated integration in the recognition of academic degrees.

Proliferation of meanings attributed by institutional actors

Institutional actors re-construct policy as they adjust the policy framework to their agendas, thus enacting 'interpretive dispersion' (Neave and Veiga 2013: 67). As shown in Table 3, respondents belonging to different groups revealed different perceptions about the embeddedness of the Bologna instruments (e.g. Bologna degree structure, Diploma Supplement, Credit System and Quality Assurance Mechanisms).

There was evidence of statistically significant differences between all the groups on the perceptions about the implementation of the Bologna instruments with regard to the variables under examination. Respondents from University E (Germany) and respondents from History tended to recognize the *Bologna degree structure* as fully implemented, while respondents from University A (Portugal) and respondents from Law considered the implementation of the *pedagogic reform* more complete. The administrative and management staff tended more to consider the *Diploma Supplement* and *quality assurance mechanisms* as fully implemented. Relevant to the perceptions about the Diploma Supplement and quality assurance systems was also the institutional role of those surveyed. The university, institutional roles and the characteristics of academic disciplines – soft-pure (e.g. History) and soft-applied (e.g. Law) appeared as factors associated with local discretionary decisions and practices.

Moreover, the Bologna degree structure and the pedagogic reform might have been relevant in interaction with national factors. In Germany, for instance, parallel systems of traditional and new degrees went side-by-side and institutions 'had some say in how to define their degrees, and were thus encouraged to behave strategically' (Witte 2006: 199). The perceptions about the influence of the Bologna degree structure on the mobility of students, employability of graduates and efficiency of national higher education systems presented evidence of differences among groups of respondents according to their "university". Respondents from University G (Norway) tended to underline major impacts of the Bologna degree structure on these dimensions. The analysis of the perceptions of respondents from Norway suggests that "state-level factors" actively contribute to different views. In Norway, national policy-makers made ample reference to Norway's frontrunner position in implementing Bologna (Gornitzka 2006).

Table 3: Perceptions about the embeddeness of the Bologna instruments

Topics	Sub-dimension eliciting different perceptions	Who tended to be more positive?
Awareness about the embeddeness of Bologna	Pedagogic reform (38% fully implemented)	Uni A (Portugal), Lawyers
	Bologna degree structure (31% fully implemented)	Uni E (Germany), Historians
	Quality assurance mechanisms (26% fully implemented)	Administrative and management staff
	Diploma Supplement (19% fully implemented)	Administrative and management staff
Awareness about the impact of the Bologna degree structure	Increase mobility of students (38% major impact)	Uni G (Norway)
	Improvement of efficiency of national higher education system (27% major impact)	
	Improvement of employability of graduates (23% major impact)	
Awareness about the impact of the Diploma Supplement	Increase mobility of graduates (26% major impact)	Historians
	Improvement of legibility of European higher education systems (22% major impact)	Administrative and management staff
	Enhancement of the attractiveness of European higher education systems (22% major impact)	Historians
Awareness about the impact of the credit system based on the student workload	Improvement of the legibility of European higher education systems (31% major impact)	Administrative and management staff
	Enhancement of the attractiveness of European higher education systems (29% major impact)	Uni D (Italy)
	Improvement of efficiency of the national higher education system (26% major impact)	Uni A (Portugal)
	Improvement of employability of graduates (20% major impact)	Uni C (Italy)
Awareness about the impact of quality assurance	To progress on accreditation (27% agree)	Uni D (Italy), Academic staff
	Enhancement academic standards (25% agree)	Uni G (Norway)
	Reinforce public accountability (23% agree)	Uni E (Germany), Administrative and management staff

Source: Veiga 2010

The respondents from the disciplinary area of History had more positive perceptions about the impact of the Diploma Supplement on the *mobility* of students and *attractiveness* of national higher education systems. The administrative and management staff was more positive about the impact of the Diploma Supplement on the *legibility of higher education systems*. One might argue that these respondents perceived the Diploma Supplement in terms of its technical features, emphasising the influence of "sub-systemic factors" on policy enactment. From the perspective of the administrative

and management staff, alignment around procedures and common means of validating performance accelerates mechanical change as:

> (…) it is far easier to tack a consensus together and thus claim a pleasing convergence around the identification and charting of pragmatic operational procedures – good practice, shared provision and common administrative techniques – than it is to 'harmonize' or to 'create a common architecture' to accommodate differing and often deeply held values, visions and the priorities to which they give rise (Neave 2012: 18).

There were different perceptions about the impact of the credit system associated with the particular university and the institutional role of the respondents. Therefore, universities and the institutional role are institutional factors, which may enhance differentiated integration. The impacts of the credit system on *employability*, *efficiency* and *attractiveness* are related to the national agendas of the selected countries underpinning national practices interacting with the universities' institutional variables. The perceptions of the impacts of the credit system on the *legibility of European higher education systems* are related to the managerial culture of the administrative and management staff.

There were also differences with regard to the perceptions about the embeddedness of quality assurance mechanisms. Respondents from University E (Germany) tended to be more positive about the degree of implementation of quality assurance mechanisms to *reinforce public accountability*, and respondents from University D (Italy) tended to associate the implementation of those mechanisms *to progress on accreditation*. Respondents from University G (Norway) tended to be more affirmative about the impact of those mechanisms in the university to *enhance academic standards*. As these perceptions might be influenced by national agendas [e.g. in Norway, the Bologna reforms were incorporated in the national Quality Reform; in Italy the delays in implementing the evaluation policy held the reforms back (Moscati 2009)], we may conclude that the interaction between national and institutional factors contributes to differentiated integration. With regard to the influence of the institutional role as an aspect of nuancing practices of differentiated integration, the administrative and management staff tended to be more positive about the *reinforcement of public accountability*, while the academic staff tended to perceive that quality assurance mechanisms were aimed at reinforcing the role of *accreditation*. Academic staff is positioned centrally in higher education institutions and, according to previous studies undertaken in the United Kingdom, they interpret changes and are actively involved in using coping strategies (Trowler 1998). European and national initiatives in quality assurance favour accreditation as a major quality assurance instrument across Europe, influencing the interpretations of the academic staff. The present analysis shows that institutional factors such as the university, the disciplinary field and the institutional role are, respectively, linked to national agendas, academic cultures and the position of institutional actors within higher education institutions. These factors actively contribute to differentiated integration, as the flexibility inherent in it structures both the political process and its outcomes, making it problematic to take the structuration separately from the enactment of differentiated integration.

The Bologna process and models of differentiated integration

We have been arguing that the complexity of the implementation of the EHEA cannot be framed by only one or two models of differentiated integration, as proposed by Holzinger and Schimmelfennig (2012) as the authors build a grid with polarising dimensions that do not cover all the features of policy enactment of the Bologna process. The Bologna process was put forward as an example of *Flexible Integration* (at the start) and *as Europe à la carte* model (Holzinger and Schimmelfennig 2012). In the latter model, Bologna is argued to have differentiation as a "permanent" feature (see Table 1). However, since the deadline of 2010 to set the EHEA was established, one might question if it is really possible to envisage Bologna as a project of "permanent differentiation". The emphasis on time

landmarks pushes for 'temporary differentiation' allowing for higher levels of integration in the long run. However, the level of discretion at the national level to define procedures for academic recognition is high. Hence, ascribing relevance to "temporary differentiation", the Bologna process can be seen as an example of the *Multi-speed* model as the initiative taken by a core of member states (Germany, Italy, France and the United Kingdom) was expected to be followed by laggards (Jensen and Slapin 2011). However, the *Multi-speed* model, as it is based "only on member states" (Holzinger and Schimmelfennig 2012), is not fully applicable because non-member states are also involved in the Bologna process.

With regard to the polarisation of "territorial differentiation" versus "purely functional differentiation", the *Europe à la carte* model focuses on "territorial differentiation". However, the range of authority and control within the Bologna process engages in policy enactment European institutions, nation-states and higher education institutions. Additionally, Bologna seems to meet the features of "functional differentiation" as national and sub-national levels and it fits "territorial differentiation" as countries outside the EU treaties are involved. The *Europe à la carte* model also underlines "differentiation at the nation-state level" in opposition to "multi-level differentiation". Bologna is an example of "differentiation at the national level" (Holzinger and Schimmelfennig 2012) in line with the relevance of national discretionary decisions and practices impinging on the features of differentiated integration, as argued. However, it can also be taken as having features of "multi-level differentiation" as its steering mechanisms are enacted by a multi-level system where 'European countries are expected to develop further the multi-level governance system in those policy fields where the formal, legal and authority of the commission is limited, such as higher education' (Maassen and Musselin 2009: 10). The *Europe à la carte model* is based on "club decision-making (intergovernmental)", but it cannot be seen only as such. In reality, the Lisbon strategy subsumed the Bologna process enhancing the role of 'EU decision-making' and there is interference from the European Commission that assumes Bologna as an instrument for the consolidation of the EHEA. This model of differentiated integration also assumes that differentiation applies 'also for non-member states/areas outside the EU territory' (Holzinger and Schimmelfennig 2012). Interestingly, the model of *Flexible Integration* representing Bologna, at the start, underlined that 'EU decision-making' emphasized co-operation as a means to establish the EHEA, which was first broached at the European Ministers Conference at Warsaw in 1997 as a means to enhance European co-operation in education and training in anticipating of the adhesion of 10 new member states (Marçal Grilo 2003). However, the idea of establishing the EHEA derived from intergovernmental discussions focused on how the European dimension interlocks national higher education systems. It is arguable that Bologna also assumed at the start some features of 'club decision-making (intergovernmental)' as the establishment of the EHEA was a strategic goal of the EU set out before the Bologna declaration in 1997, let alone that setting up of the EHEA was aligned with the 1992 Memorandum on Higher education in the European Community. Table 4 summarizes the shortcomings of Holzinger and Schimmelfennig's categorisation of Bologna.

Table 4: Dimensions categorising Bologna and tensions

		DIMENSIONS									
1	Temporary	Permanent									
2	Territorial										Functional
3	Differentiaion at national-level								Multi-level differentiation		
4	Only inside EU-treaties					Also outside EU-treaties			Only inside EU treaties	Also outside EU-treaties	
5	EU-decision making						Club-decision making (intergovernmental)				
6	Only member states			Also non-member states	Only member states	Also non-member states		Only member states	Also jurisdictions outside EU		
	1	2	3	4	5	6	7	8	9	10	
Models	**Multi-speed**	**Multiple standards**	**Avantgarde Europe**	**Core Europe, Concentric circles**	**Flexible integration**	**Variable geometry**	**Europe à la carte**	**Optimal level of jurisdiction**	**Flexible co-operation**	**FOCJ**	
Examples	Many in secondary law	In secondary law, e.g. environmental policy	EMU, basic rights charta	EMU; EEA; associated states	Enhanced co-operation, Bologna (at the start)	Schengen	Bologna	Competence allocation in Lisbon Treaty	EUREGIOS	No example	
References	Grabitz (1984); Stubb (1996, 2002)	Scharpf (1999)	Club von Florenz (1996)	Schäuble and Lamers (1984)	Centre for Economic Policy Research (1995)	Stubb (1996)	Dahrendorf (1979	Fischer and Schley (1999)	Holzinger 2001	Frey and Eichenbrger (1996, 1997)	

Source: Adapted from Holzinger and Schimmelfennig (2012)

Bologna can be described as a differentiated integration project fitting the *Europe à la carte model* (see Table 4 the dimensions highlighted in grey). However, the analysis found tensions rather than polarisations in some dimensions (1. temporary versus permanent; 2. territorial versus functional; 3. differentiation at the national-level versus multi-level differentiation; and 5. EU decision-making versus club decision-making). These tensions appear to underline how differentiated integration enacts decisions and practices that challenge policy implementation as a linear policy process.

CONCLUSION

The establishment of the EHEA, based on incentive measures promoted by the EU, while relying on soft law methodologies 'aimed at initiating or facilitating reforms to be conducted at the national level' (Dehousse 2002: 10), reveals problems of coordination with regard to the levels influencing the process of structural change. Comparison between states induces the enactment of the EHEA and brings to the fore the relationship between European, national and institutional agendas. The analysis showed that in Germany, Italy, Norway and Portugal there is evidence of decisions and practices of differentiated integration resulting from the enactment of the EHEA. As argued, there are different national rules and norms to handle academic recognition while the autonomy of higher education institutions plays a role in providing flexibility to the management of academic recognition. While in Germany, Italy and Portugal similar discourses on institutional configurations (e.g. the assumption that autonomy is the privileged form for institutions to respond to changes in the environment) point to the need for institutional procedures for academic recognition; in Norway the responsibility is entrusted to a national agency.

By taking on board the concept of policy enactment, this article contributes to potentially broadening the concept of differentiated integration. While underlining how policy gets "done" requires the involvement of multiple reference points located at different levels and beyond the European Union, it also emphasises national and institutional discretionary decision-making and practices that affect patterns of differentiated integration. The contribution of the theory of differentiated integration to understanding Bologna as a process of policy enactment towards the establishment of the EHEA relies on the role attributed to factors actively involved in differentiated integration. Discretionary aspects associated with policy enactment underline how national agendas and academic cultures are influenced by their own dynamics and disciplinary values. The perceptions of institutional actors vary depending on their institutional position, from academics in the central management of higher education institutions to the administrative and management staff. In spite of the fact that the latter actors tend to be on the periphery, they create and manage organizational and professional routines moving to the centre of the institutions (Clark 1983). The national appropriation of the Bologna process and its interpretation by academics, students and administrative and management staff play a crucial role, acting as institutional mediators of differentiated integration. Thus, the analysis contributed to testing the theory of differentiated integration by analysing how national and institutional discretionary aspects contribute to influencing policy enactment.

The contribution of this article to enriching the theory of differentiated integration relies on its emphasis on the need to replace the polarisations of dimensions featuring the the models of differentiated integration (Holzinger and Schimmelfennig 2012), we suggest that this dichotomy could be replaced by a continuum between the poles of the dimensions. As the EHEA assumes hybrid features, its analysis as a project of differentiated integration brings to the fore either the need to review the models or to re-conceptualize Bologna as a EU instrument of political integration. The enactment of Bologna towards the EHEA is a process that unfolds dynamically rather than by stages, and the models of differentiated integration should capture the tensions in a spectrum. Rather than polarising, for instance, "temporary" versus "permanent" and "territorial" versus "functional", the

understanding of differentiated integration would gain from a more flexible and idiosyncratic approach, thus opening avenues for further research.

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Research Article

Policy Change and Differentiated Integration: Implementing Spanish Higher Education Reforms

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Abstract

Over the last two decades, the Spanish higher education and research sector has undergone profound changes, but little is known about the implementation of recent reforms and how university actors responded to policy change and institutional pressures within a changing resource environment. Drawing on the insights from institutional and resource-dependence theory, we show how Spanish public universities have coped and implemented their human resources policy over the past 15 years and whether individual universities converged in their employment behaviour. The aggregate evolution of university employment trends reveals adaptation to the institutional normative pressures and financial constraints. Our results also show that some universities are more responsive to changes in the resource environment than others, and that compliance is not the only strategic response. In so doing, we aim to contribute to existing research on strategic behaviour of actors and coalitions facing policy change, and to the construction of analytical bridges between environmental changes (institutional and economic) and organisational dynamics underlying policy implementation.

Keywords

Higher education; organisational change; policy change; Spain; university reforms

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University reform has been, and still is, a hot topic in the political agenda in many European countries. Financial constraints and greater demands for accountability of publicly-funded organisations have led several governments to explore new models of higher education (HE) policy, in some cases inspired by new managerialism (Paradeise et al. 2009). The pressures for international benchmarking have often been combined with measures to provide universities with greater autonomy. This is meant to enhance competition and responsiveness of higher education institutions to their environments (Frolich et al. 2013). In the context of debate about performance and excellence, Spanish HE policy has moved from a very decentralised system of hiring and promotion towards a model that includes elements of centralised evaluation in the hiring process[1]; however, the degree of autonomy that universities wield in terms of hiring and promoting faculty is still considerable (Estermann et al. 2011).

In the past two decades a series of higher education and research policy reforms and initiatives have affected human resource models, management, recruitment, promotion and governance in the Spanish university system. In parallel, the Spanish HE environment has undergone significant changes that include the establishment of new academic research institutions (Cruz-Castro et al. 2012; Sanz-Menéndez and Cruz-Castro 2012), often under the form of semi-private foundations, focused on research rather than teaching. These new institutions, having flexible human resource management, have led to more differentiation and competition in the sector. More recently, the economic crisis and the public budget consolidation are producing additional pressures in the university realm (Cruz-Castro and Sanz-Menéndez 2015). In sum, there is a growing demand for accountability, excellence, and relevance when it comes to publicly funded research. At the same time, little is known about the effects of recent reforms on the strategic behaviour of university actors facing policy change.

We set out to achieve two objectives in this article. First, by monitoring how universities adapt to policy reforms in relation to hiring and recruitment, we aim to analyse the strategic responses of Spanish universities facing policy reforms in human resources management over the last 15 years. Second, we identify the initial trends and effects of the recent economic crisis. Since our focus is on the management of human resources, we examine the rules for recruitment and promotion of faculty and the diverse ways in which universities have coped with policy changes. Based on an approach combining institutional and resource dependence theories, we explore how individual Spanish universities deal with institutional reforms, and empirically analyse their management of human resources. This issue is relevant for theory and practice. Instead of merely focusing on policy outcomes, we shed light on the effect of policy on the changing role of actors, their resources, and their responses to environmental changes. In so doing, we attempt to build analytical bridges between environmental changes (institutional and material) and organisational dynamics. From the policy side, we believe that higher education policy design can benefit from the feedback provided by empirical research about university behaviour in the face of change.

