

# Federalism and the knowledge economy: The shifting contours of higher education policy in Canada and Germany

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## **Abstract**

The present paper addresses the question of the extent to which the emergence of a 'knowledge economy' or 'knowledge society' may be seen as reshaping the contours of responsibility for higher or post-secondary education in federal systems. It addresses this question through a comparative study of Canada and Germany, framed within an understanding of both the persistence of distinctive federal models and of the emergence of more complex structures of multi-level governance. Empirically, attention is focused on the emergence of comparable federal strategies of dis- and re-engagement with the higher education sector, producing a focus in both cases on 'research excellence' initiatives. A picture emerges of a broadly convergent sectoral agenda, but in which distinctive national institutional systems continue to shape distinctive policy responses. The German case is distinguished by both the stronger horizontal dimension of the federal system and its placement within the wider European context (notably the Bologna Process). Conversely, the Canadian case is distinguished by the direct influence which (major research) universities themselves are able to exercise as political actors. The study draws on extensive documentary research and interviews in the two countries, at both national and sub-national level.

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## **Introduction**

In 1996, the OECD published its work on 'The Knowledge-Based Economy' within which knowledge is 'recognised as the driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance' (Ibid.: 3). This puts a particular focus on the education sector, and even more so on higher education, given its central place in national innovation systems. In combination with the inherent political relevance of economic progress and together with the implication of greater internationalisation, this creates a new environment for higher education policy that poses a challenge to governments and higher education institutions.

Federal political systems add another challenge: in most democratic federal systems, issues of education and higher education are the constitutional prerogative of the subnational unit, whereas the economic well-being of a state is mainly the responsibility of the federal level. The central elements of the concept of the knowledge economy – education and economy – therefore directly affect both levels of government in the federal case studies under analysis here: Canada and Germany.

The paper will examine how the emergence of the knowledge economy has influenced the balance and contours of higher education policy in both countries. It will show how the knowledge economy has affected the traditional two-level playing field, as well as situating developments relative to wider, emerging structures of multi-level governance (cf. Piattoni, 2010). In the German case this led to the European level becoming a determining factor, while in the Canadian case it produced a reconfiguration of stakeholder opportunity structures to the benefit, in particular, of major research universities.

The paper starts with a brief look at the longer-term development of the higher education policy sector in the two countries. It will then continue with the empirical analyses of first the German case and then the Canadian case, before concluding with a comparison that highlights

that defines the impact of the knowledge economy on the higher education policy sector in relation to the different federal models represented by the two case studies.

The paper is based on documentary analysis and on semi structured interviews with academic and non-academic stakeholders in both countries over the last four years.

### **The higher education policy dimension in the federal systems of Canada and Germany**

Although issues of higher education were - as in many other democratic federal states - characterised by the jurisdictional primacy of the subnational units (Länder in Germany and Provinces in Canada), the actual nature and conditions of the federal systems in Germany and Canada initially produced contrasting characterisations in the policy field.

After the re-establishment of Germany as a federal state in the post-war period, universities were basically the sole responsibility of the Länder (which actually constituted themselves before the federal state was founded in 1949). The federal government in the then capital Bonn played only a minor role. The situation in Canada was very different at that time. Despite their constitutional responsibility, the provinces played hardly any role in the early post-war period as universities began their transition from 'private domain' to 'public utility' (Corry, 1970). The more visible relationship was that between the federal government in Ottawa and the higher education institutions, i.e. the universities as the third actor in the policy field.<sup>1</sup>

An important issue at that early stage was the financial dimension: it allowed the federal government in Ottawa to play a role beyond its constitutional rights in the policy field and it paved the path for an increased involvement of the national government in Germany as the Länder did not have the financial resources to fully fulfil their commitments in the sector. Yet, while, amongst other issues, the financial constraints and the existence of a cooperative federal model provided the ground for a constitutional reform in 1969 in Germany that established the government in Bonn as a major actor in higher education policy, Canada experienced developments pointing in the opposite direction. Due to what has been described as the 'awakening of the provinces', resulting in the provinces taking charge of their constitutional rights and establishing themselves as main governmental actor in the policy field, the country witnessed a gradual withdrawal of the federal government from the general financing of higher education, leading to Ottawa focusing more on the targeted funding of the research sector (while continuing its commitment in the area of student financing).

In the 1990s, the higher education policy fields in Canada and Germany appeared to have moved in directions that reflected the general orientation of their respective federal systems: the cooperative model in Germany as reflected by the strong federal role in the policy field and its dual federalism counterpart in Canada as manifested in the limited influence of Ottawa in the sector. In addition, while external developments like the infamous Sputnik shock exercised similar pressure on the higher education systems, the policy field was still largely characterised by national reference points and less so by the impact of internationalisation. This, however, changed with the development towards the knowledge society and its associated idea of the knowledge economy. It exposed higher education in both countries to an influence of an external nature that could not be ignored. This became in particular visible in the German context.

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<sup>1</sup> The following argument concentrates in both countries on universities as the institutional representatives of higher education.

## Germany

After the federal government - following the constitutional reform of 1969 - had established itself as a major player in higher education policy, the balance within the policy field regarding the division of power between the two levels of government changed little over the years. The Länder had given up their constitutional prerogative for the sector and in exchange received more financial support. At the same time, by participating directly in the national policy-making process via the Bundesrat, they had gained more control over the federal spending power. It was the manifestation of a constitutionally defined cooperative model of federalism in higher education. As such, the sector was not much exposed to attempts at rebalancing the division of powers, but suffered from the effects of the infamous 'joint decision trap' (JDT).<sup>2</sup>

The JDT is 'an institutional arrangement whose policy outcomes have an inherent (non-accidental) tendency to be sub-optimal – certainly when compared to the policy potential of unitary governments of similar size and resources' (Scharpf, 1988: 271). Central hereby are the existence of overlapping competencies and a strong self-interest of the political actors involved. This constellation may (but does not necessarily) produce a blockage in a policy process (Benz, 2003: 211), as it carries the inherent danger of the veto power of the political actors. This veto power proved to be central to the development of the so-called *Reformstau* (reform gridlock) in the 1990s in Germany during times of different majorities in the national policy-making chambers of the *Bundestag* (national parliament) and the *Bundesrat* (Länder representation).

