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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

EU competition law; EU integration; higher education institutions; research policy; economic and social integration

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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.<sup>1</sup>

## 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; Deiac, 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.<sup>2</sup>

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.<sup>3</sup> 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

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

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

<b>Public research conducting organisations<sup>5</sup></b>	<p>HEIs</p> <p>Ministerial research institutes</p> <p>Four major public research organisations:</p> <p>Max-Planck-Gesellschaft (basic research)</p> <p>Fraunhofer-Gesellschaft (applied research and development)</p> <p>Helmholtz-Gemeinschaft (long term studies with large scientific installations)</p> <p>Leibniz-Gemeinschaft (strategic research on specific themes)</p>	<p>HEIs</p> <p>Research institutes more or less affiliated with ministries</p> <p>Institutes in advisory and intermediate organisations</p> <p>Publicly funded research organisations focussing on applied research (e.g. the Netherlands Organisation for Applied Scientific Research)</p> <p>Collaborative research organisations (e.g. Top Consortia for Knowledge and Innovation focussing on nine <i>topsectoren</i>)</p>	<p>HEIs</p> <p>Research institutes in research councils</p> <p>Less significant other public research institutions</p>
<b>HEI system<sup>6</sup></b>	<p><u>Binary</u></p> <p>108 universities, 205 <i>Fachhochschulen</i> (more vocational HEIs) and 145 more specialised HEIs.</p> <p><u>Financing</u></p> <p>308 public, 150 private (including 37 religious institutions)</p>	<p><u>Binary</u></p> <p>14 research intensive universities, roughly 40 <i>Hogescholen</i> (more vocational HEIs) and other, more specific HEIs.</p> <p><u>Financing</u></p> <p>The 14 universities and the <i>Hogescholen</i> are publicly funded, financing of other HEIs differs</p>	<p><u>Unitary</u></p> <p>166 UK HEIs (almost 80% in England) including some specialised HEIs.</p> <p><u>Financing</u></p> <p>Autonomous institutions which receive public funding</p>
<b>Research as statutory task of HEIs<sup>7</sup></b>	Yes	Yes	No (merely a task HEIs may do and may receive funding for)
<b>Academic freedom<sup>8</sup></b>	Constitutionally protected	Protected in statute for HEIs	Not explicitly protected, but some weighing with governmental aims in statute

	Germany	The Netherlands	UK (England)
1.	EUROSTAT 2013	EUROSTAT 2013	EUROSTAT 2013
2.	Bundesministerium für Bildung und Forschung 2012 table 1, p.412 seq	Centraal Bureau voor de Statistiek 2013	Office of National Statistics 2014, table 1, 4
3.	Article 74 (1) no. 13 and 91b Basic Law	Van der Meulen 2010	Research Information Network 2010: 5 seq
4.	Hinze 2010; Edler and Kuhlmann 2008	Van der Meulen 2010; Mostert 2012; Jongbloed 2010; Rathenau Instituut 2013 sections 'politicians and government' and 'Advisory bodies'	Research Information Network 2010; Department for Business Innovation and Skills 2012
5.	Hinze 2010; Schubert and Schmoch 2010: 255 seq; Edler and Kuhlmann 2008	van der Meulen 2010; Mostert 2012; Jongbloed 2010; Braun 2006: 4, 8; Rathenau Instituut 2013 section 'Organisations'; Rijksoverheid 2012a	Office for National Statistics 2014: 7, table 1, 2; Candemir and Meyer 2010: 500, 506
6.	Statistisches Bundesamt 2013: 159	Article 1.3 and 1.9 (3) Higher Education and Research Act; Jongbloed 2010; Mostert 2012: 15; Chiong Meza 2012: 2 seq	Kelly, McLellan and McNicoll 2009: 7 seq; Candemir and Meyer 2010: 500; Farrington and Palfreyman 2012: para. 1.22; Zoontjes 2010: 123; Palfreyman 2003
7.	Articles 2 (1) and 22 Framework Act for Higher Education	Article 1.3 Higher Education and Research Act	s 124 Education Reform Act (ERA) 1988, s 65 Further and Higher Education Act 1992 (FHEA)
8.	Article 5 (3) Basic Law	Article 1.6 Higher Education and Research Act	e.g. s 68 (3) FHEA and s 202 (2) ERA

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 Forschungsgemeinschaft*, 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).



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).<sup>4</sup> 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)<sup>5</sup> 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 Claey's-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<sup>6</sup> have been affected by commodification as part of the policies currently pursued. While generic funding is still the most important research income (*eerste geldstroom*), universities also increasingly receive competitive public funding (*tweede geldstroom*), contract research income from government, funding from the private sector, the third sector and from abroad (*derde geldstroom*) and philanthropical donations (*vierde geldstroom*) (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).<sup>7</sup>

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 rijks-subsidies*; 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 Georgiou 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,<sup>8</sup> 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).<sup>9</sup>

### **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.<sup>10</sup> 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 Delftship 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, where 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 <i>Van Gend</i> [1984] ECR 3763 6/64 <i>Costa</i> [1964] ECR 585 13/77 <i>INNO v ATAB</i> [1977] ECR 2115 118/85 <i>Commission vs Italy</i> [1987] ECR 2599 C-41/90 <i>Höfner</i> [1991] ECR I-1979 C-475/99 <i>Ambulanz Glöckner</i> [2001] ECR I-8089 C-280/00 <i>Altmark</i> [2003] ECR I-7747 C-65/03 <i>Commission v Belgium</i> [2004] ECR I-6427 C-147/03 <i>Commission v Austria</i> [2005] ECR I-5969 C-11-12/06 <i>Morgan and Bucher</i> [2007] ECR I-9161 C-281/06 <i>Jundt</i> [2007] ECR I-12231 C-542/09 <i>Commission v the Netherlands</i> Judgment 14 June 2012 nyr C-523-585/11 <i>Prinz and Seeberger</i> Judgment 18 July 2013 nyr C-20/12 <i>Giersch</i> Judgment 20 June 2013 nyr C-220/12 <i>Thiele</i> Judgment 24 October 2013 nyr C-275/12 <i>Elrick</i> Judgment 24 October 2013 nyr
General Court	T-198/09 <i>UOP</i> Order 7 March 2013 nyr T-488/11 <i>Sarc</i> Judgment 12 June 2014 nyr
National Courts	BVerfGE 111, 226 of 27 July 2004 ( <i>Juniorprofessur</i> )

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<sup>1</sup> See Tiller and Cross (2006: 518 seq) on legal (doctrinal) analysis.

<sup>2</sup> For an overview of research spending as percentage of GDP 1990-2012 see EUROSTAT (2013). For an overview of reactions to the financial crisis regarding HEI funding see European University Association (2013).

<sup>3</sup> 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.

<sup>4</sup> Whether this is in itself constitutional has also been questioned (for a summary see Kühne 2010).

<sup>5</sup> Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01).

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

<sup>7</sup> 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.

<sup>8</sup> 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](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.

<sup>9</sup> 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).

<sup>10</sup> 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 Farbmman (2010) and Gideon (2012) for market definition and HEIs.



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