We organised the study as follows. We first review the relevant literature with a focus on classifications and typologies of universities, and on two of the classical approaches for analysing organisational change: resource-dependence and institutionalism. Next, we present the basic features of the Spanish university system and a brief historical account of policy reforms. We then elaborate the methodology, with an empirical analysis of employment in public universities over the past decade to identify adaptation patterns and differentiated strategies within policy frameworks. Finally, we offer some preliminary conclusions.

ANALYTICAL BACKGROUND

The classification of universities into different models has received much scholarly attention and, indeed, they are useful to broadly locate universities descriptively. Drawing on Burton Clark's (1983) and Johan Olsen's (2007) classifications, Michael Dobbins and Christoph Knill (2011) propose three ideal-types taking into account the organisational structure of universities, including personnel and funding issues, the state regulatory approach, and the relations between universities, stakeholders and society. Key to their proposed types is the allocation of autonomy. They distinguish between the state-centred model, the Humboldt model (self-governing community of scholars) and the market-oriented model. These models reflect different visions of universities and their organising principles. Within this classical classification, the Spanish universities would fall into the *Humboldt model*.

Taking variations in strategic autonomy further, Richard Whitley (2012) applies the concept of organisational actorhood[2] to distinguish among hollow, state-contracted, state-chartered and private-portfolio universities. His ideal types are closely related to decision-making capacities regarding resources, employment, research and teaching at the organisational-level *vis-à-vis* governance relations. Whereas hollow universities would largely lack actorhood and have no weight in major decision spheres, state-chartered ones would have greater autonomy. Hence, the latter, while being formally set up as separate organisations with their own governance structures and powers to award degrees, hire staff etc., do so within the general framework of the national HE system and conform to its policies. The private-portfolio universities would have the greatest discretion with respect to the state, yet they are also constrained by scientific elites in providing project funding and reputational assets. Within Whitley's classification, the Spanish universities could be depicted as *state-chartered organisations*.

Classifications may serve to depict general perspectives and locate particular systems descriptively, but they tend to be static in nature. Organisational change in higher education can be analysed from two complementary perspectives: Resource-dependency theory and neo-institutionalism (Gornitzka

1999; Gornitzka and Maassen 2000a). Institutional theory emphasises the value of conformity to the institutional environment and adhesion to external rules, predicting isomorphic[3] or convergent dynamics across organisations in the same field[4]. Resource-dependence theorists stress the organisational need for adaptation to control resource flows, and how organisations make active choices to manage resource dependence. Institutional theory states that the cognitive, normative, and regulative structures and activities lend essential meaning and stability to social behaviour in a common organisational field. We believe the combination of these two approaches is appropriate for examining organisational internal processes and shifting coalitions, especially since a key empirical dimension of university autonomy is the decision-making capacity over employment and human resources.

Applying institutional and resource dependence approaches to studying strategic responses to institutional pressures, Christine Oliver (1991) argues that organisations are not limited to conformity and passive adaptation to institutional pressures. Accordingly, strategic responses would include: Acquiescence, compromise, avoidance, defiance and manipulation. The choice of responses would depend on the origin and causes of the pressures, the means of implementation, and the perceived gains and costs. Following Oliver, we highlight the following as relevant for analysing university reactions to HE policy reforms. Modern universities share three key features in relation to their environment: a need for external resources, the multiplicity of actors or constituencies with whom they relate, and, as professional organisations, a quest for autonomy. As universities are strongly dependent on external financial, material and human resources, the lower the gain (in terms of resources) perceived as a result of conformity to institutional pressures, the greater the probability of resistance. In other words, if conformity enhances economic efficiency and social legitimation, then acquiescence will be the most likely response. Moreover, since universities relate to several constituents — the state, the students, the academic profession and elites, interest groups, unions, etc. — acquiescence to institutional demands from one constituent is unlikely if it implies conflict with others. Thus, universities would be more likely to engage in compromise and avoidance strategies to cope with multiple conflicting pressures. Finally, strategies other than conformity may respond to a perceived loss of decision-making discretion for the organisation, especially in core organisational decisions such as resource allocation and acquisition or hiring and promotion. When pressure is interpreted as a threat to autonomy, it is likely to spawn a variety of avoidance and defiance strategies, including 'window-dressing' or 'decoupling' behaviour given the fact that universities as public institutions only have a limited capacity to resist legal changes.

Nicoline Frolich and her colleagues (2013) argue that more attention should be given to the interaction between the environment surrounding the organisations and the ways in which the environment is interpreted by the organisation. One way is to view strategic processes as bridges between environments and organisations, explicitly acknowledging the possibility of differences rather than homogeneity among entities sharing an organisational field. We use these elements of organisation theory as a way to test if universities belonging to the same classificatory type and subjected to similar institutional pressures (governmental reforms and policy actions) could employ different strategic responses in line with some expectations described in the literature. Universities might not behave as a homogenous group. Local conditions may affect the perceived gains and costs in the context of internal power coalitions. The case in point is human resources management, that is, the hiring and promotion strategies adopted by universities.

THE SPANISH UNIVERSITY SYSTEM AND RECENT POLICY REFORMS

Table 1 presents key features of universities, with special attention to human resource management in the Spanish HE system.

Table 1: Institutional features of the public university system in Spain: Snapshots

FEATURES	DESCRIPTION
Publicness	The Spanish university system is similar to other European systems like those of France, Italy, and even Germany, where public universities account for the greatest share of the system. For a more recent and detailed comparative analysis see: Estermann, Nokkala and Steinel (2011)
Governance and autonomy	It is a state-delegated model managed by professional academic corporations, constitutionally autonomous from Government but subjected to public sector rules as regards budgeting, human resources management, contracting, etc.
Funding	Universities are financially dependent on regional governments. On average the direct transfers represent up to ¾ of the total budget, the rest comes from students' fees and research activities. Direct funding is not provided on the basis of performance (Gonzalez Lopez 2006), but mainly on the number of students and type of degree. While direct funding is not mandatory earmarked, the universities have to guarantee first the civil servant salaries (faculty and staff). The contribution of research overheads to their overall funding is small.
Status of academic staff	The university academic employment structure is dual: - Temporary professors or researchers working on fixed-term contracts, under lectureships, PhD fellowships or temporary contracts for research projects. - Permanent (tenured) professors (with civil servant status and life employment guaranteed by the State) after winning a public "tournament". (Mora 2001). There are no positions under the model of the "tenure track", as a probationary system for a fixed term period, after which the subjects go "up or out".
Capacity of departments to manage its own human resources and positions	Departments have some capacity over the creation of temporary positions but very little about the creation of new permanent ones, a function highly centralised in university authorities, which are democratically elected. Departments or Institutes do not manage their positions in an autonomous way to fulfil objectives. If a permanent faculty member leaves the institution, the position is often completely lost for the Department and new rounds of negotiations with authorities start from scratch to try to get a new one in competition with other units at the university. This context of authority distribution creates some pressure for the Department to support and reward "loyal candidates", who will not leave or go away; in doing so, departments minimize the risk of losing positions that are costly to get. There are no salary negotiations in academic recruitment. In Spain, as in many other European countries, permanent university faculties are civil servants and their salaries are set up on the basis of bureaucratic rules. This feature limits the negotiating capacity of departments and its ability to incentive their members once recruited. Evaluation of performance in research and teaching is poorly developed and set up in a national exercise; it has only positive consequences for those well evaluated, with very small increases of salary (Osuna et al 2011).
Tournament call and selection procedure for tenure	The creation of a new permanent position has to be approved by the university central administration and is allocated to the department after a complex political process and negotiations. Once approved, the Department controls to a large extent the final choice of the successful candidate. From 1983-2001, the way of filling out the new permanent position was a public call for a tournament. All PhDs could apply and compete in a *quasi* public exams system. The composition of the examining committee was determined by a national Law (5 members, being the Chair and one member proposed by the Department). 2002-2007 *Habilitation* system for tenure. Centralised evaluation by seven-committee members randomly selected by lottery. 2008- Accreditation system by a central agency for both tenure and temporary academic positions.

Source: Sanz-Menéndez et al. (2013)

Spain's public university system, before the transition to democracy, followed a hollow model. The central government coordinated almost all aspects of higher education: admission rules, curricula, exams, recruitment and promotion of professors, salaries, appointment of Rectors, etc. National exams centralised access to permanent faculty (civil servant) positions. Successful candidates were matched with available positions nationwide, and academic authority was structured around professorial chairs. A dual structure governed in terms of academic employment, yet most positions (over 80 per cent at the time) were locally managed, with fixed term contracts controlled by Chairs. Universities were "hollow" organisations.

Over the last three decades, three sets of university reforms were introduced. The first was in 1983, with the University Reform Law (LRU); the second in 2001, under the Organic University Law (LOU); and the most recent, in 2007, was a partial modification of the LOU. All three stipulated changes to available academic positions and options for managing human resources.

The 1983 reform, promoted by the social democrat government, contained some elements of the Humboldt model, viewing the university as a self-governing community of scholars (Sánchez-Ferrer 1997). It established that university academic staff should be civil servants (Mora 2001) with two different categories [Professor (CU, *Catedrático de Universidad*) and Associate Professor (PTU, *Profesor Titular de Universidad*)]. An additional category (Contracted Assistant, *Profesor Ayudante*) was created as a temporary or fixed term contract (for a maximum of 4 years), mainly for PhD students, and another for part-time teaching (Contracted Lecturer, *Profesor Asociado*). Given the weak management and prevailing collegial control, the 1983 reform released the departments from the control of a single chair, introducing a more decentralised means of access to permanent academic positions through selection committees, which the department effectively controlled, even though they included members of other universities[5].

In the 1980s and 1990s, Spain's university system grew considerably (number of universities, both public and private, student enrolment, and faculty positions). For example, the number of students in higher education doubled between 1983 and 1998, surpassing enrolment of 1.5 million. During roughly the same time, however, a series of problems emerged: corporatism and clientelism, inbreeding, parochialism, quality and excellence deficits, and lack of technology transfer, among others (e.g. Bricall 2000; Navarro and Rivero 2001). Such shortcomings, in the context of the transfer of public university supervision to the regional governments, led the central government to promote reforms. The Conservative Government launched the 2001 University Law with the objectives of improving governance and responsiveness, increasing quality, and fighting academic inbreeding, which at the time was perceived to be a very important flaw in the recruitment and promotion system[6]. In the area of academic human resources, in addition to the civil servant positions the Law established new types of contractual arrangements (visiting professor, contracted doctorate professor, etc.). The Law allowed universities to decide how to manage these human resources, by hiring and recruiting based on the traditional civil servant positions (mainly Spanish citizens) with life employment, or to start hiring with potentially more flexible labour conditions and salaries under private employment regulations.

The 2001 reform also recentralised the academic evaluation and selection process, and strengthened the role of the regional authorities, many of which thereafter enacted legislation about higher education.[7] To gain access to the academic profession with civil servant status, a centralised national *habilitation* exam system was set up. National Committees of seven tenured professors were randomly selected through a lottery procedure to evaluate and habilitate (successful) candidates as associate or full professors by means of these national exams (Zinovyeva and Bagues 2012). *Habilitation* was a requirement for tenured professorial employment at any Spanish public university. The Law further established that some new positions for contracted professors would be managed locally, while a central agency (ANECA) was created to provide accreditation to PhDs willing to be

contracted under those arrangements[8]. In theory, the system would foster academic mobility and reduce the inbreeding bias, thereby levelling the power of departments and strengthening external academic ties[9]. The new design did not take complete control on hiring away from the universities, but it facilitated a more competitive "quality control" over the pool of eligible candidates. In short, a dual structure for academic staff was established. While the Rectors rejected the new *habilitation* system and opposed the government's reforms, in parallel, universities and departments developed strategies to cope with the "new rules of the game"[10]. As departments lost control over *habilitation* and accreditation evaluation processes, they gained discretion in more strictly departmental decisions regarding tenure appointments and contracts among those habilitated or accredited.

The Social Democrat Government promoted the latest partial university law reform that took place in 2007. It abolished the *habilitation* system, introducing instead an accreditation process for all civil servant and contracted positions (Bosch 2006). ANECA, or a regional counterpart, was to carry out *accreditation*. However neither *habilitation* nor *accreditation* meant automatic access to tenure or contracted positions. The universities (departments) specified the positions to which habilitated or accredited professors could apply, and the final selection among candidates was left largely to the departments. The accreditation system (with success rates close to 70 per cent in the first round) gave rise to further decentralisation of the hiring and promotion processes at the university level. The power to create the positions remained in the hands of university management.

Having briefly outlined the different systems of hiring, promotion and access to civil servant positions, our attention now turns to the diverse strategic responses to these reforms. Universities could either take advantage of the 2001 stipulations to increase academic faculty through newly contracted staff categories, or they could continue granting civil servant status and life employment to newcomers. In theory, using the contractual categories would provide universities with more flexibility in terms of human resources management, particularly given the dominant employment stability model, and more ability to deal with potential changes in the environment (such as the reduction of funding). On the other hand, new civil servant academic positions would reduce the university's flexibility. The first approach could be implemented through a managerial strategy, supported by a coalition promoting flexibility and the search for quality over other criteria; the second one would extend life employment providing security but lessen the university´s ability to cope with a potential budget crisis.

Spanish Universities have moved out of the "hollow" organisational category into a category that resembles state-chartered organisations in Whitley's types, where collegial communities (Humboldt model) often preclude opportunities and capacities of coherent management. Overall policy reforms over the last twelve years have produced limited effects in changing the way universities function. Still, universities made choices, following different strategies in attempts to arrive at a balance between civil servants and contracted professors. Aside from policy reforms, the emergence of new academic research institutions signalled significant changes in the universities' institutional environment. A new generation of government-sponsored centres was sown in the early 2000s, most often with the status of private or public non-profit foundations, at the national or regional level. Empirical data show that these centres have a number of common features (Sanz-Menéndez and Cruz-Castro 2012, Cruz-Castro et al. 2012), including flexible human resources management: they function under private labour market laws, with performance-based salary structures, individual negotiation and have no civil servants. Some distinctive characteristics involve their funding structures, whereby sources are diversified (between public block grant, competitive funding and private funding). Universities have thus seen their boundaries redefined, which has given rise to cooperation and competition modes with the new centres.

The most relevant change, however, stems from the ongoing economic crisis and the reduction of public funding, with the mandatory implementation of the budget balance principles in university finances. Three significant consequences are the suspension of civil servant openings without the

authorisation of the Regional Governments, changes in student fees, and new professor workload measures approved by the central government in April 2012 (Cruz-Castro and Sanz-Menéndez 2015). In sum, legal changes over the last two decades have influenced the capacity of universities to manage their human resources through introducing a variety of contractual figures and providing more room of manoeuvre.

ADJUSTMENT TO ENVIROMENTAL AND POLICY CHANGES

In this section we address the general evolution of the employment in Spanish universities over the last 15 years, with attention given to the effects of more recent crisis in terms of hiring and recruitment. To do so, we focus on the specific combination of civil servant versus contractual status as the strategic response of Spanish universities towards environmental changes, especially in light of the general policy trend already present before the onset of the crisis.

Methodology

To explore the existence of adaptation patterns to policy frameworks, our empirical approach combines data analysis at the macro-level and at the level of individual public universities. The key indicator regarding human resource management was taken as the number of academic staff with labour contracts (fixed term or open-ended) as compared with civil servants (life employment), in the academic faculty. In other words, we determine the ratio of Contract (C) to Civil Servant (CS). Before the crisis, the university controlled the hiring process, and chose between creating new permanent positions or temporary contracts. These choices had clearly different consequences. In the event of budgetary problems, universities could adjust (fire, dismiss, or not renew) the fixed term contracts under model C. The CS model afforded no chance of dismissal. Taking the option of growth with C potentially provided certain universities more room to manoeuvre, to increase turnover, to be more selective, and to avoid rigidity in the management of human resources. At present, in the context of crisis, universities have lost control over the creation or replacement of civil servant positions.

For our data analysis, we took into account the reforms, the changes in types of available positions, and in the recruitment process approved by Law in December 2001. In 2007 the changes mainly affected the procedure surrounding civil servant positions (abolishment of *habilitation*). Our first empirical target, then, is the overriding pattern of employment behaviour of universities *after* 2001. The impact of the economic and financial crisis (in terms of funding from public sources) became evident in 2010/11. For this reason we chose the period between 1998/99 and 2010/11, obtaining data (made available annually) from the *Estadística de Educación Universitaria* produced by the National Statistical Office (INE). Additionally, to identify the effects of the crisis on the universities we used the data for the two following years (2011/12 and 2012/13), obtained from the Ministry of Education, Culture, and Sports.

We acknowledge that policy initiatives have delay effects, which take time to become visible in the data, and should also note the existence of some anticipatory behaviour of universities in the context of the policy process. In this sense, at the end of 2000 the universities reacted to the Parliamentary debates regarding the approval of the new Law, many of them acting to consolidate academic staff with civil servant positions. After approval of the Law, in December 2001, it took a few years before the new national *habilitation* system became operational and universities adopted a strategy in response. As regards the budget, the year 2010 still had an increase in comparison with 2009 in aggregate terms for public universities. It was only in the budget of 2011 that the general reduction became a reality, meaning that the reduction of staff was noticeable the following year.

Public statistical sources do not provide longitudinal data, but rather annual stocks of professors employed. This enabled us to monitor the stock of public university academic staff at the end of each year/academic course without considering the flows (entries and exits). We should underline that the number of students is a main variable influencing the amount of resources provided to public universities by their respective regional government. Our analysis is developed in two stages using descriptive statistical methods: after comparing the evolution of universities in terms of academic staff employed, we analyse the specific patterns of change in composition (contracted versus civil servants professors).