Party-political and ideological confrontations had already led in the 1980s to the federal government reducing its role in the higher education policy field to a less prominent status by mainly focusing on the financing issue. However, this reduced federal role, despite its assigned constitutional rights, further reinforced the *Reformstau* in higher education, which became a defining feature of the sector in the 1990s and a central focus of popular academic discourses (Glotz, 1996; Daxner, 1996). In this environment a governmental change on the national level led to a renewed political interest in the policy sector in order to overcome the *Reformstau*.

### *The governmental change of 1998*

The federal election of 1998 brought to an end 16 years of Conservative led governments under the chancellorship of Helmut Kohl (Christian Democrat – CDU). It also marked the beginning of a new period in higher education. The new Social Democratic/Green government under Gerhard Schröder (Social Democrat – SPD) re-engaged with the higher education field by starting policy initiatives that went beyond a more narrowly defined financial dimension (Braband, 2005). The initiatives – here in particular the introduction of the so-called *Juniorprofessor* (assistant professor) in combination with the abolition of the habilitation as the entrance qualification for the full professorship and a general ban on student fees for the first degree – did not, despite their potential for stirring controversy, mark a fundamental shift in the policy field, as they did not address the underlying problem of the federal system. They rather marked a continuation of the political confrontation under changed conditions.

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<sup>2</sup> In the 1970s the concept of *Politikverflechtung* was introduced by Scharpf, Reissert and Schnabel (1976) to characterise the limited decision-making autonomy of the constituent units in the 'entangled' German federal system. In the following years Fritz W. Scharpf developed the tool further, applied it to the analysis of the European community and published his work in English (1988) – the JDT was born.

The assault on the hierarchical status of the German professor and the social dimension of banning student fee are in a way traditional Social Democratic policy issues, and as such ended up in a party political confrontation with Christian Democratic led Länder governments following the established script as defined by the JDT. The cooperative federal system demanded its toll again and led not to suboptimal policy outcomes, but actually to no policy outcome at all as the Constitutional Court (*Bundesverfassungsgericht* - BVG) overturned both legal initiatives in 2004 (abolition of habilitation) and 2005 (student fee ban). The BVG ruled that the federal government did not have the power under the Higher Education Framework Act (*Hochschulrahmengesetz* – HRG) to push through such fundamental policy issues against opposition from (some of ) the Länder.<sup>3</sup>

Yet, while the remodelling of the academic employment structure, and here especially the abolition of the habilitation, marked in a way a continuation of ideological struggles dating back to the 1970s, it also manifested the recognition of a changing higher education environment. In a concept paper of the Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung* – BMBF) dealing with the higher education employment structure, the motivation for the reform attempt had a clearly international dimension, as it already stated in the first sentence of the paper (BMBF, 2000: 1):

The goal of the federal government is to strengthen the performance and innovation ability of our science and research systems and to secure the competitiveness of the German higher education and research landscape also in an international comparison.<sup>4</sup>

The paper was published on 21 September 2000, more than a year after the Bologna Declaration aimed at creating a European Higher Education Area (EHEA) was signed and six months after the European Commission had launched its Lisbon Strategy with the aim of making the European Union (EU) ‘the most competitive and dynamic knowledge-based economy in the world’ (European Council, 2000). While the full impact of both initiatives was difficult to predict at that stage, they highlighted a growing influence of the international dimension and the knowledge economy. In particular the Bologna Process (short: Bologna) developed a dynamic in Germany that leaves the impression that the actors in favour of change tried to catch up with a litany of lost opportunities for reform in the sector. Bologna fundamentally changed the contours of higher education policy in Germany and established the European level as an ‘actor’ in the German higher education system.

### *The impact of the Bologna Process*

Bologna is a legally non-binding process outside the European Union. Therefore it appeared to be rather weak and it was initially not taken seriously in Germany. Yet, the perception of the process changed quickly, highlighted by the organisation of a follow-up conference in 2003 in Berlin as part of the general cycle of ministerial meetings of the process. According to a senior civil servant and Bologna expert this conference marked a turning point as it accelerated the process of the implementation of the Bologna goals in Germany.<sup>5</sup>

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<sup>3</sup> For the court ruling on the habilitation, see: [http://www.bverfg.de/e/fs20040727\\_2bvf000202.html](http://www.bverfg.de/e/fs20040727_2bvf000202.html); for the court ruling on the student fees, see: [http://www.bverfg.de/e/fs20050126\\_2bvf000103.html](http://www.bverfg.de/e/fs20050126_2bvf000103.html).

<sup>4</sup> Own translation of original text: ‘Ziel der Bundesregierung ist es, die Leistungs- und Innovationsfähigkeit unseres Wissenschafts- und Forschungssystems zu stärken und die Wettbewerbsfähigkeit der deutschen Hochschul- und Forschungslandschaft auch im internationalen Vergleich zu sichern.’

<sup>5</sup> Interview, 18 November 2011.

Due to the lack of a legally binding dimension the general structural goals of the Bologna Process have to be translated into national legislation by the individual member states. The most visible expression in the German context is the introduction of a degree structure consisting of BA and MA programmes. They are synonymous with the implementation of the Bologna goals even if those go beyond degree structures. The main instruments for their implementation – a constitutional prerogative of the Länder – are the regulations of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (*Ständige Konferenz der Kultusminister der Länder – KMK*)<sup>6</sup> for the accreditation of BA and MA programmes.<sup>7</sup>

The Bologna Process caused some controversy and created opposition within the system (mainly from professors and students) but the potential for party political conflict remained limited. This was due to various factors:

- The central goals of the Bologna Process fall mainly into the area of learning and teaching. This area is characterised by the predominant constitutional competence of the Länder, thereby bypassing formal coordination processes and their conflict potential with the federal government.
- Bologna dealt with, as one interviewee put it, the ‘generic level’,<sup>8</sup> i.e. it dealt with framework conditions without going into detailed provisions and was therefore not particularly party political. Something more specific, like for example student fees, would have led to a different situation.<sup>9</sup>
- On the European level, Germany is represented in the working groups and in the ministerial meetings by both a representative from the Länder and a representative from the government in Berlin. And on this level ‘they represent German interests’,<sup>10</sup> and not individual, party political interests.
- The implementation process in Germany is accompanied by a national Bologna working group which consists of representatives of the Länder and the federal government and of representatives from other national stakeholders where the members ‘inform each other and discuss issues fostering a common understanding and fostering a common level of information’.<sup>11</sup>

Under these conditions, the goals of the reform were not endangered by the entangled federal system. The introduction of the BA/MA structure was so successful that, at the beginning of the academic year 2015/2016, 90.9% of the over 18,000 degree programs on offer were either BA or MA (Hochschulrektorenkonferenz, 2015: 7). The Bologna reforms – despite the controversy it caused in the country – managed to bypass the conditions that caused the *Reformstau*, while at the same time putting further pressure on the existing higher education policy system due to the financial and administrative costs associated with the transformation of a degree structure and the introduction of a accreditation system. Or to put it differently, Bologna did not solve the problem of the JDT associated with the joint decision-making of the

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<sup>6</sup> The KMK serves as a body for communication and coordination of the policies of the Länder.