The impact of changing environments and policy reforms on academic staff recruitment/hiring policies

To assess the extent to which Spanish public universities[11] adapted to changes and responded to reforms in the hiring models available, we examine the balance between contracted and civil servants academics. Firstly, the different environments and changes in the number of students are identified. Secondly, changes in the academic staff at public universities is analysed for the whole period to detect different patterns. Thirdly, to compare the trends in the environment and the evolution of staff, the type of responses by universities is determined. Finally, for a better look at university responses, the different use and balance between academic staff categories is assessed.

Aggregate evolution of university system in Spain (1998-2010)

The last decade of changes in the Spanish public university system could be summed up in a series of snapshots. The number of students stopped growing; the expansive trend prevailing for decades had come to an end. The national aggregate number of enrolments decreased by 8 per cent, public universities losing 13 per cent of their students between 1998 and 2010. The number of students is a key element in the financial environment of Spain's public universities. While Regional Governments provide funding and direct transfers, the general funding models they implement to finance universities stipulated the number of students as the basic determinant of the main stream of funding (González-López 2006).

Universities secure approximately 80 per cent of their income from public sources; of this amount two thirds comes from the Governments' direct appropriations transferred as a basic support (block grant) for the teaching mission (Fundación CYD 2012); 15 per cent comes from tuition. Research mainly depends on public competitive funding and industry contracts. Most direct transfers (although the money is not earmarked) must first pay the salaries of academic and non-academic civil servants; therefore, the room to financially manoeuvre is more limited when the proportion of civil servants is higher. In fact, universities can only dismiss or fire the staff under the contract models. To respond to budget cuts, investments and operations costs could be cut. Debt cannot be issued without approval of the Regional Governments — something that was unlikely in the context of the crisis.

Against this funding context, reduction in student numbers meant reduction of income over time. Adjusting to this expectation may have been slowed down by the general trend, until 2009, of growing resources allocated by the Governments (CRUE 2012) and the high growth in public funding for research. Yet after the official start of the economic crisis and the annual reduction in the transfers, beginning with the budget of 2011, the effects became evident. According to a university survey regarding their budget outlays in 2009, 2010, and 2011, non-financial income dropped 8 per cent, current expenditure transfers declined 9.4 per cent, and capital transfers dropped 11.1 per cent. Regional dispersion was considerable (Parellada 2013). A more recent analysis (CC.OO. 2014),

comparing 2010 and 2013 aggregate budget levels of public universities, estimated reduction of the public budget at 13.7 per cent (amounting to 1,400 million euros), which would be 22.4 per cent in constant real terms (including inflation). One third of the budget reductions entailed the reduction of labour costs, reducing the number of employees (and their salaries) (Cruz-Castro and Sanz-Menéndez 2015).

The evolution of university employees in the context of student enrolment

Between 1998/99 and 2010/11, the stock of academic staff in Spanish public universities increased by almost 29,100 (from 79,700 to 108,800). In the same period, the aggregate number of students in public universities declined as a general trend, an average of 13 per cent. Certain specific situations across universities, however, can be distinguished.

In just eight universities enrolment grew. The common feature of this small set of growing universities (Group A) is that they were created in the late eighties and early nineties, as an alternative to the large old universities in big metropolitan areas (URJC, UC3M, UPF, UPO), or to introduce HE options in medium size cities where they did not exist previously (ULP, UJIC, UMH, UPCT). As expected, academic staff grew in all of them.

A second, more heterogeneous group of universities (Group B) reduced their number of students in absolute trends in line with national average (13 per cent). Within this group we find large old universities and medium size universities in all regions, all affected by the reduction of population cohorts and drop in access rates to university studies after years of economic growth and buoyant labour markets. Some showed an extraordinary increase in terms of academic staff (while losing students) with increases of 73 per cent (UA), 57 per cent (UH), 51 per cent (UJ), 42 per cent (UCLM), and 37 per cent (UPV and UBU). A secondary subset showed a moderate increase in total academic staff, or even stagnation (UAM, UPM, US, UGR, UCO), and a final subset of universities underwent a small decrease (UB, UAB, UPC, ULL).

The third group of universities (Group C) shares the common feature of undergoing serious reduction — more than 25 per cent — in enrolment. Altogether, this group includes a dozen universities, most having over 30,000 students in 1998 (UNIOVI, USC, UCM, UZ, EHU/UPV, USAL), though a few are medium-sized new universities (UAL, UDL). Again, in some cases there are discrepancies between the trend in the evolution of students and academic staff: the most striking ones were UAL with 25 per cent reduction in students and 40 per cent increase in staff in the period; or UDL, with 28 per cent reduction in students and 33 per cent increase in staff. Other showed smaller reductions (UOVI, UCM) or stagnation (USC, UVA, USAL) in academic staff. This noteworthy trend, not of reduction, but rather of a significant increase, is an observation calling for further discussion.

Organisation theory analysts would expect an adaptive response of universities to the changing environment, leading to a process of convergence (isomorphism) in the organisational field. However, as the evolution of employment numbers reveals, this was not the case. Despite the fact that most universities were losing students (with the expectation of reducing financial transfers from Governments based on student number), most significantly increased their academic staff, including the number of permanent civil servant academics who could not be dismissed at a later date. This phenomenon should be considered in the context of increased public budget allocated to universities during the previous decade. However, what matters is the choice about the composition of employment types, which calls for examining the evolution of the different universities with respect to their aggregate employment and its categories.

EMPLOYMENT, RECRUITMENT, AND EVOLUTION OF ACADEMIC STAFF IN SPANISH PUBLIC UNIVERSITIES

While the stock of academic staff in Spanish public universities increased by almost 30,000 in the period under analysis, only 6,700 had permanent civil servant positions (entries would have been more, considering retirement). The aggregate increase in the period was close to 37 per cent, but its internal distribution by status [permanent versus temporary] was significantly different, and changed over time (see Figures 1A and 1B.).

Figure 1: Academic staff of Spanish public universities by main categories. 1998-2012

Part A: Evolution in absolute numbers
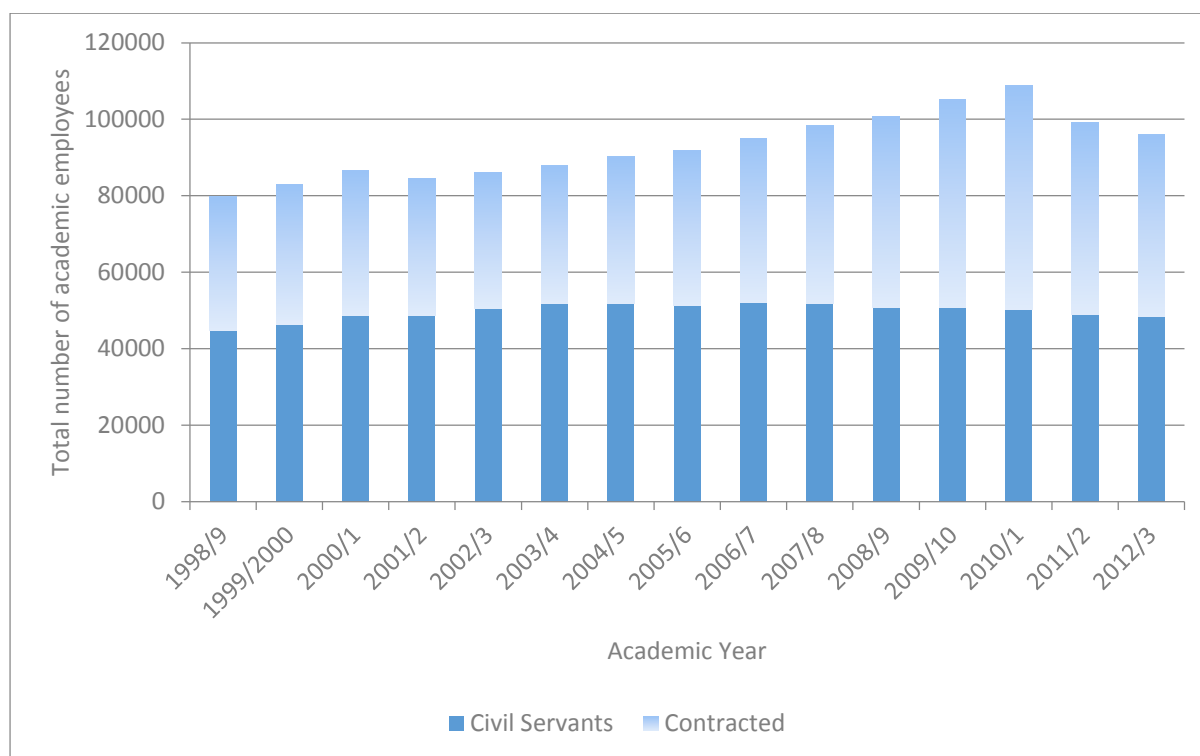
Before the university reform became an issue, in the first three years of our observation, the rate of change (in index numbers) was the same for academic civil servants and contracted employees. The prevailing trend between 2001 and 2004 is characterised by a significant reduction in the number of contracted staff and an increase in the number of civil servants. This data could only be understood as the university system's reaction to the political debates regarding changes in the recruitment models. Just before the approval of the new Law (21 December 2001), and once the debate in Parliament was developing, many universities decided to approve new permanent positions and issued the calls before approval of the legislation, still under the previous decentralised selection system. The effect was a reduction in temporary contracted academic staff over the same years; many professors previously under contracts attained civil servant status. At the end of 2004, the process was almost over. Since that year there has been stagnation or even a reduction in the number of permanent academic staff, and a radical increase in the number of contracts, in those years completely under the university's control. The national *habilitation* system in use between 2002 and 2007 had a delayed effect in the statistics, visible between 2004 and 2009. Many universities opted to increase academic staff through the new contractual types.

*Part B: Evolution represented by Index numbers (1998/99 = 100)*
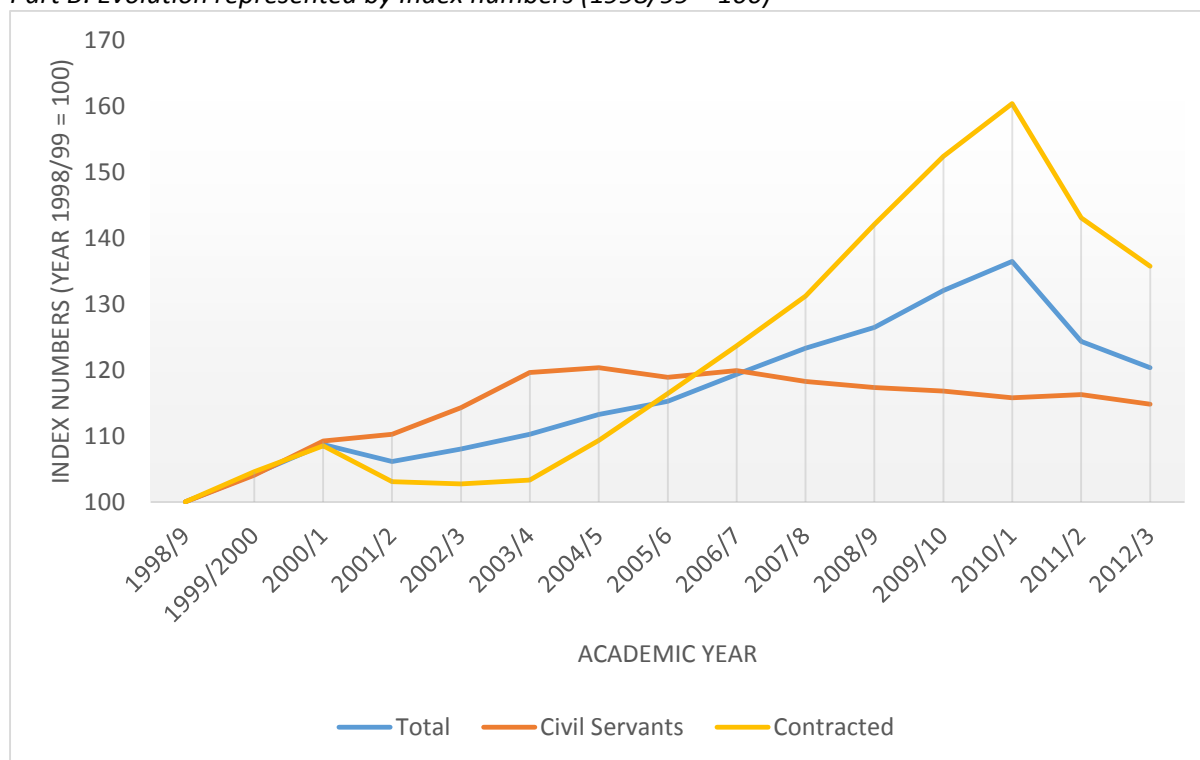
Source: INE and MECD. University Statistics, various years

Then the crisis came. The year 2010/11 was the peak in terms of employment of the total academic staff of public universities. It was followed by significant reduction, to 96,000 in 2012/2013 (12,800 less, mostly contracted academic staff). Potentially, universities that chose to increase capabilities with contracted academic staff were in a position to better adapt to the consequences of the crisis. Those with a bigger share of civil servants among its academic staff had less room of manoeuvre, due to the comparatively rigid employment situation. While most universities dismissed people with fixed-term contracts, universities with higher shares of civil servants under more serious financial problems approved collective layoffs of contracted employees (e.g. UPM). In a context of shrinking resources, personnel costs, which differ across employment categories, are of paramount importance. The salary of most contracted PhDs is lower than the cost of permanent staff, which made it a wise choice for the time being. Promoting staff growth through contracted employees, instead of civil servants, proved the most adaptive response to changes in the environment and to institutional pressures. Universities that increased their ratios of C/CS regarded the choice among human resources management strategies in the years of budgetary growth as an opportunity. In analytical terminology, this could be seen as the "compliance" or "conformity" response. However, many universities did not respond with conformity, and some even increased the absolute number of civil servants and reduced the ratio of temporary versus permanent academic staff (even in the context of a radical reduction of students, the main funding source). This pattern is interpreted as avoidance or defiance. This type of response grossly reduced flexibility in human resource management in the face of the crisis.

As we can observe in Figures 2A & 2B the C/CS ratios were already different at the beginning of the observation period (1998/99) and became more diverse at the end (2010/11). In the upper right area, we see universities that increased their academic staff through contracts, while the group of universities that have favoured the increase of civil servant academic staff is in the lower left; a reference on the evolution of the national average is provided in this figure[12]. Again, it is important to note that this rigid employment structure offers almost no managerial capacity to refocus the areas of expertise of universities by shifting human resources.