Recommendations by the KMK are based on the consensus principle and are not legally binding, but in practice recommendations are normally accepted as virtually binding by the Länder governments (Keller, 2000: 187).

<sup>7</sup> The most recent version of the regulations (Ländergemeinsame Strukturvorgaben für die Akkreditierung von Bachelo- und Masterstudiengängen) are of 4 February 2010.

<sup>8</sup> Interview, 18.November 2011.

<sup>9</sup> Ibid.

<sup>10</sup> Interview, 18 November 2011.

<sup>11</sup> Interview, 21 November 2011.

*Bundestag* and the *Bundesrat*. On the contrary, Bologna and its reform dynamic arguably further heightened the need for a reform of the federal framework conditions.

### *Federal constitutional reforms*

In addition to the *Reformstau*, the system experienced further pressure due to the state of the fiscal equalisation system as a result of the costs of unification and the need for re-distribution from West Germany to East Germany. It left little room for the *Länder* to manoeuvre, leading them instead to focus on more autonomy for their policies (Scharpf, 2010: 27). Together with the massively increased differences between the economic abilities of the *Länder* after unification and encouraged by the growing demands of internationalisation, this provided the ground for the idea of competitive federalism entering the political discussion, challenging the traditional model of cooperative federalism shaped by the constitution.

In this environment an initial attempt was made to reform the federal system, but it ultimately failed in December 2004 due to a disagreement over transfers of additional competences to the *Länder* as a result of a power struggle based on party political affiliations and differences in the economic abilities of the individual *Länder* (Scharpf, 2010: 27-30; Pasternack, 2011). The collapse of the reform attempt was ‘greeted with considerable disappointment and complaints that it was another example of *Reformstau*, the apparent inability of the German political system to deliver needed reforms and an additional reason to fear a growing *Politikverdrossenheit*, a sense of dissatisfaction and even disgust with the political system’ (Moore, Jacoby and Gunlicks, 2008: 397). Yet, the political conditions became more favourable after the next federal election in September 2005 which resulted in the formation of a Grand Coalition - only the second one since 1949. The Grand Coalition provided the critical juncture necessary to disrupt the existing path dependency.

Relying on the work of the reform commission from the year before, the resulting negotiations between the Christian Democrats (CDU/CSU) and the Social Democrats (SPD) did not take long and led to constitutional changes that came into force on 1 September 2006. The main goal of the reform - reducing the negative effects of the JDT - was to be achieved by more separation and more clarification of legislative power, and by revising and reducing joint financing involving the federal level. The intended effects were a reduction of laws that need the approval of both federal chambers (thereby reducing the opportunities for mutual blockages) and, directly related to that, a quicker and more transparent law making process. In the case of higher education – which was central to the reform – the effects of the changes were supposed to provide room for more competition amongst the *Länder* by concentrating the legal competences regarding higher education more solidly in their hands.<sup>12</sup> However, the idea of the reform was fundamentally undermined by a lack of a reform of the fiscal relationship between Berlin and the *Länder*.<sup>13</sup> This left most of the *Länder* struggling to fulfil the additional obligations as a result of the gained competences (Anbuhl, 2008: 59-60) or as one actor, a university president, phrased it (quoted in: Simon, 2011: 940): ‘the whole thing [the reform] was obviously not focused on content but was rather introduced to gain influence and power. And then the ministries in the *Länder* realised that they actually could not finance

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<sup>12</sup> For a detailed account of the reform in the context of higher education, see: Pasternack, 2011; Seckelmann, 2010, 2011.

<sup>13</sup> This was addressed in another reform in 2009 without fundamentally changing the consequences of the 2006 reform as it did not tackle the fundamental aspect of a rearrangement of the fiscal equalisation system.

it ...'.<sup>14</sup> Furthermore, the central problem of the imbalance between legal competence and allocation of financial resources had a rather unintended result for the federal government.

The federal government lost competences to the Länder but was at the same time freed of financial obligations without losing its financial resources. Due to the limited resources on the subnational level, the federal government was able to take on a role which it was actually supposed to lose as the Länder required an additional financial input. The resulting support from Berlin thereby intruded into more constitutionally sensitive areas of higher education – like for example the *Hochschulpakt 2020* (Higher Education Pact)<sup>15</sup> and the *Qualitätspakt Lehre* (Quality Pact for Teaching)<sup>16</sup> – while formally respecting the new legal conditions that allow such interference with Länder competences only if all Länder agree with the programme.<sup>17</sup> In addition, while Berlin lost some legal competences, it kept its legal competences in areas such as student financing, access to institutions of higher education, and, of particular importance in the present context, research.

### *Increased federal engagement in research*

The federal government has historically played an important role in the funding of research. Although the Humboldtian university model, at the heart of the German academic tradition, is predicated on the fundamental unity of research, teaching and learning, this does not carry over into the policy sphere. In the political arena research is treated differently from the rest of the higher education sector and is generally less problematic for the interaction between the two levels of governance. The role of Berlin in research funding is more accepted as research is culturally less sensitive than learning and teaching, and because research is traditionally considered to be of more relevance for the national economy and therefore requires and justifies the attention of the national government. This situation is further underlined by a sort of dualism in the German research landscape where research takes place both in higher education institutions and in research institutes outside the traditional setting. While the exact division in terms of financial resources is disputed (Kreckel, 2009), the research institutes play an important role and - reflecting the priorities of the political actors - get more money from Berlin than from the Länder (Hohn 2010). Under these circumstances, developments in the research sector did not follow the (national) logic indicated by the constitutional reforms of 2006, but rather were a consequence of the increased internationalisation in higher education as implied by the knowledge economy more generally and European-inspired (Bologna/Lisbon) reform processes more specifically. As such the most important

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<sup>14</sup> Own translation of: 'Das Ganze war offenbar nicht inhaltlich begründet, sondern um des Einflusses und der Macht wegen eingeführt. Und dann merkte man in den Länder-Ministerien, dass das alles gar nicht finanzierbar war ...'.