Figure 2: Ratio of Contracted / Civil Servant academic staff in Spanish public universities. Changes between 1998/99 and 2010/11
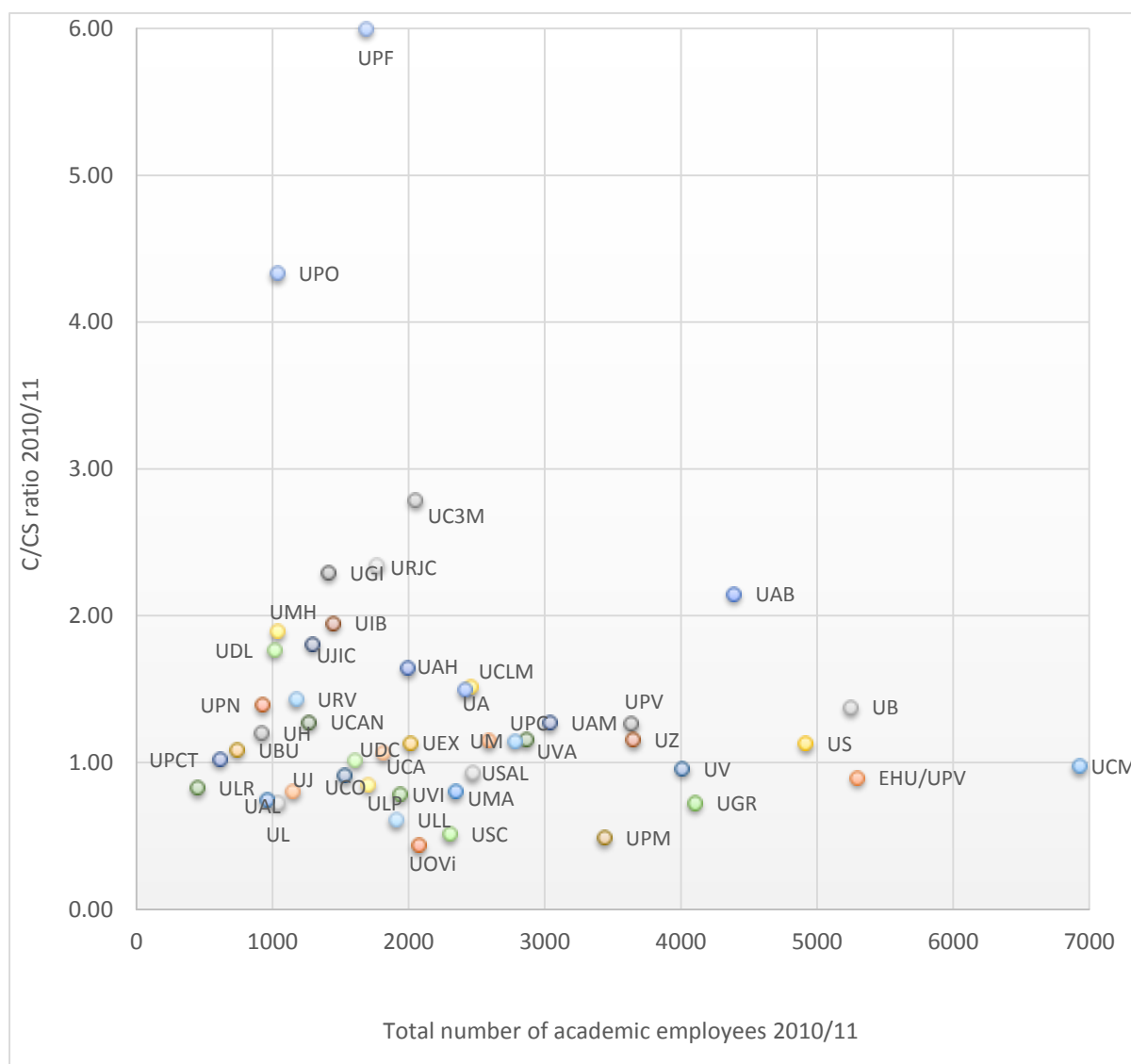
Part A: Position all universities
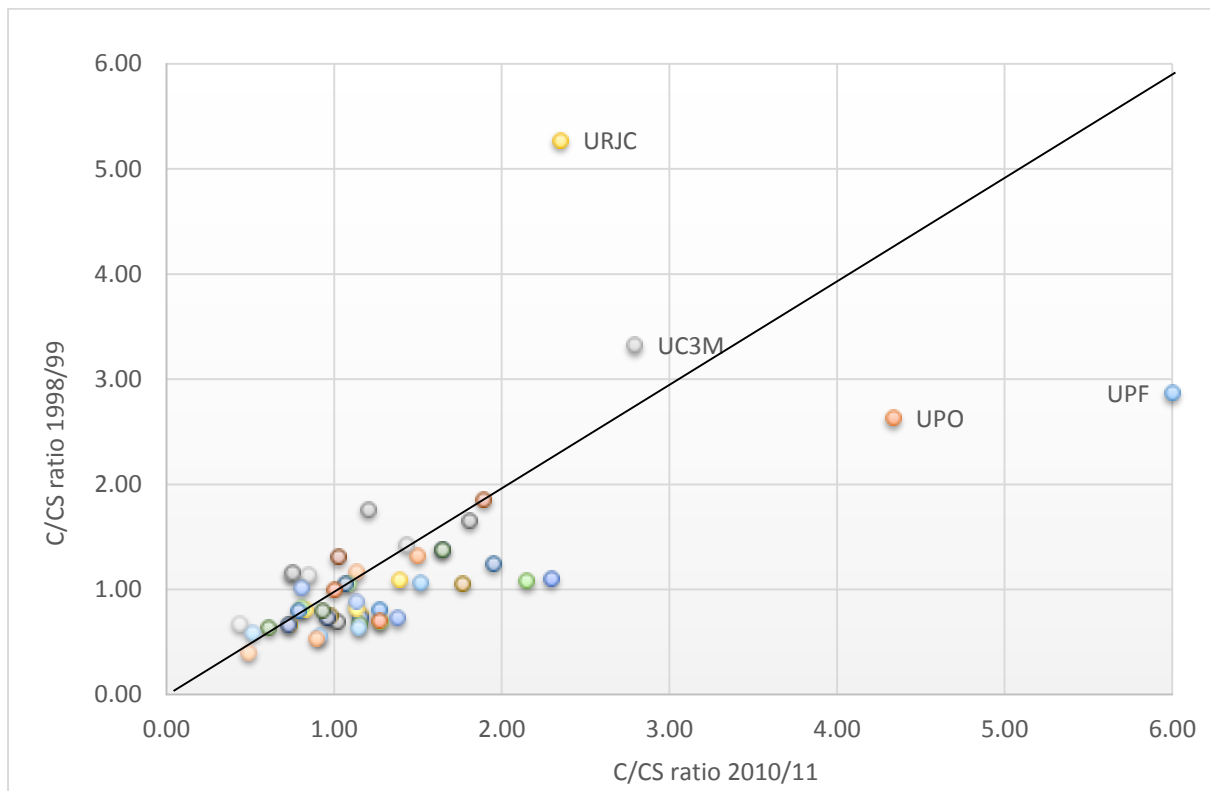
Part B: Magnifying some universities (exclude 4 high values)
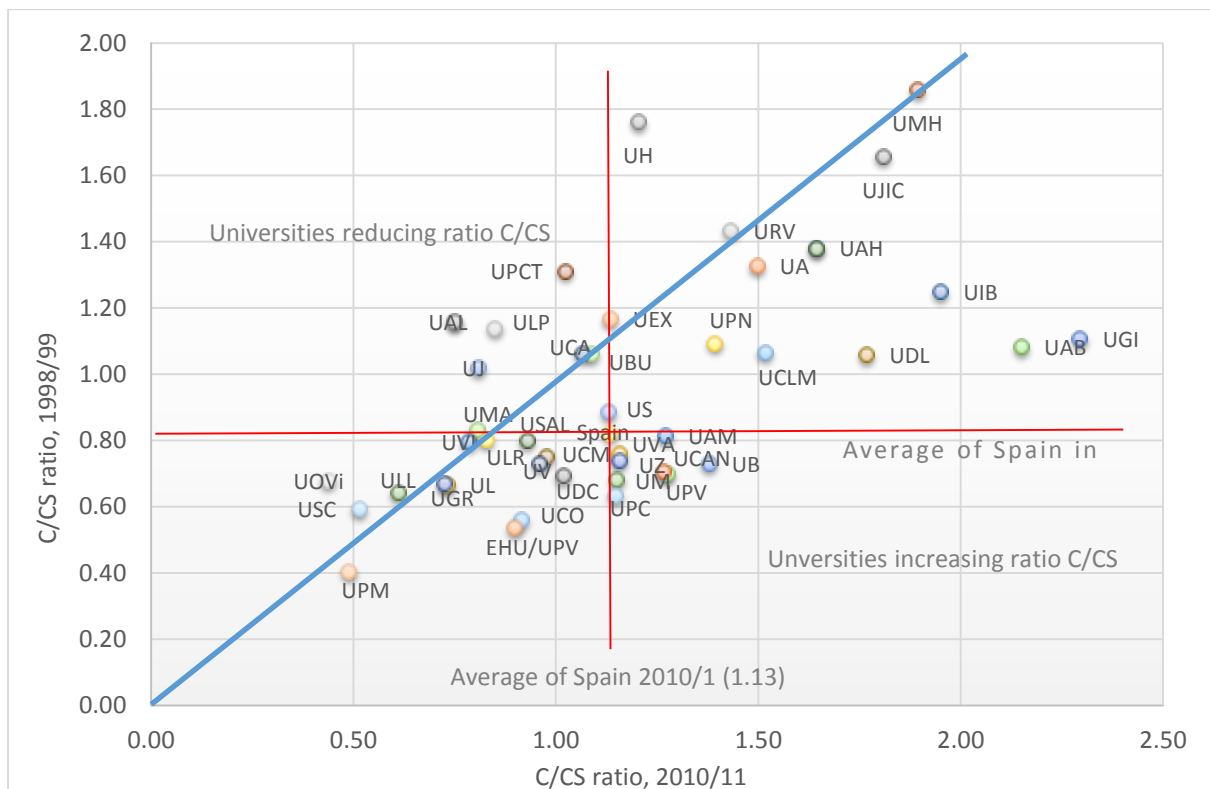
Source: INE and MECD. University Statistics, various years

These results do not appear to correlate with the size of the university. Just before the crisis, for instance, in the UPF there were six times more contracted academics than civil servants, while in others, like UOVi and UPM, there were less than 0.5 contracted per one civil servant (Figure 3).

Figure 3: Ratio of Contracted / Civil Servants academic staff of Spanish public universities, by total size of the university, 2010/11

Source: INE. University Statistics, 2010/11.

Since the onset of the crisis, the C/CS ratio has diminished in all Spanish universities and the national average has gone down as a part of the adjustment process, reflecting that universities reduce where it was easier[13]. However, in terms of specific universities, the diversity of strategies followed as a response to policy reforms in the last decade, had left them in a very different position at the time of budget cuts. Having a higher C/CS ratio implies more strategic flexibility to cope with budget cuts in better conditions. In theory, a lower ratio means having less flexibility to choose. Universities with low levels of flexibility are potentially in a worse position to be selective in terms of performance assessment (see Figure 4 representing the ratios "before" and "after" the crisis).

Figure 4: Ratio of Contracted/Civil Servant academic staff in Spanish public universities. The effects of the crisis: Changes before (2010/11) and after (2012/13)
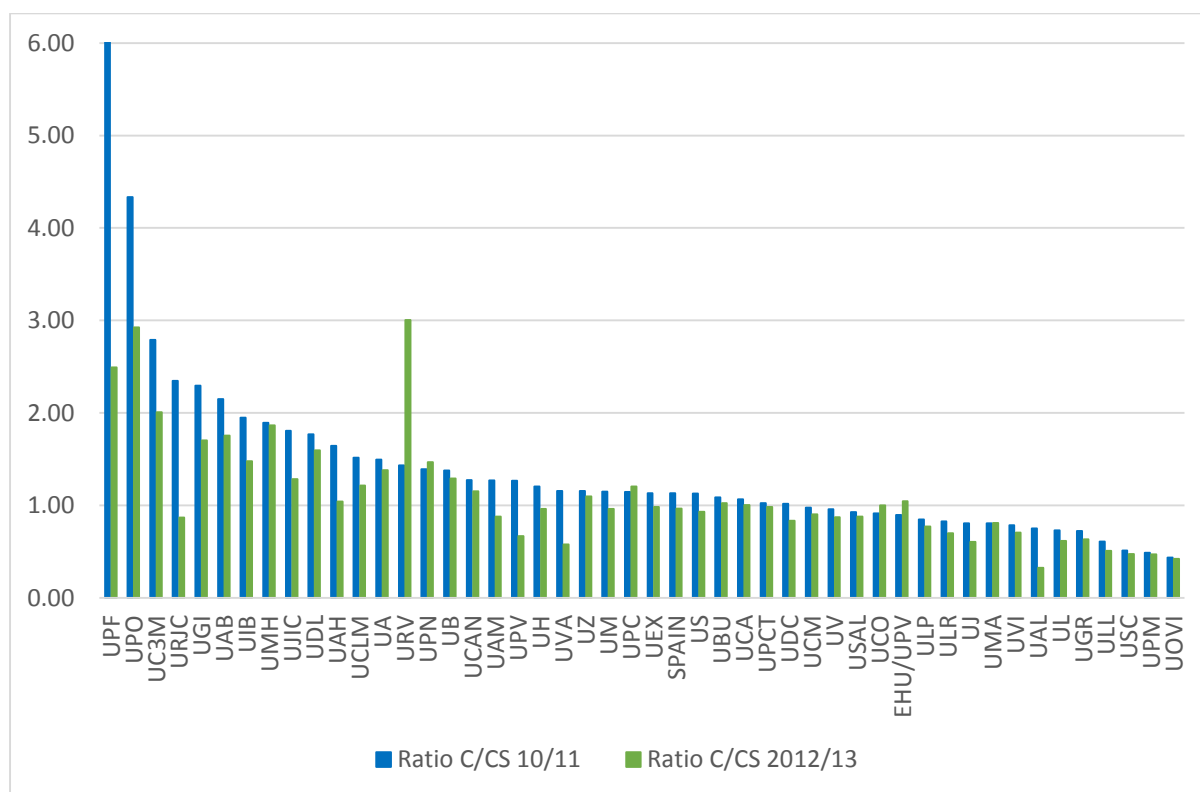
Source: INE and MECD. University Statistics, various years.

CHANGING THE ACADEMIC EMPLOYMENT MODEL IN SPANISH UNIVERSITIES

Beyond the evolution of aggregate figures for academic employees in Spanish public universities, we identify different dynamics or responses regarding the different types of academic categories. Some universities, despite changes in terms of student numbers, have accelerated and reinforced the trend of increasing staff employed in civil servant categories. The number of the two main permanent civil servant categories (CU & PTU, respectively equivalent to full professor and associate professors) has increased by over 6,500 in the 10-years period of study. The promotion of academic staff through internal university negotiations explains the significant increase in the stock of permanent faculty in the two top permanent categories. This behaviour could be interpreted as a way of ignoring the changes lending more flexibility to human resource management. Still, the degree of divergence with regards to the institutional pressures varies: One group of universities is seen to significantly increase the number of students, while another group, despite a drop in enrolment, increased the number of academic permanent staff. In this case, the environmental pressures pushed in one direction but many universities apparently decoupled.

It should also be mentioned that, in aggregate terms, a number of universities reduced the total number of academic civil servant employees over the period 2001-10 (among them UB, UCM, UB, UPC, ULL, UOVI) mainly due to a lack of replacement for those professors reaching retirement age. This group of universities (most of them in Catalonia and Madrid) that reduced academic staff under the civil servant categories, usually radically increased the number of new categories of contracted academic staff (contracted PhD, visiting professor, researcher, etc.). Regardless of enrolment, these universities opted to increase their flexibility in terms of managing the resources and their power *vis-à-vis* the interests of corporate groups and unions, thereby improving their ability to respond to

subsequent budget reductions. Finally, a major group shows a pattern of higher increases in permanent versus contracted categories, expressing resistance of the governing coalition in those universities to pressures from main stakeholders outside the universities. The effect was a radical reduction of the flexibility and management capabilities of universities.

To sum up, the evolution of the aggregate employment and its structure in public universities provides an opportunity to test responses to institutional pressures in different contexts. The institutional pressures create opportunities for internal coalitions in the universities, with effects and changes that modify the coalition in subsequent iterations. The current economic context offers an opportunity to see whether some universities made choices that put them in a better position to cope with new environmental pressures resulting from the on-going financial and economic crisis.

CONCLUSION

We set out to explore how Spanish universities responded to HE policy reforms concerning human resources. The aggregate evolution of employment shows a general trend of adaptation to institutional normative pressures, reflecting a sharp increase in temporary employment over the last decade, together with a stagnation of the civil servant employees. Yet some universities have moved in the opposite direction, reinforcing the civil servant base. Despite being the same population and the same organisational field, our results indicate that institutional pressures do not produce a single type of response (*sensu* Oliver): acquiescence, compromise, or avoidance. Years of observation after the onset of the crisis, however, reveal that some universities are more sensitive to changes in the resource environment. Some have reduced their payroll (contracted), whereas others mainly reduce investments and operational costs.

Acknowledging the general limitations of country case research, as well as the aggregate level of analysis adopted (university versus faculty or departments), we believe our findings have analytical and policy relevance. Our analysis of Spanish universities is more supportive of frameworks that view organisations as active participants that respond differently to common pressures, as opposed to strong "conformity" models. We might venture to name some determinant factors: a) Universities with less pressure from their Regional Governments might perceive that compliance or conformity do not increase efficiency or produce legitimation gains, among them UM, UGR, UOVI, etc.; b) Larger and older universities might have developed more complex constituencies that defend the "traditional model of human resources management" (civil servants) that helps support coalitions, such as UCM, USAL, etc.; c) Small and new universities may appear more coherent in terms of their management's ability to implement flexible models of hiring, helping universities to respond better to new excellence and quality performance challenges, like UPF, UC3M, UPO, UMH, etc..

On the policy outcomes side, in retrospect, the consequences of the 2001 reform appear complex. Indirectly, the Law promoted the expansion of contractual temporal academic hiring (albeit with a diversity of rationales among universities). However, the reform was largely based on the policy principle that coercive institutional pressures would lead to compliance and conformity from universities. The *habilitation* system was based partly on distrust and control, and policy change did not reveal clear "winners". Moreover, when the organisation perceived institutional change as leading to a conflict of goals, its likely response was compromise, if not avoidance (Oliver 1991). The top universities, recruiting and promoting on the basis of meritocratic and universalistic criteria, may have perceived the reform as an administrative hurdle for good candidates (leading them to try more flexible contracts). By contrast, universities that opted to promote local candidates, with less regard of their relative merits, may have viewed the reform as an obstacle in their internal labour markets. In both cases, the perceived balance of the reform was that of sacrificed decision-making capacity in a key governance issue, and in some universities "decoupling"[14] was the strategic response.

The lesson offered to Governments revolves around institutional autonomy: Instead of hindering institutional university autonomy, they should modify material resources as an incentive mechanism. Some authors even question the extent to which organisational change is the outcome of deliberate reform (Gornitzka and Maassen 2000b). The problems of steering the higher education sector through regulations from above links well with Clark's argument of a sector that is bottom-heavy and difficult to reform. Furthermore, university managers may play critical roles interpreting environmental pressures that subsequently translate into organisational action (George et al. 2006). Indeed, no reforms from the last three decades have attempted to change the core of university funding. Funding higher education through the number of students is almost certain to have severe sustainability consequences.

In James March's categories[15], one could argue that a main driver to the observed changes in Spanish universities was "regeneration" dynamics, reflected in the demographic turnover of scholars socialised in accordance with different principles and practices. In coping with a common environmental condition regarding resources, Spanish universities nevertheless engaged in different employment-strategy behaviours. Public funding reduction evolved into an institutional pressure from the policymaking sphere, although the real financial impact was not yet visible until the recent economic crisis. Temporary contract academic positions existed before, but the 2001 reform and its implementation signalled the gradual cementing of a two-track employment system in the Spanish higher education sector.