<sup>15</sup> The pact started in 2007 and will last until 2023, funded by the federal government with over €20 billion with the Länder contributing over €8 billion. For further information, see the relevant homepage of the federal ministry (<https://www.bmbf.de/de/hochschulpakt-2020-506.html>, accessed: 30 April 2016).

<sup>16</sup> The pact started in 2011 and runs until 2020 with Berlin providing about €2 billion for the funding of the programme. For further information, see the homepage of the programme (<http://www.qualitaetspakt-lehre.de/>, accessed: 30 April 2016).

<sup>17</sup> The reason behind the unanimity requirement after the federalism reform is Article 104b (1) that states that the federal government can only get financially involved in areas where the basic law grants such competences. This provision became popularly known as the so-called *Kooperationsverbot* (ban on cooperation) which was misleading because the ban could be bypassed based on the aforementioned unanimous vote. As a senior representative and higher education expert from the federal government put it: 'there is no ban on cooperation in higher education policy. We can do everything, we only have to come to a mutual agreement with sixteen [Länder]' (Interview, 21 November 2011). This perception was underlined by a constitutional change of Article 91b (1) in January 2015 that established that cooperation in higher education (in areas of exclusive Länder competence) was possible when all Länder agree with it.



development to meet the challenges of the knowledge economy started already before the constitutional changes of 2006 – the so-called *Exzellenzinitiative* (Excellence Initiative).

In June 2005 the federal government and the Länder governments decided to establish the programme with a funding of €1.9 billion for four years to promote research excellence at universities for them to become internationally more competitive. Because of the success of the initiative a second round was agreed in 2009 with an increased funding of €2.7 billion (for the period 2012 until 2017). And in April 2016 the *Gemeinsame Wissenschaftskonferenz* (Joint Science Conference) – an organisation founded in 2008 to coordinate the science activities of the national and the subnational level – announced that from 2017 onwards the initiative will become permanent with a funding of €533 million per year.<sup>18</sup> Both the Länder and Berlin contribute to the funding of the program, with the federal government paying 75% of the total budget and the Länder the remaining 25% (Deutsche Forschungsgemeinschaft, 2013).<sup>19</sup> While the total amount of funding might be still limited, the initiative stimulated a competition in higher education to an extent that arguably had not been witnessed before in Germany.

### *The changed higher education policy landscape in Germany*

Before the knowledge economy started to exercise its influence in German higher education towards the end of the last century, higher education policy was mainly a national issue. It was characterised by the JDT and its party political confrontations, which prevented the federal government from taking a more active role in the policy field despite its comprehensive legal competences. The situation began to change with the Bologna Process which established the European level as a new dimension in the field and which acted as a sort of instrument to remove policy issues from the national, party political arena. The resulting KMK regulations of the Länder (see above) thereby became a kind of de facto framework law replacing the federal framework law that lost its legal base as a result of the 2006 constitutional reform. Yet, those regulations were basically of European origin and could therefore be seen more as an expression of an added level of governance rather than as a manifestation of increased Länder competence. The resulting multilevel system in higher education has led some observers to speculate that one of the levels will lose its importance. Potentially this could be the Länder level, and this because of rather than despite the 2006 reform (Münch, 2011). The federal reform of 2006 has therefore to be viewed critically despite its attempt to disentangle the system by giving more exclusive competences to the Länder.<sup>20</sup> In particular, the unsolved financial dimension further increased the financial pressure on the Länder. This opened space for Berlin – freed of some legal competences but also freed of some financial obligations – to use its financial resources in a much more flexible way. Potentially, Berlin can always reevaluate its spending priorities, thereby providing even more room for manoeuvre against the necessity for cooperation with the Länder (Lange, 2010: 137; Pasternack, 2011: 351-352). The role of the Länder is further undermined by the consequences of the knowledge economy that imply higher investments into public research. While this is traditionally within the competence of the federal government anyway, the increased engagement of Berlin in university research via the Excellence Initiative created further dependencies on the federal level.

From that perspective the situation has fundamentally changed over the last 20 years. The knowledge economy has established itself as a fundamental reference point and arguably

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<sup>18</sup> Press release No 04/2016 of the *Gemeinsame Wissenschaftskonferenz*, Berlin/Bonn, 22 April 2016.

<sup>19</sup> This is supposed to be continued for the new initiative starting in 2017 (see footnote 18).

<sup>20</sup> For critical reflections on the success of the constitutional reform, see for example: Benz, 2008; Scharpf, 2010.

strengthened the role of the federal level without, though, disentangling the federal system. It has become an entanglement of a different kind, in a still cooperative system, now embedded in a newly internationalised higher education policy environment.

## Canada

The Canadian higher education policy sector experienced a different dynamic in the 1990s to that seen in the case of Germany. Instead of witnessing attempts by the federal government in Ottawa to reengage with the sector, the period rather witnessed the end of the general federal financial engagement (in effect, its only role given the absence of substantial legal competences in the field).

The influence of the federal government in higher education policy had been steadily declining in the second half of the 20<sup>th</sup> century. A national higher education policy did not exist, nor was there a national higher education ministry. The policy dimension was reduced to financial aspects. This resulted in spiralling costs for Ottawa over which it tried to re-establish control (in terms of both overall amount and the objects of expenditure). However, earmarked funding as an option was perceived by the provinces as an intrusion into their field of competences. The resulting problem seemed to have been solved after both governmental levels negotiated a new deal in 1977 that resulted in the Established Program Financing (EPF). The agreement – which went beyond higher education – brought the provinces funds that were not earmarked and that were based on direct payments and the transfer of tax points. Under these conditions, it was not surprising that Ottawa practically lost its influence on how the financial means transferred as a result of EPF were used in the provinces. As a consequence, the national government reduced its funding for EPF as the programme was perceived, from its perspective, to be a failure which required correction.<sup>21</sup>

### *A federal retreat – the Canada Health and Social Transfer (CHST) program of 1996*

Acting unilaterally, the Liberal government under Prime Minister Jean Chrétien (which came to power in 1993) introduced a new system, the Canada Health and Social Transfer (CHST) program, in 1996.<sup>22</sup> It brought together the existing EPF and a further program (Canada Assistance Plan – CAP), but also introduced substantial cutbacks regarding the transfer payments by Ottawa (Snoddon, 1998). Together with cutbacks in other areas of higher education funding, the program has been branded at that time by J. Robert S. Prichard (2000: 17-18), a former president of the University of Toronto, as ‘arguably the lowest point in the fifty year history of federal support for postsecondary education and research’. In this way CHST appeared to have marked the end of the federal ambition in the general funding of postsecondary education.