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Annex: University Acronyms

UA	Alicante	**ULP**	Palmas (Las)
UAB	Autónoma de Barcelona	**ULR**	La Rioja
UAH	Alcalá de Henares	**UM**	Murcia
UAL	Almería	**UMA**	Málaga
UAM	Autónoma de Madrid	**UMH**	Miguel Hernández de Elche
UB	Barcelona	**UOVi**	Oviedo
UBU	Burgos	**UPC**	Politécnica de Cataluña
UC3M	Carlos III	**UPCT**	Politécnica de Cartagena
UCA	Cádiz	**UPF**	Pompeu Fabra
UCAN	Cantabria	**UPM**	Politécnica de Madrid
UCLM	Castilla-La Mancha	**UPN**	Pública de Navarra
UCM	Complutense de Madrid	**UPO**	Pablo de Olavide
UCO	Córdoba	**EHU/UPV**	País Vasco
UDC	Coruña, A	**UPVL**	Politécnica de Valencia
UDL	Lleida	**URJC**	Rey Juan Carlos
UEX	Extremadura	**URV**	Rovira i Virgili
UGI	Girona	**US**	Sevilla
UGR	Granada	**USAL**	Salamanca
UH	Huelva	**USC**	Santiago
UIB	Islas Baleares	**UV**	Valencia (Est. General)
UJ	Jaén	**UVA**	Valladolid
UJIC	Jaume I de Castellón	**UVI**	Vigo
UL	León	**UZ**	Zaragoza
ULL	La Laguna		

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[1] For the analysis of the scientific performance evaluations in Spain see for example: Sanz-Menéndez (1995), Cruz-Castro and Sanz-Menéndez (2007) or Osuna et al. (2011).

[2] In this context, organisational actorhood is understood as the combination of two sets of collective capabilities (Whitley 2012): First, to exercise discretionary authority over the acquisition, use and disposal of resources; and secondly to generate particular kinds of problem-solving routines that are organisation-specific.

[3] In sociological terms, isomorphism is defined as the similarity of processes or the structure of one organisation to those of another, be it the result of imitation or independent development under similar constraints. There are three main types of isomorphism: normative, coercive and mimetic.

[4] An organisational field is defined as a 'set of organisations that, in the aggregate, constitutes a recognised area of institutional life; key suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services or products' (DiMaggio and Powell 1983: 145).

[5] Two out of five members (usually chair and vice-chair) were from the department; the other three members would be randomly selected among the pool of permanent professors of public universities in the same knowledge area, so the establishment of networks among the academic elites within disciplines and across universities became important. Access was by an open tournament procedure, but the management of the process limited competition and usually the participation in the exams was only from a single candidate.

[6] For an empirical analysis of access to tenure and promotion under this system see: Cruz-Castro and Sanz-Menéndez (2010) or Sanz-Menéndez et al. (2013).

[7] In this sense, the most active regional governments have effectively influenced the institutional environment of universities in their regions. The decentralisation of competences to this level has meant that funding models may show variations across regions, but homogeneity within them.

[8] It was established that universities could have up to 49 per cent of their academic staff under contracts (non tenured). This accreditation requisite represented an important change with respect to the previous situation in which departments were free to contract temporary academic staff with their own criteria.

[9] The ANECA was replicated in different regions; then having local institutions providing local accreditations.

[10] For instance, most of them created new positions massively in the year before the approval of the 2001 law to promote their local candidates to associate and full professorships under the old department-controlled committee model (the figures mentioned at the time were "10,000 new tenured positions approved by universities to resist the reforms", but now we could confirm than the aggregate number was much less – see section 4). After the approval, the dominant university strategy was to jeopardise the implementation of the new system through the control of the employment demand by not offering new positions to which habilitated candidates could apply.

[11] We do not include in the analysis the private universities because they represent a small part of the system (approx. 12 per cent of the undergraduate students in 2010) and they function under a significantly different institutional environment. We also have excluded the public open (virtual) teaching university (UNED).

[12] Since in many regions there is only one university, we consider the reference of the national average more suitable than regional ones.

[13] With the current data available it is not possible to analyse changes in contracted staff in disaggregate terms by type of contract to see if cuts affected some categories more than others; this could be an interesting issue for further research.

[14] John Meyer and Brian Rowan (1977) use the term "decoupling" which consist of adopting a structure for purposes of legitimacy but not implementing it in practice. The behaviour of many Spanish public universities during the *habilitation* period is an example.

[15] March (1981) identified six key drivers of organisational change: rule following, problem solving, learning, conflict, contagion, and regeneration.

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Commentary

Funding Frontier Research: Mission Accomplished?

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Abstract

Despite many warning voices pointing to the organizational weaknesses of this instrument, the European Research Council (ERC) is considered a success story of European research policy. How did that come about? This research note takes a look inside the ERC's administrative body, the ERC Executive Agency. Based on personal experience, the text provides information how tensions between scientific and administrative expectations towards the performance of this agency could be alleviated, and how a unique social fabric consisting of double compliance, complementary efficiency, and two-tier loyalty emerged. The note ends with some cautious remarks concerning the ERC's future.

Keywords

The European Research Council (ERC) has been carefully watched by advocates (Winnacker 2012; Celis and Gago 2014) as well as scholars from different disciplines (Groß, Karaalp and Wilden 2010; Lorz and Payandeh 2012; Nedeva 2013; Luukkonen 2014). One particular concern regards the mismatch between the institutional format chosen for running the ERC and the specific needs and requirements of a basic research-funding organisation (Vike-Freiberga et al. 2009; Hofmann 2012).[1] As a recent study on the process of "institution building" of the ERC notes, in the beginning there was 'tension between the academic community's perception of due procedures […] and the way in which they were practised across the range of EU spending activities' (Gornitzka and Metz 2014: 100).

The studies mentioned above either concentrate on the early phase of the ERC or on the interpretation of its legal foundations. This research note takes a different stance. It aims at answering the question how the resulting tensions actually 'alleviated over time as the institution gains experience' (Gornitzka and Metz 2014: 101). Its focus is on the ERC Executive Agency, because it was within this administrative body where the tensions were mostly alleviated. Over the course of four years (2010-2013), I have been working at the agency's premises as a scientific advisor to the President of the European Research Council. While this role was not formally foreseen in the legislation defining the Scientific Council (European Commission 2007), I have been involved with decision-making at the top of the ERC. My work also led to numerous encounters with agency management and staff, and I have observed many parts of the agency's business. However, since I have not been a member of the ERCEA staff, I did not have access to management meetings, and I was not exposed to communication within the agency. In this unique position as an "inside outsider", I have observations that would allow me to elaborate how the ERCEA managed to deal with these different expectations.[2]

Put broadly, the scientific and the administrative world have different understanding in how things should be run. Bureaucratic organizations are expected to fulfil their tasks following administrative measures; this is even more so the case with an agency that is set up along principles commonly known as "new public management". The scientific world, on the other hand, expects swift solutions in order to open up space for research projects, particularly if those are expected to tackle the frontiers of science, often without seeing the broader implications of such an *ad-hoc* approach. The expectations differed in regards to compliance with rules, efficiency of getting things done, and loyalty towards the

institution. In a way, this is a version of the old contradiction between scientific unpredictability vs. well-defined procedures in bureaucracies.

Looking at how the ERCEA adapted to the specific needs of the ERC will provide a better estimate whether it is the appropriate format for the long term; it will also provide insights to the more general question, that is, whether the institutional formats currently available in the European administrative space (Balint, Bauer and Knill 2008: 678) are generally suitable to the policy instruments emerging in science policy. The remainder of this note is structured in the following way: it first shows some general features of the executive agency format; then I will discuss at three instances how the agency format had to be adapted in order to conduct the daily business of the ERC; finally, I will provide some preliminary conclusions.

WHAT ARE EXECUTIVE AGENCIES?

In the early 2000s, the European Commission drastically redefined its organizational identity (European Commission 2000; Kinnock 2004; Kassim 2008). Among other issues, the practice of delegating services to a vast number of so-called technical assistance offices had to be terminated. Instead, Council Regulation 58/2003 established the right of the Commission to set up executive agencies (EA) (Council of the European Union 2002; König 2014). Between 2004 and 2007, six EAs have been established, most of which have been reorganized since then (see Figure 1).

Figure 1: Lifeline of executive agencies[3]

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 -
		EACEA (Education, Audiovisual and Culture EA)								
IEEA (Intelligent Energy EA)				EACI (EA for Competitiveness and Innovation)						EASME (EA for Small and Medium-sized Enterprises)
	PHEA (Public Health EA)			EAHC (EA for Health and Consumers						CHAFEA (Consumers, Health and Food EA)
			ERCEA (European Research Council EA)							
			REA (Research Executive Agency)							
		TEN-T EA (Trans-European Transport Network EA)								INEA (Innovation & Networks EA)

One interesting feature of the EAs is their adaptability. While the number of EAs did not change, almost all of them have been substantially reprogrammed (including name changes), usually with the advent of each new Multiannual Financial Framework (European Court of Auditors 2009: 11). They are deployed to eleven policy areas, including health, energy, entrepreneurship, and infrastructure, as well as basic research funding, academic exchange, and educational issues (Table 1). In total, executive agencies authorised 4.73 billion EUR of committed appropriations in 2012 (amounting to 3.28 per cent of the overall appropriations of that year).

Table 1: Commitment appropriations of executive agencies per policy domain for 2013[4]

	Commitment appropriation … … in policy area	Figure (Mio)[5]	Share
EACEA	15 (Education and Culture)	453,85	16.88
	16 (Communication)	27,40	10.46
	19 (External Relations)	148,78	3.12
	21 (Development and Relation with ACP States)	0,00	0
	22 (Enlargement)	23,32	2.14
EACI	2 (Enterprise)	92,52	8.09
	6 (Mobility and Transport)	80,64	4.88
	32 (Energy)	82,67	11.55
EAHC	17 (Health and Consumer Protection)	64,83	10.52
	20 (Trade)	0,50	0.49
	21 (Development and Relation with ACP States)	8,00	0.54
ERCEA	8 (Research)	1.090,09	13.29
REA	2 (Enterprise)	268,04	23.43
	8 (Research)	219,35	3.00
	15 (Education and Culture)	858,72	31.93
TEN-T EA	6 (Mobility and Transport)	1.317,56	79.80

Mostly, EAs conduct calls, organize the evaluation of applications or tenders, and set up and execute granting and (internal) auditing. They save administrative costs by using cheaper workforce (primarily contract staff) for programmes that make particularly intensive use of human resources, allowing the parental Directorates General (DGs) 'to focus on legislative and strategic tasks in policy formation and monitoring' (European Court of Auditors 2009: 13). In a nutshell, they are "distribution machines", following a standard organizational model, and closely monitored by the Commission. Their independence is limited (Busuioc 2013: 24), and in terms of compliance, efficiency, and loyalty, they are strictly aligned to Commission specifications.

## THE ERC EXECUTIVE AGENCY – SAME BUT DIFFERENT?

Similar to its sister institutions, the ERCEA is devised to distribute funds. But there are differences. Instead of being flexible to changing tasks, it is tasked with continuously managing only one programme. And in addition to one parental DG, it is dealing with an entity that is unique in the European administrative space, the ERC Scientific Council. In order to respond to these specific demands, it had to adapt its governance structure, its organizational setup, and its procedures and resources.

Governance Structure

Technically speaking, "ERC" is an umbrella term for three entities: The specific programme, which is part of the EU Framework Programme (Council of the European Union 2006); the ERC Scientific Council, 'composed of scientists, engineers and scholars of the highest repute' (European Commission 2007 (4) and art. 5(1)), setting the scientific strategy and monitoring the process of selecting proposals for funding; and the ERC executive agency, which is responsible for all administrative tasks concerning the ERC (Council of the European Union 2002). For each of the three, legislation has foreseen its own decision-making bodies.

In order to foster the relationship between the ERCEA and the Scientific Council, informal links between the two entities were forged: two members of the Scientific Council were formally appointed members of the agency's Steering Committee; vice versa, the Director and agency management participated in the regular Scientific Council plenary meetings. But early on, it was also felt that additional governance structures were required to establish regular lines of communication and exchanges between the two entities (see Figure 2).

Figure 2: Entities of the ERC and their legal decision-making bodies (author's compilation)
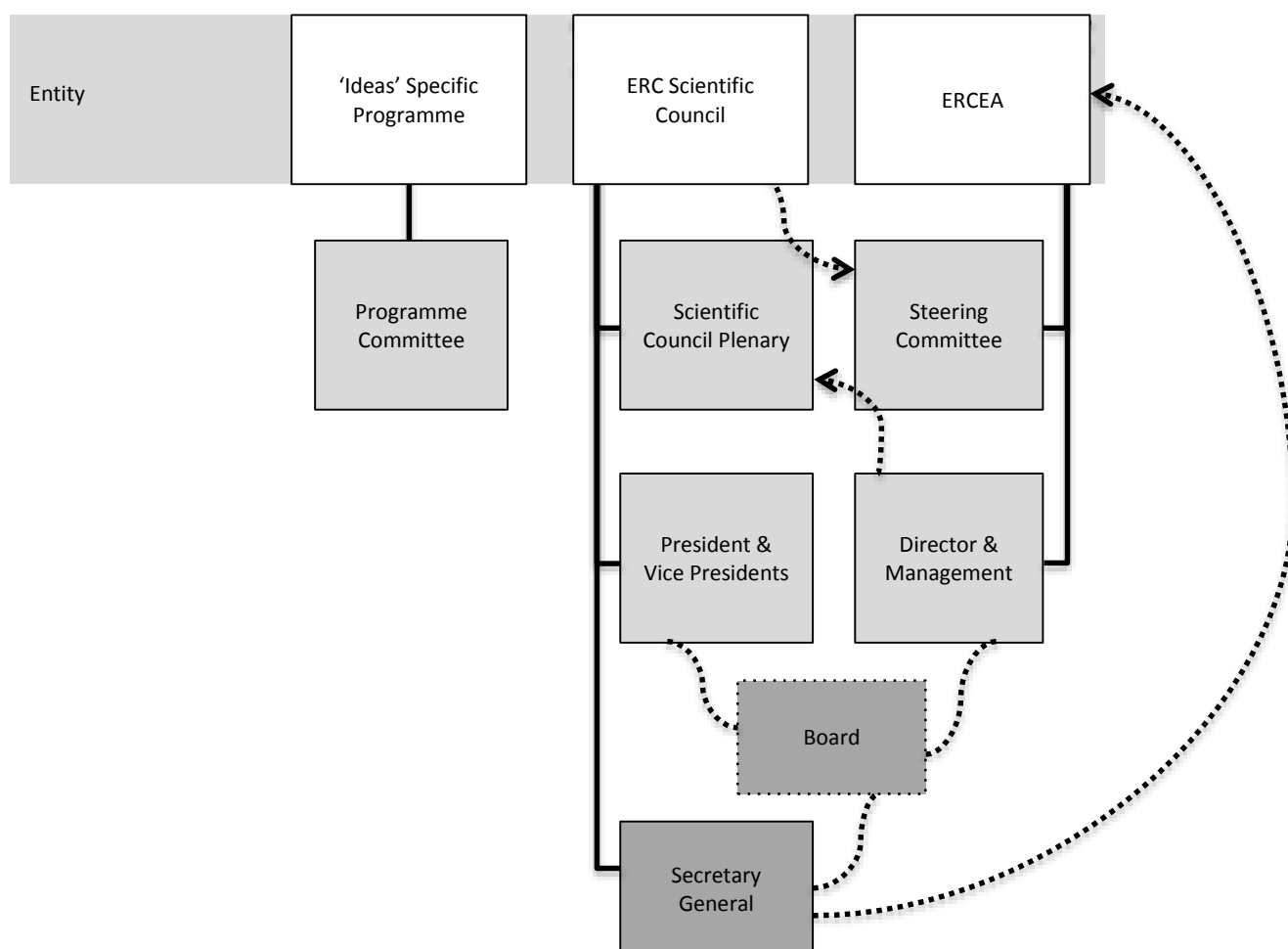
Note: dotted lines indicate informal arrangements and expected ascendancies.

Since its members worked on a voluntary basis, the Scientific Council had insisted from the very beginning to create the position of the Secretary General in order to 'assist the Scientific Council in ensuring its effective liaison with the [agency] and with the Commission, [and] in monitoring the effective implementation of its strategy and positions' (European Commission 2007 (5)). Selected by the Scientific Council, the Secretary General was working full time at the premises of the EA and was paid by the Commission. In the early phase, he was the ears and eyes of the Scientific Council within the agency and played an important role in getting the evaluation procedure going, and also in briefing the newly hired staff on the principles of that procedure. However, the way the Secretary General was situated inside the agency was not ideal (Winnacker 2012), and, anyway, its role diminished over time. My personal observations confirm that there was little influence on the agency in later years. Between 2010 and 2011, the position was vacant for almost two years, and it has been dissolved in 2014.

Originally, the ERC Board was established in order to prepare the Scientific Council Plenary meetings. Over time, it gained more power, since it provided a regular meeting point between the Scientific Council leadership and the ERCEA Director and management. Certainly, that was the result of closer working relations between the Scientific Council leadership and the ERCEA management, as much as it reflected the subtle change from establishing the ERC from scratch to working towards a regular agenda. The Board is now formally acknowledged in the legislation (before 2014, it was not an official body in either of the ERC entities). It was the sounding body where complaints from the agency side as well as from the scientific community could be openly discussed, where common positions would be forged, and also where decisions were made even though they had to be adopted by the Scientific Council plenary (to which the Board reported). The more intimate Board allowed agency management to actively influence the decision-making process, more so than the crowded Scientific Council plenary meeting.

Organizational setup and procedures

The parallel existence of two entities reflects the idea of shared responsibilities: whereas the Scientific Council is supposed to devise the scientific strategy and to monitor the evaluation procedure, the ERCEA's Steering Committee would ensure that the agency would run smoothly along Commission regulations. The problem is, of course, that those regulations were devised for an agency format with different purposes. The most obvious deviation from the standard format can be found in the ERCEA's organizational setup. Unlike the other executive agencies, the ERCEA maintains a range of horizontal units, notably IT, communications, legal matters, and policy advice. This is in contradiction to the basic idea of the EA format, where centralised units within the parental DGs provide such services. To the Commission, centralising the horizontal units is, of course, not only an issue of cost efficiency. An agency with its own databases, with its own lawyers, and with its own public relations will more easily build up its own identity.

Of particular interest is the unit with the title "Support to the Scientific Council". Indeed, preparing the Scientific Council plenary meetings was what this unit was initially supposed to do (which is why it is internally still called "the Council secretariat"). But with a growing agenda, the Scientific Council increasingly relied on this unit to write reports on policy issues, to prepare speaking points and statistical evidence, and to provide advice on different matters concerning research policy (Open Access, scientific fraud, etc.). The unit's size grew accordingly (it has now around ten policy officers covering a wide range of expertise, with some of them having extensive experience in European R&D policy), and so did its relevance. Somewhat surprisingly (given the fact that EAs are not supposed to do policy in the eyes of the Commission), this is also true for the parental DG: in my experience, the unit prepared reports and speaking points for Commissioners (and more than once, it prepared briefings for a Scientific Council member and someone in the parental DG on the same occasion).

The existence of the Scientific Council secretariat and of the separate legal unit also provides the legalistic knowhow to put the Scientific Council's decisions into a legal text, primarily the annual work programme. In theory, the Scientific Council has the decision on its content, but the procedure is intricate and lengthy, not the least because it still has to run through "inter service consultation". Here, agency-based lawyers have often been of crucial value: interpreting the legal requirements of the Framework Programme differently to the common sense in the Commission has often allowed the ERC to establish procedures that were more user-friendly to researchers. A good example for this would be the requirement of time recording, which was interpreted considerably looser by the ERCEA than by other Commission services.

Financial and human resources

A constant issue within the agency has been the availability of resources to maintain its organizational structure. One reason is that the EU budget is set in advance for seven years, thereby impeding the agency's ability to adjust with agility if there is a change in strategy by the Scientific Council. Another reason is related to the strict separation of operative budget (for funding projects) and administrative budget (for running the agency). The former has seen considerable growth over the last years. The latter, however, has not kept pace; because the Commission is forced to reduce its overall administrative budget it exerts a tight policy on Executive Agencies in general. The ERCEA had to accommodate both a wider-ranging organisational setup and a different governance structure; it occasionally required a higher share of the funds than other executive agencies (which, by implication, further limited the resources available to the other EAs, as well as to the parent DG). In the higher echelons of the Commission, the view was regularly lost that the ERCEA followed a different purpose than the other EAs, and had to be reminded about that by the ERCEA management as well as members of the Scientific Council more than once.

Table 2: EA staff details in 2012[6]

	Staff	Share of "temporary agent" positions
EACEA	428	24.1
EACI	156	17.9
EAHC	50	24
ERCEA	380	26.3
REA	496	25.8
TENTEA	99	26.2

The administrative budget is not simply a lump sum; it consists, broadly, of monetary funds and human resources. Human resources have been of particular concern to the ERCEA, because cheaper labour had been one of the main reasons for outsourcing Commission services in the first place. The regulations regarding open positions and type of contract stipulated by the Commission are particularly tight. However, the ERCEA is tasked to run an elaborate and costly evaluation procedure, and thus has to hire more scientific officers under the more expensive category of "temporary agents". In the last years, it has regularly reached the threshold stipulated by the Commission that no more than 30 per cent of the entire agency staff can belong to that category (Table 2). The issue has caused

much grievance among staff. My personal impression was that, while the fluctuation among lower-paid contractual agents was very high, the higher-paid agents developed a deep allegiance with the ERC, probably for two reasons: the increase of tasks in the fast-growing ERCEA often allowed them to fill positions with *de facto* managing properties, even though that was not financially rewarded; and the fact that their organization was received so favourably by the academic communities in Europe amplified the ideational sympathy with the agency.

KEY TENSIONS BETWEEN SCIENTIFIC AND ADMINISTRATIVE EXPECTATIONS

Tensions between the scientific and the administrative worlds derive from different expectations towards compliance, efficiency, and loyalty. As shown above, alleviating those tensions and to ensure proper functioning of the ERCEA required intervention in the governance structure, the organizational setup, and in the resource allocation of the standard EA format.

As for compliance, the core question here concerns ERCEA's ability to fulfil, on the one hand, the legal restrictions imposed by the EA format and the Commission's use of new public management tools, and, on the other hand, the expectations of the Scientific Council to implement whatever strategy it decides. As we have seen, the agency has adapted its governance structure and its organizational means to comply with the double requirements. However, conflicts emerge regularly along resource allocation and in procedural questions. Some of the formal requirements have been mainly a burden to the researchers, such as the time recording issue mentioned before. Others, however, have directly affected the ERC's selection procedure of proposals for funding. Only after many quarrels could the ERC do away with the requirement to ask for blue-ink signatures from potential remote reviewers in order to give them access to proposals.

Regarding efficiency, there is different emphasis in the scientific and in the administrative worlds that turns out to be complementary rather than contradictory. The Scientific Council's focus lies primarily on the efficient conduct of the selection procedure (what is going on until the funding decision), while the main focus of the Commission lies on the granting procedure (what is going on from the moment of the funding decision until conclusion of the project). Hence, tensions could be alleviated by giving in to requests in the scientific understanding regarding the former and maintaining standards along the administrative understanding regarding the latter. Besides procedural complementarity, however, tensions continue to exist about the lengthy procedure of putting the scientific strategy into legal text. Furthermore, horizontal units and the need to hire costly staff put the agency at the threshold of the limits of cost efficiency imposed by the Commission.

Loyalty, finally, is allotted very differently within the agency and can best be characterised as a two-tier phenomenon. Units that are close to the Scientific Council (policy, communication) and that conduct the evaluation procedure (scientific department) have a higher loyalty towards the ERC as an organization separate from the Commission. In units more distant to the Council, where fulfilment of administrative requirements is on the daily agenda, loyalty tends to be directed more towards the Commission. Tensions exist primarily in the conduct of procedures, but also as a result of the problems emerging from the restrictive staff regulations (promotions).

CONCLUSION

Double compliance, complementary efficiency, and two-tier loyalty constitute the unique socio-organizational fabric of the ERCEA today. They are the result of attempts to alleviate the tensions inevitably emerging from different expectations towards the performance of the ERC. But is this fabric sufficient to weather the future of this "mission-agency" (Braun 1993: 144)? The answer is, probably,

yes; but there are at least two impediments that will continue to constrain the ERC. One concerns the administrative budget. The agency has optimised the way it uses its resources in order to maintain the business as designed by the Scientific Council. Already now, the agency is the victim of high staff turnover as many other European Union services (see Suvarierol, Busuioc and Groenleer 2013). But what if the Council decides to create another call (to tackle another aspect of frontier research), or to downsize the grants (to award more grants but with smaller funds)? In both cases, the agency would have to hire additional personnel, in order to cope with the additional workload. Under the given financial regulation, this is mission impossible. Thus, for the next years at least, the ERC is locked in, determined to continue the programmes of the past, with little room for innovation.

The second impediment derives from the informal set of personal allegiances on which the ERC relies. In the past, there were instances when the agency's efforts along the standard procedural ways had proven useless, and things could only get done through personal intervention at the highest political or administrative level. Even in highly rationalised bureaucracies like the Commission, informal ties are playing an important role; in the case of the ERC, they continue to be particularly important. Exceptions to the resource allocations, if at all, can only be reached through personal encounters between the Scientific Council leadership and the heads of DG RTD. So far, that has been an asset; however, people move and, often, so do allegiances. As long as the clearing of problems relies on personal relations rather than more formalised ways of accepting the ERC's exceptionality, a high degree of uncertainty will remain.

Is the EA format something that can be used for other policy instruments in the emerging domain of science policy? The fact that it has adapted in order to make the ERC a successful enterprise would allow the cautious statement that this is so. This requires the crucial addendum that, however, this was only achieved through uncompromising commitment of many people involved who believed in the ERC as a powerful idea for research in Europe. Furthermore, it seems that the ERC is too special to provide a template for organizational reform – unless someone plans to set up a second basic research-funding agency in Europe.

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[1] Parts of this account are drawn from and developed further in Thomas König, The European Research Council (Cambridge: Polity, forthcoming). I am grateful to Meng-Hsuan Chou and Inga Ulnicane, Theo Papazoglou and Benjamin Turner from the ERCEA, as well as an anonymous reviewer for their comments on an earlier version.

[2] Note that the scope of this paper ends in the year 2013. Some changes in the structure of the ERC have been made with the introduction of the next Research Framework Programme, 'Horizon 2020'; however, the underlying principles have been extended at least to a mid-term review of that edition of the Framework Programme (Smits et al. 2011).

[3] According to 2013 EU Draft Budget (Directorate-General for Budget, 2012, 391–400), and information on EU agencies, available at: http://europa.eu/about-eu/agencies/index_en.htm. Accessed 27 May 2014.

[4] Information on all executive agencies is from their 'Statement of revenue and expenditure' of 2013. Available at http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2013:091:SOM:EN:HTML Accessed 17 August 2013. Their annual reports, available at: http://ec.europa.eu/atwork/synthesis/aar/. Accessed 17 August 2013. For the comparison with commitment appropriations in 2012 per policy field, see the Annual Budget Report (Directorate-General for Budget 2013: 18).

[5] Following the entry in column 'Commitment appropriations authorized'.

[6] See endnote 4.

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Commentary

An Academic in the Europe of Knowledge

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Abstract

The challenges and opportunities of the Europe of Knowledge run alongside the competing requirements of peer review and regular 'research assessments' for many academics, not least in the UK. In this personal reflection, Julie Smith considers the impact of the Europe of Knowledge on research for social scientists and how its requirements fit with a need to demonstrate excellence and impact both in academic and practical terms. She notes that there is often a tension between attempts to deliver 'excellence' and 'impact', even within a context where both these concepts and the broader idea of 'knowledge' are difficult to measure. On balance, researchers are increasingly integrated into European networks and aspire to excellence but the constraints of funding, both nationally and at the EU level, mean that blue-skies research is not often possible.

Keywords

Par ma foi! Il y a plus de quarante ans que je dis de la prose sans que j'en susse rien. M. Jourdain in Molière's *Le Bourgeois gentilhomme*, Act II, Scene IV

'Am I an academic in the Europe of Knowledge?' It seems that I am. Was I aware that I was an academic in the Europe of Knowledge when I was asked to write this reflection piece? To be honest, the answer is "No". Like many of the practitioners I have interviewed over the years for my own research I suppose I have focused rather narrowly on my own daily work, not considering it in context as part of a wider whole, other than in the rather conventional sense of endeavouring to ensure that one's writing takes into consideration all the relevant *acquis académique*. For a scholar of the institutions of the European Union (EU) and democracy within the Union, this is no inconsiderable task in itself given the burgeoning amount of literature that has been produced alongside the ever-changing institutional order. Just as a sometime Deputy Permanent Representative in the UK Permanent Representation to the EU once expressed considerable scepticism about why I would be remotely interested in her daily activities, which seemed to her simply to involve getting up, going to work and going home, I was surprised at the idea that anyone, other than an anthropologist, would be studying what academics do. The simple answer was precisely because she was "networked", an integral part of the decision-making processes in the Council of the European Union, and I was studying the UK's bilateral and small group cooperation within the EU. (Of course such puzzlement is not something that normally affects politicians - the usual focus of my research - who are generally secure in their belief that they are naturally a source of as much fascination for others as they are for themselves.)

Apart from *studying* networks, even if not quite defined as such at the time, I found myself increasingly *involved in* international academic networks. In my youthful arrogance, it did not initially occur to me to consider why "Cambridge" was asked to participate in such collective enterprises, or even to realise that this was a new, or at least evolving, phenomenon.[1] As a new academic, I just assumed that was how scholars of the European Union functioned, cooperating across borders, as the founding fathers might have expected, and that it was my personal expertise that was being sought. Since my own area of study covered the relationships between national actors at different levels, an understanding of other Member States was essential to my research. The chance to work with colleagues from across

the Union thus had considerable intellectual appeal; there was a real incentive to cooperate, just as the European Commission had hoped. Thus began my involvement in a whole series of acronyms, mostly funded by the European Union, as we participated in CONVEU-30, CONSENT, MERCURY, INCOOP, OPAL, Theseus, Pegasus and Exact, not to mention the UACES Collaborative Research Network on the European Research Area (ERA-CRN) which led to this Special Issue, and, most recently, Pademia.[2] Some of the multi-national collaborations were outside formal EU processes, yet all were distinctly "European".

As Mitchell Young (2015) points out, multi-annual framework research funding at the European level goes back to 1984. Looking back, all of my acronym-laden networks and projects, with the exception of OPAL and the ERA-CRN, slotted neatly into the framework of another area of my own research: the EU budget and multi-annual financial framework (MFF). This is perhaps not surprising given that the EU's framework research programmes have been funded from the EU budget agreed in the MFFs, albeit with some typically required local 'co-funding'. Thus the CONSENT Network of Excellence was part of Framework Programme Six (FP6), which coincided with the 2000-06 MFF, while INCOOP, a Marie-Curie Initial Training Network, and MERCURY were both part of FP7, which ran alongside the 2007-13 MFF, and the ever-growing Pademia network on Parliamentary Democracy in Europe was funded in the dying days of that multi-annual framework. As I write, academics, myself included, are penning proposals for new research projects and PhD training networks via the rather more ambitiously named Horizon 2020, funded in the framework of the 2014-2020 EU MFF agreed in late 2013. Yet, like the framework packages that preceded it, Horizon 2020 is time-limited and dependent on the wishes of the EU Member States (MS) and institutions. In this case it is perhaps also vulnerable to the proposal to review the MFF in 2016, a new departure that is intended to increase the democratic accountability of the Union and ensure that MEPs elected in 2014 are able to exert an imprint on the Union's budgetary arrangements, which would otherwise fall entirely outside the term of the current five-year parliament.[3] This could potentially cause chaos for researchers and higher education institutions, which rely on the EU for a significant percentage of their funding.

NETWORKS OF ACADEMICS NEW AND OLD

As the names of the calls within which these EU projects have been conducted imply, there is a focus on networking. For EU institutions this is not a simple intention to fund "excellence" in research as national funding councils might seek to do. Significant emphasis is placed on networking itself. For young researchers, this is expected to take place in tandem with a solid grounding in research methods and, ideally, will lead to a doctorate. Yet, this last feature is not a prerequisite of funding – no final tranche of Marie-Curie Initial (now Innovative) Training Network funding is held back from host institutions if the early stage researchers (as they are known) fail to complete their PhDs. As long as the relevant institutions have ensured that training has been delivered and, crucially, that their protégés have been "networked", the ITN is deemed a success. Of course, PhD candidates do not all complete their theses and certainly do not all complete on time, regardless of the funding arrangements in place or the requirements of their funders, but at least in the UK the government-funded research councils do impose targets for completions. That the EU does not do so is both a strength and a weakness: if the EU were to act like national funding bodies, this might represent a move towards greater excellence in a narrow sense (at least in terms of higher and swifter completion rates) but perhaps at the expense of allowing students to explore ideas and go off at tangents thanks to opportunities arising from the network; thus, it could pave the way to higher rates of completion but less engagement with the networked community and, hence, fewer long-term benefits. Certainly, the UK HE sector believes there are benefits accruing to collaboration for its own sake.[4]

Networking is also a crucial component of other funding initiatives within the EU, as academics are encouraged to collaborate with partners from other EU Member States. Calls for funding typically

make explicit the geographical spread they seek to encompass, with a small core of institutions (research institutes, think tanks and universities) from "old Europe"—in this case the founding Member States and those that joined in the 1970s, '80s and '90s—never seen as sufficient. Rather, it is essential to reach out to North, East and South/South-East Member States, including at times even to non-member states, reflecting the moves in FP7, to encourage collaboration with third countries such as India and China.[5] Thus, as its protagonists hoped, EU research funding can be seen to foster European integration as academic departments gradually look to their contacts in other European states in order to create appropriate consortia that will press the right buttons to secure much sought-after research grants. Such networks **do** have the tangible advantage of ensuring that academics increasingly get to know their colleagues in other European states (and occasionally third countries, when the rules of the game permit or even encourage participation from outside the EU) even if the reality at times does seem to resemble David Lodge's *Small World* with frequent travel to different countries and conferences where one keeps meeting the same people.