At first sight, this development appeared to follow a path dependency whereby the provinces claimed (back) their constitutional prerogative in higher education, starting with the quiet revolution in Québec and the subsequent Canadian-wide ‘provincial awakening’ as regards their role in higher education in the 1950s and the 1960s.<sup>23</sup> Yet, this impression would be misleading and does not reflect the change that had started to take place in higher education policy, which has been described by Herman Bakvis (2008: 205) as an ‘excellent example of

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<sup>21</sup> For a more detailed account, see: Braband, 2004: 102-129.

<sup>22</sup> The program was in 2004 split up into the Canada Health Transfer and the Canada Social Transfer; for more detailed information, see: Bakvis, 2008: 206-209 and the homepage of the Department of Finance Canada (<http://www.fin.gc.ca/>).

<sup>23</sup> For more details, see: Braband, 2004.

uncontested independent action by the federal government' and which has been characterised by Allan Tupper (2003; quoted in: Bakvis, 2008) as the 'quiet revolution' of the federal level. The 'quiet revolution' took place in the associated field of research funding which, besides the direct support of students, is the main area of federal activity in higher education, as it is generally – similar to Germany – constitutionally less contested.

### *Shifting priorities: the federal engagement in research funding*

Almost at the same time as the federal government was withdrawing from the general funding of higher education, it was expanding its role in the funding of research. This was in no way a new activity and could also be seen as following the logic of path dependency (Bakvis, 2008: 216) as a consequence of pre-existing research councils and the establishment of, for example, the Networks of Centres of Excellence<sup>24</sup> in 1988. But in the 1990s, federal research involvement developed a new quality based on the recognition of the potential impact of the knowledge economy for the country.

The Canadian government was open to the implications of the knowledge economy (Metcalf and Fenwick, 2009: 212) and itself emphasised – in terms consistent with those employed by the OECD (see introduction) – the significance of the knowledge-based economy for the country (Bakvis, 2008: 213, referring to the 1997 Throne Speech). It marked the beginning of a new epoch as 'the federal Liberals 'got religion' in promoting the knowledge economy, and the research that drives it' (Cameron, 2001: 150). It manifested itself in the 1997 budget and the launching of the Canada Foundation for Innovation (CFI), and was followed in 2000 by the Canadian Institutes of Health Research (CHIR) and the Canada Research Chairs (CRC). These initiatives - further stimulated by a return to a fiscal surplus in the federal budget of 1997/1998<sup>25</sup> – led to a substantial increase in the federal funding of research. This came in addition to an increase in funding – of about 60% between 1995/96 and 2003/04 – for the three existing research councils (for detailed figures, see: Bakvis, 2008).<sup>26</sup>

The theme continued in the following years. In 2001 Ottawa tackled the controversial issue of the indirect costs of university research.<sup>27</sup> It established a program directly to support universities by compensating them for the indirect costs resulting from research. This has been a long-standing issue, and had increased in significance as a result of growing research funding. Therefore, the federal government provided in 2001, initially as a one-time investment, \$200 million to ease the pressure on universities. The program was extended and finally made permanent in 2006 (Tupper, 2009).<sup>28</sup>

The election of a Conservative government under Stephen Harper, and its promise of an 'open federalism', might have been seen to herald a degree of change in the sector. This proved, however, broadly not to be the case.

The weight of – and risks of a reliance on – the federal 'power of the purse' continued to be felt. One of the first measurements of the new government in the higher education sector was the establishment of the Post-Secondary Infrastructure Trust initially with a funding \$1 billion

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<sup>24</sup> <http://www.nce-rce.gc.ca/>

<sup>25</sup> The federal surplus lasted until the fiscal year 2007/2008. For more detailed figures, see: Royal Bank of Canada, 2016.

<sup>26</sup> The funding councils are the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC) and the Medical Research Council (MRC); all three were established after a restructuring process in 1976 (Braband, 2004).

<sup>27</sup> For more information, see Braband, 2004.

<sup>28</sup> It has currently (2016) a budget of \$342 million a year. For further information on the program – which is now called 'Research Support Fund' – , see the website of the fund: <http://www.rs-fsr.gc.ca>.

for two years shared amongst the provinces. Like with so many initiatives of the federal government before, this project was also primarily based on the financial strength of Ottawa. The resulting spending power thereby often undermined constitutional prerogatives especially during times of federal budget surpluses. Yet, while the program was welcomed by the provinces, it also revealed a dependency on the goodwill of the federal government. Under such circumstances the leadership of higher education institutions in the provinces feared that such contributions could as easily stop as they have started (Tupper, 2009).

In essence, though, the new open federalism brought little change. The strategic interest of the Harper government was described by a senior representative in the Council of Ministers of Education Canada (CMEC) as something more of a ‘continuation’ that brought ‘no change of focus’ and reflected a ‘more status quo’ approach, which had not been entirely expected: ‘the higher education community was probably surprised that there was no change of direction’.<sup>29</sup>

From a perspective that identifies the impact of the knowledge economy as a driving force of Ottawa’s research orientated approach to higher education, this might be less surprising given the characteristic policy priorities of conservative parties. In this vein a research approach focusing on the economic and innovation dimension of higher education was less likely to be threatened by a Conservative government, especially when the incentive to engage in such an approach was actually of an external nature – the knowledge economy concept – and not a party political idea of the Liberals.