There are clear benefits to scholars of European integration who have a research interest in sharing expertise with colleagues from other Member States, either through informal interactions in the margins of meetings or more formal collaborative ventures. Regular, institutionalised contact with research partners offers additional benefits regardless of academic discipline and can facilitate genuinely comparative pan-EU research. Thus, just as national governments find themselves better able to influence European policy and treaties if they have already developed strong links with partners in other Member States,[6] so academics who have already developed strong ties find it easier to work together subsequently. One learns the strengths and weaknesses of academic partners, both as individuals and institutionally. Some brilliant colleagues, particularly from small or new Member States, might be based in relatively poorly endowed institutions with little capacity to coordinate major research proposals or run them if the applications are successful. It is important to have them as part of a network/research consortium for the personal attributes they bring with them – and vital to those individuals to be able to participate in such networks as they provide resources that would often be unattainable at home, particularly for researchers in the natural sciences. The hope is that grant funding will enhance capacity building. However it remains essential to draw in other partners with an established record of applying for and administering grants. Thus, in the field of European Studies, the Universities of Cologne and Maastricht are attractive because of their well-developed research offices, which have honed EU grant applications to a fine art. It is also helpful to learn the strengths and weaknesses of individual colleagues. As in political life, so in academic networks, personal chemistry and professional respect are both conducive to effective collaboration. Knowing that you can rely on people to produce the goods, or "deliverables" in EU-parlance, is vital. Further, having networks on which to draw in advance of any calls for proposals from the EU or other funders such as the national research councils participating in the ORA makes the quest for research funds (and formalities of completing the application forms) that bit easier.

FUNDING MATTERS

And if these hard-nosed issues matter in the Arts, Humanities and Social Sciences, they are even more crucial in the natural sciences and engineering, given the huge infrastructure costs associated with certain types of research, which could not be adequately financed on a national basis. Thus, universities increasingly target resources on securing grants from the EU, especially through the European Research Council (ERC). The UK has been especially successful in securing ERC grants: it plays host to 23 per cent of the total ERC grants, compared to 14 per cent in Germany, the next largest recipient.[7] The clear advantage of the ERC over some of the earlier network programmes is that there is an obvious intention that the projects should result in cutting-edge research, without which the Union cannot hope to meet its economic aspirations, such as the desire to be the world's leading

knowledge economy by 2020 (a commitment made within the framework of the now all-but-forgotten Lisbon agenda). Yet, if the costs of doing research in the scientific sphere are high, so are the costs of putting together outstanding proposals that stand any chance of being funded; thus, leading research institutions now provide seed-funding to enable researchers to meet and develop proposals. These sunk costs cannot be recouped directly, but are nonetheless seen as essential by Vice-Chancellors and others striving to ensure their staff are part of elite research projects and to improve the bottom line, assuming a good rate of success can be delivered. That universities should seek to change their modus operandi to secure funds makes sense to rational economic actors, as places of higher education and research undoubtedly are. Thus, one can identify a set of institutional arrangements emerging in response to the EU's funding streams, opening up a potential new furrow for "new institutionalists" to plough in their attempts to understand the process of European integration, this time in what is sometimes called the 'fifth freedom': of knowledge and innovation (see Ulnicane 2015).[8]

Yet, this raises a set of important questions for academics, politicians and those intermediaries: the bureaucrats. What results from European research funding? Are academics and universities just following the money, cutting our intellectual cloth to fit the measurements of the EU, or are we able to do something more creative, innovative and intellectually ambitious? Is there scope to generate knowledge in any meaningful way? Are we moving to a Europe of Knowledge? And do EU funding and the European Research Area actually enhance research outputs or merely ensure that the university bean-counters are kept happy while allowing academics the benefits of interesting travel?

In some areas there are clear and quantifiable answers. From an economic perspective, financial and employment-related data suggest that EU-level funding for research and development has a significant effect (see European Commission 2011). These data go beyond the networks of excellence and ITNs to include the full range of EU research funding tools that were in use before the decision to consolidate funds within the Horizon 2020 envelope and offer one way of measuring the value of EU funding in terms of two measures deployed by the EU institutions in framing the 2014-2020 MFF: "value for money" and "European added value" (EAV). Value for money is a straightforward idea known to the individual citizen as much as to international policy-makers and is something that clearly appears sensible: few politicians and fewer ordinary citizens are likely to favour the alternative: wasting money. EAV is a rather more contested concept, especially if the "added value" from funding something at the EU level does not bring dividends back to the member states in a consistent or quantifiable way. Thus, ideas of EAV in the area of European Development Aid being discussed in the run-up to the 2014-2020 MFF were not greeted enthusiastically by Treasury officials, since even if there were demonstrable EAV it would not cut the UK's spending in any way, which is was fixed at 0.7 per cent GNI;[9] the outcomes, of course, would have been enhanced by EAV, but this does not always persuade hard-nosed Treasury/Finance ministry officials of the benefits if they do not affect the bottom line. EAV in terms of EU R&D funding seems to offer rather more tangible benefits to the UK, which has seen significant financial rewards from participating in EU-funded projects. According to Universities UK, the UK secured more than £5 billion in Framework Programme 7 funding from 2007 to 2013. In 2013, the UK HE sector received £1.2 billion. The European Commission is, rightly, keen to stress the successes achieved by the ERC and its grant holders, and has done so in economic terms.[10] But surely there is more to excellence than its monetary value? As Ulnicane points out (2015), there is a long-standing tension between valuing research for its economic or social value (applied research) versus focusing on research for its own sake (pure research).

MAKING AN IMPACT

For 21st Century academics there is inevitably a tension between on the one hand pursuing one's intellectual dreams - writing the book one has always wanted to write, making a crucial scientific breakthrough - and achieving the metrics against which all but the lucky few (those freed by

retirement or seniority) are measured. These include the following requirements: to publish widely in leading peer-reviewed journals, including references to anyone who has ever written in the field, leaving a woefully small amount of space left for the industrious researcher to include his or her own ideas and far less for the inclusion of interesting new empirical insights; to write monographs that may be similarly constrained or rushed out in time for the next research assessment exercise or promotion; to acquire research funding; and demonstrate that the resulting work has had "impact" in the real world as well as in academe. All of this militates against any "pure" (or even commonsensical) vision of research. The idea (and ideal) of the "lone researcher" still works for a few in the Arts and Humanities – philosophers and historians do not necessarily require collaborators or lavish research budgets: libraries and archives still tend to be collectively provided[11] and, as one of my economist friends put it, 'I only need a computer and a pencil for my research.' Such people do not actually need large research grants; they may not need grants at all to produce outstanding research. Yet, departmental or university expectations in some universities mean some academics are expected to apply for grants that they scarcely need in order to meet targets intended to help universities improve their bottom line, even if the *net* income from grants is actually rather small. This may distract researchers from work that could indeed be excellent as they are forced to devote time to finding ways to apply for grants, whether national or EU, that are increasingly tailored for large projects, not the lone researcher. Has anyone calculated the cost of "pure research foregone" against the net increase to the bottom line? (Or, put another way, time spent seeking money = thinking "space" foregone.) If not, perhaps someone should. The opportunity to apply for funds is welcome; an obligation to do so raises questions about academic freedom and the importance of leaving researchers to their own intellectual devices, which is more likely to lead to research excellence.

While ostensibly intended to ensure research excellence, there are times when the quest for money seems to become an end in itself – indeed it has been a contextual measure of success in the UK's Research Excellence Framework (REF) – rather than a means to an end. Of course, natural scientists do need serious sums of money for their equipment, which individual universities are unlikely to be able to fund and hence there is a strong rationale to collaborate across borders: at the extreme, there is no need for multiple hadron colliders but there is a need for the quantum of R&D funding for one to exist. Yet there are problems here too. Even for those researchers who need cash to support their research environment, there is a built-in problem: are they applying for funding to enable them to do the research that they believe is necessary or desirable, or research that politicians or bureaucrats have decreed would be beneficial? If the latter, what does this mean for intellectual and academic integrity? It is perhaps worth noting that Nobel Laureate Peter Higgs doubts he could have made the same discovery in contemporary research as half a century ago 'because of the expectations on academics to collaborate and keep churning out papers' (Aitkenhead 2013).

Over the years, the various EU framework programmes and now Horizon 2020 have laid out guidelines for the sort of research that will be eligible for funding. As other authors in this Special Issue make clear, the criteria tend to focus on applied research and were initially not focused clearly on "excellence" despite the use of the word. Over time the requirements for funding have increasingly moved towards excellence, even if that term remains somewhat vague as Young (2015) argued. What is clear, however, is that funding is intended for applied rather than pure research.

A UK PERSPECTIVE

At the national level, the UK funding councils, while technically independent from government, put out funding calls that at times seem to respond to the demands of the government of the day, reflecting a rather politicised approach to research funding. Thus the focus was on security and terrorism in the last decade under "New Labour", while "the Big Society" and inequality, respectively issues in the Conservative and Liberal Democrat manifestos for the 2010 General Election, featured in

the ARHC and ESRC calls for proposals shortly after those two parties made their Coalition Agreement for government in May 2010. Little scope seemed to be left for researchers themselves to choose their preferred area of study aimed at pure rather than applied research. However, few put the choices as starkly as sometime Business Secretary in the Labour Government, Lord Mandelson did when he suggested that universities should plug financial black holes by 'doing what they do best… focus more on practical training and science and engineering courses with links to industry' (Tickle and Bowcott 2010).

We may therefore be moving to a paradoxical situation where there is both research and "knowledge" (*sapienza*) but where genuine blue-skies thinking and intellectual excellence are impossible for most researchers, as they must keep focus on meeting all these competing and sometimes contradictory demands placed upon them. This is not just the trade-off between pure and applied research that has been noted for decades but rather a difficulty arising from requirements to pursue both "impact", understood as the effect on the policy-making, business or other non-academic sectors and scholarship, in the more traditional sense (by which I mean writing largely for other scholars). In the case of the UK, with its regular, and equally institutionalised, attempts to measure research excellence, academics face perhaps starker choices than in other European states.[12] Initiated in the 1980s as a way to ensure that the "dead wood" was removed from British universities, the now familiar research requirements (previously the Research Assessment Exercise and most recently the Research Excellence Framework) have become an everyday part of academic life in the UK but one with certain undesirable consequences for higher education more broadly. The downside of removing "dead wood" in the 1980s, by which was frequently meant those who had ceased undertaking published research, was the loss of some outstanding teachers; and the further institutionalisation of centralised research exercises means there is a disincentive for academics to focus on teaching excellence when promotion is predicated predominantly on research excellence. As one academic lawyer suggested to me, 'Perhaps the pendulum has now swung too far.' Academics need space to think and to innovate; the time that Peter Higgs fears has now been lost to modern academics. The time to research and write can be shoehorned into multi-annual funding and research assessment frameworks, but this may not be optimal. Academics are not journalists and generally did not come into the profession expecting to have to write to order. Certain research projects take many years and in some disciplines the length of time to get an article published runs into years, regardless of how brilliant the piece may be. The need to publish for the REF may thus impede the very excellence in research it seeks to bring about.

As with the criteria for securing funding in the ERA so domestically it is possible that the rules established and refined since the mid-1980s may not always deliver the excellence sought. The premium is on publishing in top journals or, in some disciplines, writing research monographs, yet at the same time, the REF and Research Councils expect "Impact". Few practitioners will read the erudite and esoteric journals that meet the criteria set for research excellence in the REF, so how can impact be achieved? Must researchers then produce their findings in multiple forums in order to try to tick each and every box? And for what purpose?[13] Some of the hoops created in the 1980s may have had their day. Allowing researchers to focus on research and writing for their own sake might just allow for rather more creative outputs of greater relevance in the real world than requiring them to produce a set number of publications within a particular timeframe. And our academic colleagues in other countries would be greatly relieved if the publishing cycle were no longer distorted by the UK's REF.

Oh, and I have a small confession to make: my first full-time job was a three-year temporary post as a Teaching Fellow in the History and Politics of European Integration made possible by the fact that an established colleague had secured a Jean Monnet Chair in Cambridge. It was thanks to his good fortune that I happened to be in Cambridge when the European Research Area came into being. I just did not realise it was happening at the time. Rather like M. Jourdain speaking prose, I have been in the Europe of Knowledge all along but without realising. How many others do likewise?

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Note from the Editor

Julie Smith is a Fellow in Politics at Robinson College, Cambridge. Some of these ideas formed part of her maiden speech as a member of the House of Lords on 25th November 2014.

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[1] For it was the institutional label rather than my personal expertise or CV that was the pole of attraction for other academics in most cases. On occasion my colleagues and I were drawn in as academic "experts" to contribute to the intellectual offerings of other networks, where the requirement was to provide content rather than an institutional base, as a result of our particular research interests, at others it appeared almost as if there were a checklist of partner institutions, whose very presence in a network would help secure funding. Cambridge secured £52.8m in 2013-14, representing 13 per cent of its total research grant income.

[2] The ERA-CRN is funded by the University Association for Contemporary European Studies (UACES) and OPAL, the Observatory of Parliaments after Lisbon, was funded as part of the Open Research Area by the national funding bodies of France, Germany and the Netherlands and by the Economic and Social Research Council in the UK (Research grant ES/I014853/1).

[3] This was made explicit in Article 2 of the Council Regulation laying down the Multiannual Financial Framework for the years 2014-2020: Brussels, 25 November 2013, 11791/7/13 REV 7 POLGEN 129 CADREFIN 170.

[4] For example, Universities UK and the Russell Group of 24 leading research universities both stress the importance of collaboration for research outcomes. Source: briefings from UUK and the Russell Group (2014).

[5] MERCURY, for example, included academic partners in China and South Africa.

[6] Tony Blair demonstrated this with his 'New Bilateralism', which inter alia led to the Lisbon Strategy that ran parallel to development the European Research Area from 2000 (see Smith and Tsatsas 2002).

[7] Information from Universities UK. This situation has been criticised by one anonymous academic who refers to EU funding as having "Robin Hood"-like qualities in reverse, precisely benefiting already well-endowed countries and institutions (see Anonymous Academic 2014).

[8] The extensive literature on institutionalism starts with March and Olsen (1983). Most recently the new institutionalist literature has been expanded by Vivien Schmidt (2010) who adds "discursive institutionalism" to historical, sociological and rational choice institutionalism.

[9] This observation comes from an off-the-record interview I conducted as part of the European Parliament study available as Smith et al. (2012).

[10] European Commission (2011), Annex p. 3

[11] Even here the situation is changing, however, as Historians are sometimes expected to request the costs of archiving the materials they wish to study into their grant applications.

[12] In the US the quest for tenure provides a similar framework for junior academics seeking a permanent place but the requirements are not life-long as in the UK.

[13] This issue is not unique to the UK, as one American academic's frustration over the need to be "useful" was eloquently demonstrated in the *New York Times* (Conniff 2014).

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Book Review

Mari Elken, *University of Oslo*

THE HYBRIDIZATION OF VOCATIONAL TRAINING AND HIGHER EDUCATION IN AUSTRIA, GERMANY AND SWITZERLAND

Author: Lukas Graf

How can societies assure the necessary skills for the labour markets? This is a question that has gained attention both in European and domestic level policy debates about higher education (HE) and vocational education and training (VET). While education and training has *thus far* not been a core focus in European studies, a number of thorough theoretically driven studies are now being published. Lukas Graf's study is a good example of this growing interest in studying this sector.

In this book, Graf examines two sectors (HE and VET) in three countries, Germany, Austria and Switzerland, that can be seen as most similar cases in terms of skills formation with separated systems for HE and VET. He views the two sectors as unique distinct organizational fields with strong institutional barriers. The study focuses on the effect of recent policy developments on the permeability between these two institutional fields, by examining the rules, standards and ideas that frame such relationship. In the empirical analysis, Graf finds an increasing level of hybridization in the three countries through the development of distinct and unique organizational forms, which he argues to be a representation of institutional permeability. The study takes a longitudinal approach, examining national developments from the second half of the 20th century to 2012 through systematic process-analysis. The empirical sources for the book include 40 expert interviews with 48 individual experts, in addition to various documents and secondary sources.

The analytical framework (Chapter 3) primarily draws on historical and organizational institutionalism. Graf argues that 'the institutional divide between VET and HE runs deeper than superficial discrepancies at the level of bureaucratic etiquette and formal labels' (p.30). To exemplify this, Graf further looks into how this "educational schism" can be explained following three lines of explanation: power, legitimation and function. Common to this analytical toolbox is the focus on institutional resilience towards change – either through sustained power imbalances, legitimacy and taken-for-grantedness of the VET-HE divide, or stable environments due to persistence of national varieties of capitalism. However, as Graf identifies, these explanations fit poorly with identified empirical reality, as particular organizational innovations in these three countries can be identified. Consequently, if the existing theoretical tools would suggest that such highly institutionalized fields would not be easily transformed or changed, how does one explain such innovations?

Graf's study suggests examining this institutional transformation primarily through four kinds of institutional change: displacement, layering, drift and conversion. These different kinds of change also form a basis for examining the empirical cases as forms of hybridization. As hybridization in many cases appears to be a concept that is used rather loosely in the literature, Graf deserves recognition for his solid analytical clarification on what this hybridization actually entails and how it is different from other kind of institutionalized linkages between HE and VET. Specifically, he focuses on three elements: parity of esteem between HE and VET, the nature of degrees and governance arrangements. These specific forms for hybridization are linked to national contexts, as well as differentiated

Europeanization of these educational systems. In Chapter 5, Graf examines European integration processes with respect to skills and argues that European policies have had effects on national level already before the recent expansion after Lisbon Agenda. However, his primary focus is on more recent Bologna and Copenhagen processes that drive forward European integration in HE and VET respectively.

Chapters 6-8 analyse the three country cases. The theoretical assumptions of resistance towards change are challenged by all of them. In Germany, Graf identifies hybridization processes through the introduction of dual study programmes that are unique not only due to being at the "nexus" of VET and HE, but also being a de-standardized and heterogeneous group of programmes. As such, one can argue that Graf's findings in the case of Germany highlight a rather interesting case, considering the multitude of pressures towards standardization in European higher education. Graf also finds hybrid forms in the case of Austria where environmental factors played an important role in the development of higher vocational schools (*Berufsbildende Höhere Schulen,* BHS). What is particularly interesting in this analysis is that Graf's findings indicate that the processes linked to introducing the National Qualifications Framework (NQF) in Austria have made the HE and VET systems less permeable. This can also be seen as a case of unintended outcomes, as one of the primary aims of the European Qualifications Framework to which the NQF is linked is precisely for the improvement of institutional permeability and parity of esteem between HE and VET. Graf's findings thus provide valuable insights to those interested in the relevance and the role of such European instruments on national level. In the case of Switzerland, the change Graf identified took place primarily through the introduction of the universities of applied sciences with dual apprenticeship training and a vocational baccalaureate, where sectoral dynamics are still not settled.

In chapter 9, Graf shifts the analysis towards a more comparative analysis of those three cases. As the three cases point towards the role of varied institutional environments, Graf suggests that 'hybridization is a response to the existence of the rigid institutional divide between VET and HE in times of rapid environmental changes' (p.190). While he identifies all three countries as forms of hybridity, the specific patterns in the three countries show distinct forms: historical contingency (Germany), long-term evolution (Austria), and deliberative institutional design (Switzerland). He links these patterns to the variety of capitalism argument. Next, returning to the analytical framework, Graf takes the thee patterns of hybridization and shows us that they are the results of "blended worlds" through conversion, blending and layering processes that have emerged next to the persistent institutional divide between VET and HE. He further argues that potential institutional friction can emerge which can be reduced through sufficient ambiguity in terms of the institutional environment to allow variation in organizational practices. Having outlined the conceptual outlook, Graf then discusses this in terms of the three country cases.

Finally, he turns to the role of Europeanization. His analysis identifies that some ideas promoted on the European level represent a mismatch in terms of existing traditions on the national level, and that current Europeanization processes do not sufficiently take into account the existence of hybrid forms. As these hybrid forms are located in various positions in the educational map in those three countries, the relevance of Bologna vs. Copenhagen varies. He highlights three central conclusions, pointing towards the fact that Europeanization can both maintain the institutional divide, as well as have potential adverse consequences for some existing hybrid forms, what he calls 'paradoxical impact of the current Europeanization processes'.

The concluding chapter 10 summarises the empirical findings and conceptual insights with respect to the initial questions – how did the hybrid forms emerge? What kind of national variation is there? What is the effect of these hybrid forms on institutional permeability? And, what is the role of European processes in the emergence and dynamics of such hybrid solutions? The relative lack of cross-sectoral analysis of VET and HE is also noted the review section. Graf's contribution can be seen

as a unique with its longitudinal analysis of system dynamics of those two sectors in the context of European integration processes. At a time where skills, qualifications and parity of esteem between HE and VET have become frequently stated in the policy agenda, improved understanding of the relationship between these two sectors is both timely and necessary. Empirically, it brings much needed insights into the processes and new organizational forms that emerge between educational sectors, an area that often gets neglected between the main lines of research with focus on the dynamics *within* particular sectors. Theoretically, it brings additional insights into analyses of institutional change by identifying how highly institutionalized fields where change would be termed unlikely, yield organizational innovations and novel hybrid solutions between particular fields. As such, it highlights the persistence of institutional divides and how these also persist through the emergence of hybrid forms.

In essence, it is a well-conducted study about the interplay between stability and change. Overall, this study also advances the linkages between the *literature* on VET and HE. One can just hope that more studies will follow Graf's steps, so that more permeability between the institutionalized divide *between the research traditions* for VET and HE can also be achieved to a much larger extent than has been the case until now. Further studies could focus on finding more contrasting cases to these three countries, to identify whether this hybridization processes can also be identified in other regions.
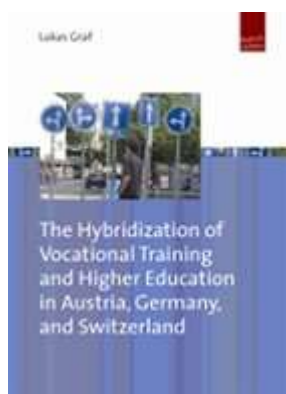
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Book Review

Meng-Hsuan Chou, *Nanyang Technological University*

GLOBAL UNIVERSITY RANKINGS: CHALLENGES FOR EUROPEAN HIGHER EDUCATION

Editor: Tero Erkkilä

What effects have the global university rankings had on European higher education institutions? And why should academics and European policymakers care? In *Global University Rankings*, Tero Erkkilä brings together thirteen contributors to address these very questions. By examining 'rankings as policy instruments of global governance', these contributors tease out 'the institutional outcomes of the use of rankings in Europe, both at the EU level and at the national level' (p. 3). Specifically, each of the chapters speaks to the 'political challenges, policy shifts and institutional results that the rankings precipitate' (p. 3). The main message is: global university rankings *matter*.

Global university rankings matter, they tell us, for at least the following reasons. Firstly, the use and production of rankings are on the rise and they generally construe the 'falling behind' of European universities as a 'policy problem' that must be urgently solved. This may be especially problematic given its origins as an informal assessment comparing higher education institutions *vis-à-vis* one another. Erkkilä thus suggests that the global university rankings can be conceptualised as a 'transnational policy script' that has now diffused worldwide and permeated through the national institutional ranks. Secondly, global university rankings have power implications in many ways: in language use (English vs. local language), across world regions (promoting the dominance of one region and its guiding economic principle over others) and between national higher education institutions (flagship universities vs. the rest). Thirdly, they negatively impact both the hosting society and its higher education institutions; for instance, they lead to the stratification of university systems, growing inequality between disciplines and across universities, as well as failing to actually provide students with the requisite information about where to study. Lastly, and somewhat ominously, Erkkilä concludes, 'The global university rankings are here to stay' (p. 245).

So why read on?

I argue that the value-added of this edited volume, beyond its rich contents, is how the contributors prompt and enable the readers to engage critically with the global university rankings and to reflect on the potential ways to "resist" its encroaching presence – both academically and politically.

Organised into four parts, Part I paves the historical and conceptual foundation for discussing global university rankings. Following the introduction (Chapter 1, Tero Erkkilä), Barbara M. Kehm's chapter on 'The Impact of Rankings on the European Higher Education Landscape' addresses three questions at the heart of this phenomenon: What do rankings really measure? 'Whom do they serve? And to whom are they important?' (p. 22). After revealing the many negative effects the global university rankings unleashed and their failure to achieve the very mission they supposedly set out to do, Kehm concludes that not every university should play the 'rankings game'. Instead, she argues that the focus should be on establishing the 'normative form of trust together with a new social contract between higher education institutions and its stakeholder' (p. 34). Bob Reinalda continues the historical overview of global university rankings in Chapter 3, 'Global, Asian and European Backgrounds of Global

University Rankings'. He explains that the rise of the rankings is a recent phenomenon and must be understood against the dual context of Asian countries heavily investing in higher education and the international drive towards the 'knowledge-based economy'. The speed with which such developments unfolded suggests that the global higher education landscape may very well undergo transformation – again – within a short period of time; a bastion of hope for those who are interested in mitigating the rankings' negative effects.

Part II consists of five chapters, all focussed on delineating the institutional responses of European governments and universities towards the global university rankings. Chapter 4 opens with a comparative analysis of nine European countries: Sweden, Denmark, Norway, Finland, the Netherlands, the UK, Ireland, France and Switzerland. Antti Pelkonen and Tuula Teräväinen-Litardo zoom in on how these countries addressed two dominant themes that have emerged in the higher education domain in the last decade: 'prioritisation of research' and 'human resources in research'. They find that these countries converged at the discursive level (all offer 'similar rationales of change and formulated national policy objectives broadly along the lines of the EU framework', p. 69), while diverging in the concrete policy and measures adopted. Specifying the institutional mechanisms through which this pattern of convergence-divergence comes about, Åse Gornitzka proposes three mechanisms in Chapter 5: channelling, filtering and buffering. For Gornitzka, national institutions are not passive recipients; instead, they are structured by legacies that 'affect the way in which national policymakers respond to global rankings' (p. 76). Together, these two chapters tell us that national institutions are important because they are at the forefront of the global university rankings exchange. As "first responders", they may re-direct, reject or receive (only some or all of) the messages that rankings purport.

The remaining three chapters of Part II amount to a "cautionary tale" about global university rankings. Taking the case of the UK and its Research Assessment Exercise (now the Research Excellence Framework, REF) in Chapter 6 ('The Drift to Conformity: The Myth of Institutional Diversity'), Jon Nixon shows that these research assessment exercises have 'both stratified and homogenized the higher education sector'. Even though British institutions are generally high on the global league tables, Nixon concludes that the UK 'provides a salutary lesson in how *not* to develop a system of mass higher education' (p. 102). Turning East, in Chapter 7 ('Polish Higher Education and the Global Academic Competition: University Rankings in the Reform Debates'), Dorota Dakowska shows that Polish policymakers have embraced the results of the global rankings as a trumpet call for reform. Similar to Nixon, Dakowska is sceptical about the positive effects that such legislative reforms may bring. Continuing with the case of Finland, in Chapter 8 ('Reforming Higher Education Institutions in Finland: Competitiveness and Global University Rankings'), Tero Erkkilä and Ossi Piironen interviewed university deans and department heads to find that they question the overall likely efficacy of the reforms associated with rankings and global "competitiveness".

Containing four chapters, Part III shows that, while the global university rankings may be challenging for most European higher education systems in general, they are especially problematic for the social sciences and humanities. Indeed, in Chapter 9 ('Measuring Excellence in Social Sciences and Humanities: Limitations and Opportunities'), Arto Mustajoki demonstrates that the very tools used to assess disciplinary research performance are inadequate for a variety of reasons, starting with their basic assumption that all disciplines could be measured and compared across the same indicators (e.g. publication practices). At the same time and using the discipline of political science in Europe as an example, Niilo Kauppi shows in Chapter 10 that the 'social carriers [of rankings] participate in the relatively successful practical realization of the academic standards they seek to codify, of the shaping of reality according to the criteria they promote' (p. 166). Revealing the flaws of the global rankings of political science departments through a comparative analysis of Simon Hix's 2004 study and *QS's* 2011 and 2012 listings (Chapter 11), Erkki Berndtson emphasises the importance of self-reflection through historical analyses. Finally, in Chapter 12, Richard Münch argues that the way in which

rankings provide the information flows for its intended audience 'distorts both research and teaching so profoundly that they are no longer in a position to fulfil their genuine function for society' (p. 196). Together, these four chapters constitute the harshest criticism, and perhaps rightly so, of the global university rankings.

Part IV concludes the volume with two contributions. In Chapter 13 ('Global Rankings as a Marker of Revaluing the University'), James H. Mittelman contends 'that the rise of global rankings signifies that the university's time-honored priorities are contested and being devalued' (p. 223). Academics worldwide and regional and national policymakers interested in the civic functions of universities should be especially concerned. Indeed, as Tero Erkkilä urges the reader in the final chapter, for this and other reasons, 'higher education policies in Europe, and elsewhere, should remain highly critical of the simplistic policy feed of global university rankings' (p. 245).

To sum up, these fourteen chapters offer a deep analysis of how European higher education institutions have navigated the changing higher education landscape since the launch of the global university rankings only about a decade ago. Given how 'rankings' have permeated the public imagination as well as academic lives throughout the world, this volume is a needed contribution for students and scholars of public policy, European knowledge policy and European integration, as well as research managers and higher education policymakers who are keen to understand the role of rankings in Europe.

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Book Review

Mitchell Young, *Charles University in Prague*

BUILDING THE KNOWLEDGE ECONOMY IN EUROPE: NEW CONSTELLATIONS IN EUROPEAN RESEARCH AND HIGHER EDUCATION GOVERNANCE

Editors: Meng-Hsuan Chou and Åse Gornitzka

Knowledge policy on a European level has emerged from the margins of political interest to become the backbone of the Lisbon and Europe 2020 strategies. Yet this is a policy area that is difficult to come to grips with even for those familiar with EU studies. As the editors write in their introductory chapter, it is an 'experimental site of mixed modes of governance' which 'has witnessed processes of coevolution between intergovernmental, transnational and supranational logics' (p.22). The book, *Building the Knowledge Economy in Europe*, takes on this task through nine chapters that each examines a particular aspect of the integration and institutionalization of knowledge policy in Europe. There is a wealth of empirical material within these chapters and numerous jumping off points for future research.

The book will be of interest to scholars in a range of disciplines. For European studies researchers, the failure of knowledge policy to conform to what have become standard integration theories makes this book a valuable source of evidence by which to test existing integration theories or develop new ones. The lessons based on integration of knowledge policy could prove relevant for scholars focused on even more nationally sensitive areas such as security. More broadly, for scholars in political science and public management who are interested in complex approaches to policymaking, institution-building, and governance, there are many insights, which can be drawn from the book. The chapters refuse to oversimplify policy and institution building processes, but instead force the reader to see how multiple ideas, interests, institutions, actors and circumstances at multiple levels of governance exert influence. For those working on knowledge policy, both in the sectors of higher education and science studies, the book fills an important gap in the literature, as a broad and coherent approach to the construction of the European Research Area. The empirical data describing the development of multiple institutions and processes will be an important reference point for scholars doing research in the area.

The volume covers a broad range of material, but the editors do offer some guidance as to how it all fits together. Towards the end of chapter one, the editors identify three overarching lessons. The first is that we, as researchers, need to move beyond the study of vertical tensions (between the national and supranational levels) because despite their importance, they are not sufficient for explaining institution-building and change. This leads to the second lesson: we need to address horizontal tensions and sequential tensions in our analyses; tensions that arise out of the conflicting views and interests of differentiated governance sectors as well as those that are exacerbated by historical legacies and path dependencies need to be integrated into our explanatory frameworks. Each of the sectors involved in knowledge policy is differently shaped by the tension between culture, politics and the economy, and therefore has a slightly different vision and answer to the question: 'What kind of knowledge policy for what kind of Europe (p.6)?' Combining these first two lessons, the editors propose an analytical framework that draws insights from the interaction of both vertical and horizontal elements. Finally, the editors claim that although this may problematize attempts to find

an elegant and coherent narrative which is based on a rational design, it is advantageous because it forces us to look for complex understandings of what we observe happening - the Europe of Knowledge is emerging.

There are numerous themes that run through the volume. I will focus on the three which struck me most clearly. The first is the enabling role of existing institutions, particularly ones that have been depicted as having a constraining role in past literature.[1] The chapters on the 'Evolution of the European Research Area' and 'The birth of the European Research Council' suggest a more complex and balanced understanding of the role that the framework programmes (FPs) have had in developing a Europe of knowledge. While the constraining path dependence argument is not contradicted, the authors of these chapters show how the pre-existence of the FPs also served an important enabling role for both the ERA and ERC.

The second theme is emergence. Again, we can find this element in a number of chapters, but it is most powerfully seen in the chapter on the 'Establishment of the EIT' where the authors trace the process of institution creation and demonstrate how the EIT emerged as something entirely different than what the original policy entrepreneur intended (Commission President Barroso planned to create a European institution modeled on MIT). Lest one think that a blueprint might still be found, one only need compare this chapter with the previous one on the ERC to see how institution-building processes in the same sector and timeframe occur very differently: the influence of policy entrepreneurs, political and stakeholder actors, ideas, multi-level dynamics, parallel events, and the DG's combine in unique ways in each process.

The chapter 'Actors and networks in the Bologna Process' also shows us how the meta-governance of Bologna emerged rather than being planned. The authors use the theory of network governance to trace the addition of stakeholders to the governance arrangements of the Bologna Process. The authors want to test the hypothesis that legitimacy was a powerful governance mechanism (distinct from either self-interest or coercion) for explaining the emergence of the stakeholder constellation that governs Bologna. The chapter also provides interesting insights into the stability of relatively closed governance arrangements that rely on collective actors.

A third theme has to do with the logics of compliance in soft governance systems: why comply with something that is voluntary? The chapters 'Translating the 'European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers' in national arenas: Norway vs Spain' and ''Quality Agencies': the development of regulating and mediating organizations in Scandinavian higher education' both look at how national ministries and agencies accept, implement and adapt to European standards. The former is a comparative study on Norway and Spain, which uses two quite different cases to demonstrate the importance of institutional conditions in strengthening compliance. The latter chapter is a most likely case study for convergence. We might expect that the similarity of Scandinavian countries would result in their creating similar quality agencies; however, that expectation does not prove true. Despite the diffusion of ideas and clear European standards in the form of ECA and ENQA (EQAR), the author demonstrates that each country, for Sweden this even led to its placement under review by the ENQA, took distinctive approaches.

This demonstration of the failure of convergence, leads us to the main argument of the chapter 'How strong are the European Unions' soft modes of governance? The use of the Open Method of Coordination [OMC] in national policy-making in the knowledge policy domain'. Here, the author argues that soft law should not be treated in the same way as hard law, and we should not evaluate the OMC's effectiveness in terms of policy convergence. Rather the author suggests that we turn our attention towards the way in which the OMC is used and its impact on the national level. She conceives of the OMC as a 'transfer platform' where the key ingredient is information and studies it from an organizational perspective using Norway as a case study. This is a likely case, and also one for which the author can use both survey and interview data to make a strong argument showing how the OMC

is important for the policy process, but in a surveillance/monitoring mode rather than a decision-making/instrumental one. It would be interesting to see whether these findings could be replicated in less likely cases.

I have only begun to introduce some of the themes and threads that the reader will uncover. This rich text is highly recommended as it adds significantly to our understanding of European knowledge policy and the institutions by which that policy is governed.

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[1] See in particular Banchoff, T. (2002) 'Institutions, Inertia and the European Union Research Policy', *Journal of Common Market Studies,* 40(1):1-21.

BIBLIOGRAPHIC INFORMATION

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