The continuation of the approach was challenged by the global economic crisis of 2008 that threatened investments into education more generally. The federal government and the provinces, though, showed a ‘fair degree of consensus especially on a fundamental point: education must be seen as a response to an economic crisis’.<sup>30</sup>

#### *Federal research engagement and the need and role of autonomous universities*

The federal role in higher education policy, and in particular its role in the funding of universities, has been a tricky subject since the beginning of the second half of the last century. Eventually Ottawa withdrew from the more controversial area of general university funding, and increased its engagement in the research sector without encountering similar problems with the provinces. The federal government, as Herman Bakvis (2008: 211) put it, ‘succeeded in transforming the manner in which funding was delivered ... And this transformation came about with little protest from the provinces’. Yet, funding is only part of the story, as wider consequences arose from the federal research engagement in the absence of any form of overall policy coordination.

As already noted, there is no Canadian higher education policy, no national ministry of higher education, and no permanent forum where the two levels of government can interact on issues of higher education policy. Canadian post-secondary education sees the operation of a federal system in one of its most heavily decentralised expressions. Coordination efforts in the higher education sector are rather rudimentary and if one wants to define Canadian higher education policy, the reference would have to be to a conglomerate of the individual higher education policies of the provinces. While it is not the question here whether a national higher education policy is desirable, the lack of a culture of coordination allowed the federal level to establish its research funding in a sort of top-down process, or as one senior figure in the Ontario government put it:

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<sup>29</sup> Interview, 07.05.2012 (I).

<sup>30</sup> Interview, Ibid..

The federal government regardless of who was the party in power has never been prone to work systematically with the provinces. ... The feds have money and they throw it around and they know there's always somebody who is going to be baited by that funding.<sup>31</sup>

Researcher/research groups or universities more generally are at the receiving end. For them the additional funding opportunity represented an extra source of income. Yet, the effects were not always that positive as the federal funds led to an interference with the learning and teaching dimension of the institutions (and thereby more directly interfered with the provincial prerogatives), and the higher education and research priorities of the provinces. As regards the interference with teaching, especially the CRCs have come under critical scrutiny as their funding 'has a definite impact on teaching, for example, in that within universities priorities are set and resources relocated from some fields to others' (Bakvis, 2008: 212). In a similar vein, the issue of indirect costs remains a problem as universities that are particularly successful in applying for research funding need to cross subsidise their success in the research sector at the expense of other tasks, and here in particular teaching, at the institution. This has of course an influence on the strategic orientation of universities which is of some relevance if the federal research priorities do not align with the research priorities of the provinces. The consequences of this have been described by an Ontario government representative in a way that probably applies to all provinces.<sup>32</sup>

When the federal government decides to go ahead with an initiative ..., very often what happens, the institutions position themselves vis-a-vis the federal government. Universities will try to capitalise as much as possible on the kind of support that they may be offered by the Feds. But, whatever the federal priorities might be, if they are at odds with what the province's priorities are then you end up with institutions getting federal funding for particular purposes in areas that are not of particular relevance to the province and the province then has to pick up the bill on some of the costs that may be associated with whatever the Feds want.

This further raises the question of why the provinces accepted this role. Naturally, there is not one answer to this question. It is partly explicable by the fact that national and provincial priorities do not actually conflict that much with each other. Equally, the absence in many (most) cases of strong provincial research agendas has tended to leave the space open to Ottawa by default. It is also simply down to resources, with the federal government investing in existing pathways that 'were both established and well accepted by both orders of government' (Bakvis, 2008: 216). However, in the context of the present analysis, a further element must also be highlighted: the autonomy of the universities and their role as political actors, able to engage as effective lobbyists with both levels of government.

Canadian universities traditionally enjoy a great degree of autonomy. In the years before the provincial awakening (see above) this was reflected by the federal government dealing directly with the universities in policy matters, resulting in the Association of Universities and Colleges of Canada (AUCC) – since 2015 renamed Universities Canada – taking on a role as a policy partner of Ottawa. Yet, the higher education policy environment changed when the provinces claimed their constitutional rights and the AUCC lost its influence. This, however, did not result in a loss of the autonomy of the universities as the provinces claimed the

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<sup>31</sup> Interview, 07.05.2012 (II)

<sup>32</sup> Interview, *ibid.*

responsibility for the sector in a traditional two level power struggle, but did not in a similar vein redefine their position vis-à-vis the universities.

In the case of Ontario, a senior civil servant with a focus on intergovernmental relations described the situation regarding the relationship between the government and the universities in the following way:<sup>33</sup>

It is fair to say that higher education policy in Ontario up until recently was pretty much the prerogative of institutions. So universities drove higher education policy. The government did not play a significant role other than – that’s up until five or six years ago – funding, operational funding, student financial assistance ..., capital funding. But in terms of higher education policy in the broad sense of the word, it is fair to say that governments of Ontario have in the past 30 years taken a very hands off approach to postsecondary education leaving it up to the universities ... Universities are very independent in Ontario compared to other jurisdictions.

The situation in other provinces does of course differ from this specific example but, as a senior academic and higher education expert acknowledges more generally, ‘provinces for the most part haven’t been particularly interventionist’ regarding their universities.<sup>34</sup> This provided the ground for universities to take on a more direct policy role with the shift of the funding strategy of the federal government towards more research investment as part of the knowledge economy.

In this environment, entrepreneurial university leaders that entered the scene as a ‘new breed of university officials’ (Bakvis, 2008: 213) in the 1990s were able to instrumentalise the development and reengage directly with the federal government. In this vein, they contributed significantly to the establishment and running of the CFI, the first major step in the new development (Ibid: 212-213). They had an immediate role in the quiet revolution of Ottawa whereas ‘the provinces in many respects acted as bystanders and simply accepted the understanding worked out between the presidents of some of the major universities and a number of key public servants in Ottawa’ (Ibid: 206).

The influence of the universities did not stop there. And it is no longer the AUCC/Universities Canada that principally represents this influence. It rather manifests itself – reflecting the knowledge economy environment – in the association of 15 leading Canadian research universities (U15). The group holds 79% of competitively awarded research funding<sup>35</sup> and has been attributed a significant role in the shaping of federal research policy under the Conservative Harper government.<sup>36</sup>

Arguably still more telling in this regard was the action of an even smaller group. The presidents of the top five research universities in the country – University of Toronto, University of British Columbia, Université de Montréal, McGill University and University of Alberta (sometimes referred to as G5; they are all members of the U15 group) – approached *Maclean’s* magazine in 2009 for an interview (Wells, 2009) in which they argued for more differentiation in the higher education system, providing top universities with an even greater share of research resources. They thereby challenged ‘the one-size-fits-all mentality that has governed Canada’s higher education system’ (Ibid.). But they were not only concerned with

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<sup>33</sup> Interview, 07.05.2012 (II).

<sup>34</sup> Interview, 14.01.2016.

<sup>35</sup> See: <http://u15.ca/our-impact> (accessed, 23 May 2016).

<sup>36</sup> Interview with a senior policy analyst, 11.01.2016.

the research funding distribution system, as they broader suggestions for Canada as a whole (Ibid.):

The presidents called for what one of them, David Naylor of the University of Toronto, called a “first ministers’ conference on the innovation economy.” The question that would face the Prime Minister and the provincial premiers at that conference would be: how can Canada improve its performance at putting new ideas to work in the private sector?

The initiative is interesting in part for what it says about the role conception of the presidents involved, who clearly saw themselves not only as interested stakeholders, but also (and even more) as confident policy actors putting forward a vision for the wider system. Like the provinces, though, the universities are not a homogeneous group. As such, it is not surprising that the move by the five universities stirred up considerable controversy in the country,<sup>37</sup> as it basically threatened to exclude smaller universities and less well off provinces from the research funding cake (Woodard, 2010).

While the G-5 initiative has not generated much, if anything in the way of a follow-up, it remains an important marker of the potential role of universities in the policy process, not least insofar as they may be able to assume a policy-shaping role in the absence of strong (or any) coordinating structures. The role of universities in research policy – and here in particular the role of strong research universities like those universities organised in the U 15 group – is unlikely to diminish under the new Liberal government. Indeed, the initial indications point to a government that will be more sympathetic to the demands of the sector than its predecessor. The new Trudeau government’s first budget saw healthy increases in research funding, in the range of 4 to 6% above 2015 levels for the three main councils, with a ‘marked shift’ away from commercial applications and back towards basic science (*Globe and Mail*, 23 March 2016). On the back of strong lobbying by Universities Canada, the government has also launched a \$2 billion university infrastructure fund, even though no mention was made of such an initiative in the party’s election platform (*Globe and Mail*, 7 April 2016). All of this, moreover, must be placed against the backdrop of the pivotal role played by universities in Canada’s innovation system. Given the comparatively poor level of private research and development spending (cf. *The Economist*, 30 April 2016), they are the necessary motors for any initiative to tackle the country’s underperformance in innovation.<sup>38</sup>

### **The shifted contours of higher education policy in Canada and Germany**

The contours of higher education policy in Canada and Germany have changed substantially over the last 20 years, and these changes may largely be understood with reference to the wider emergence of the knowledge economy as a global policy paradigm. In a way, the pressure of the knowledge economy appears to have led to similar developments in both countries with the federal governments moving towards more targeted research funding. This, however, does not represent the full picture. At the beginning of the period under observation here (i.e. from the mid-1990s onwards) the balance within the federation looked quite different in both case studies. In the German system the federal government was firmly

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<sup>37</sup> For a short overview of relevant articles, see: Charbonneau (2009) Big five controversy keeps on going, <http://www.universityaffairs.ca/opinion/margin-notes/big-five-controversy-keeps-on-going/> (accessed 24 May 2016).

<sup>38</sup> For a further discussion of the role of the research university, including particular insight into the Canadian case, see Lacroix and Maheu (2015).

entrenched as an actor in higher education policy due to its constitutional rights, whereas in Canada the government in Ottawa was finally giving up its remaining toehold in the sector due to a lack of legal competence and in the face of provincial resistance to what they regarded as unwarranted federal interference. The emergence of the knowledge economy as a policy paradigm, however, has allowed for a reshaping of those contours in both cases.

'Freed' of most of its general commitments, the Canadian government was, supported by a budgetary surplus, able to react swiftly to the 'new' development with the establishment of various new research programs. Federalism in Germany in the meantime was still preoccupied with issues of entanglement and a constitutional reform aimed at disentanglement. As a result, the reform of 2006 was less driven by the needs of the higher education sector and the challenges posed by the knowledge economy, and more shaped by the traditional two-level game of the federal system. Or to put it differently, the reform was concerned only with the national dimension to the virtual exclusion of an interest in international developments relevant for higher education. In the higher education policy sector itself, though, the international dimension gained unprecedented importance, through both European developments (in particular the Bologna Process) and a growing awareness of a more competitive global landscape (as seen in the adoption of the Excellence Initiative in 2005). The fact remains, though, that the constitutional reform ignored important conditions in the policy field with which it was principally concerned.<sup>39</sup> However, this partially 'misguided' constitutional reform did not stop the European level establishing itself as a defining level in higher education policy along side the two traditional levels of the federation.

The Canadian system is not entangled and therefore coordination efforts and the institutions that might accommodate such efforts are limited. This makes policy processes potentially quite economical, but in the case of the research engagement of the federal government it also appears to have adverse effects. The lack of coordination between federal research funding on the one hand and the provincial management of post-secondary education on the other creates efficiency and legitimization problems.

The lack of coordination in the Canadian case also has implications for stakeholder influence, opening the door to possibilities for the sector, and particularly the big players in the sector, to play a significant policy-shaping role. Canadian universities - unlike their German counterparts - have always experienced a high degree of autonomy and had already in earlier periods been the privileged policy partner of the federal government. When the federal government lost control over its general funding contributions, the universities in a way lost their access point for influence. The knowledge economy brought the federal government back into the policy domain. This opened the gates again for the research universities, not only because they were at the receiving end of the federal research money, but also because they could provide the necessary expertise missing on the governmental level to establish the new federal role in research policy.

What we have witnessed in both countries is a shifting balance in the higher education policy field which has left the subnational levels in charge of the general policy field while the federal governments establish themselves more firmly in the area of research funding. In the Canadian dual federalism case this is a clear-cut picture, whereas in the German cooperative federal model it is not that clear-cut as coordination - or entanglement in a more negative connotation - remains a characterising feature in the German system. Our understanding of the evolution of the sector cannot, however, be limited only to the interplay of the two levels

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<sup>39</sup> A reference to the different political actors involved in the constitutional process vis-à-vis those political actors determining the education policy field might offer some but still limited explanatory value - especially if one considers the highly coordinated German system.



of government in a classic binary federalism. More complex structures of multi-level governance have to be taken into account. In the German case, it is clear that the European level has come to be a major influence in its own right. Conversely, in the Canadian case, the 'uncoordinated' operation of the system creates opportunities for stakeholder involvement across levels of government, with the big research universities in particular proving themselves to be well-equipped to assume a pivotal role.

### ***Bibliography***

Anbuhl, Matthias. 2008. Welchen Staat wollen wir? Auswirkungen der Föderalismusreform I und II auf das Hochschulwesen. In *Jahrbuch Hochschule gestalten 2007/2008. Denkanstöße in einer föderalisierten Hochschullandschaft*, ed. Frauke Gützkow and Gunter Quaißer. 51-62. Bielefeld: Universitätsverlag Webler

Bakvis, Herman. 2008. The Knowledge Economy and Post-Secondary Education. Federalism in Search of a Metaphor. In *Canadian Federalism. Performance, Effectiveness, and Legitimacy*, Second Edition, ed. Herman Bakvis & Grace Skogstad. 205-222. Don Mills, Ontario: Oxford University Press

Benz, Arthur. 2003. Konstruktive Vetospieler in Mehrebenensystemen. In *Die Reformierbarkeit der Demokratie. Innovationen und Blockaden*, ed. Renate Mayntz and Wolfgang Streeck. 205-236. Frankfurt/New York: Campus Verlag

. 2008. From Joint Decision Traps to Over-regulated Federalism: Adverse Effects of a Successful Constitutional Reform. In *German Politics*, Vol. 17, No. 4: 440-456

BMBF. 2000. *Hochschuldienstrecht für das 21. Jahrhundert. Das Konzept des BMBF*. Bonn/Berlin: Bundesministerium für Bildung und Forschung

Braband, Gangolf. 2004. *Federalism and Higher Education Policy. A Comparative Study of Canada and Germany*. PhD Thesis. Available as online publication of Institut für Hochschulforschung (HoF) Wittenberg. <http://ids.hof.uni-halle.de/documents/t1544.pdf>

. 2005. Hochschulpolitik und Föderalismus: Zum Scheitern verurteilt? Erkenntnisse aus einer vergleichenden Perspektive. In *Jahrbuch Hochschule gestalten 2005. Denkanstöße zum Bologna-Prozeß*, ed. Frauke Gützkow and Gunter Quaißer. 117-134. Bielefeld: Universitäts Verlag Webler

Cameron, David M. 2001. Postsecondary Education and Canadian Federalism: Or How to Predict the Future. In *The Canadian Journal of Higher Education*, Vol. XXXI, No. 3: 143-156

Corry, J.A. 1970. *Farewell the Ivory Tower?: Universities in Transition*. Montreal/Kingston: McGill/Queen's University Press.

Daxner, Michael. 1996. *Ist die Uni noch zu retten? Zehn Vorschläge und eine Vision*. Hamburg: Rowohlt Verlag

Deutsche Forschungsgemeinschaft. 2013. *Excellence Initiative at a Glance*. 5<sup>th</sup> revised edition. Bonn: Deutsche Forschungsgemeinschaft

European Council. 2000. *Presidency Conclusions*. Lisbon European Council, 23 and 24 March 2000. [http://www.europarl.europa.eu/summits/lis1\\_en.htm](http://www.europarl.europa.eu/summits/lis1_en.htm) (accessed on 29 April 2016)

Glötz, Peter. 1996. *Im Kern verrottet? Fünf vor Zwölf an Deutschlands Universitäten*. Stuttgart: Deutsche Verlags-Anstalt

Hochschulrektorenkonferenz. 2015. Statistische Daten zu Studienangeboten an Hochschulen in Deutschland. Wintersemester 2015/2016. Bonn: HRK

Hohn, Hans-Willy. 2010. Wissenschaftspolitik im semi-souveränen Staat – die Rolle der außeruniversitären Forschungseinrichtungen und ihrer Trägerorganisationen. In *Die Gemeinschaftsaufgaben von Bund und Ländern in der Wissenschafts- und Bildungspolitik. Analysen und Erfahrungen*, ed. Margrit Seckelmann / Stefan Lange / Thomas Horstmann. 145-168. Baden-Baden: Nomos Verlagsgesellschaft

Keller, Andreas. 2000. *Hochschulreform und Hochschulrevolte. Selbstverwaltung und Mitbestimmung in der Ordinariatsuniversität, der Gruppenhochschule und der Hochschule des 21. Jahrhunderts*. Marburg: BdWi

Kreckel, Reinhard. 2009. Zur Kooperation verpflichtet. Daten und Fakten zur universitären und außeruniversitären Forschung. In *Aus Forschung und Lehre*, Vol. 16, No. 5: 328-331

Lacroix, Robert and Louis Maheu. 2015. *Leading Research Universities in a Competitive World*. Montreal/Kingston: McGill-Queen's University Press.

Lange, Stefan. 2010. Deutsche Hochschulpolitik im Kontext der Gemeinschaftsaufgaben. In *Die Gemeinschaftsaufgaben von Bund und Ländern in der Wissenschafts- und Bildungspolitik. Analysen und Erfahrungen*, ed. Margrit Seckelmann / Stefan Lange / Thomas Horstmann. 109-143. Baden-Baden: Nomos Verlagsgesellschaft

Metcalf, Amy Scott and Fenwick, Tara. 2009. Knowledge for whose society? Knowledge production, higher education, and federal policy in Canada. In *Higher Education*, Vol. 57, No. 2: 209-225

Moore, Carolyne, Wade Jacoby and Arthur B. Gunlicks. 2008. German Federalism in Transition? *German Politics*, Vol. 17, No.4: 393-407

Münch, Ursula. 2011. Bildungsföderalismus im Hochschulbereich. In *die hochschule. journal für wissenschaft und bildung*, Vol. 20, No. 1: 38-49

OECD. 1996. *The Knowledge-Based Economy*. Paris: OECD

Pasternack, Peer. 2011. Die föderale Kompetenzordnung im deutschen Hochschulwesen: Entwicklung und Status. 21-60. Traditionelle Differenzen und neue Ähnlichkeiten. Trends

nach der Föderalismusreform. 340-353. In *Hochschulen nach der Föderalismusreform*, ed. Peer Pasternack. Leipzig: Akademische Verlagsanstalt

Piattoni, Simona. 2010. *The Theory of Multilevel Governance: Conceptual, Empirical and Normative Challenges*. Oxford: Oxford University Press.

Royal Bank of Canada. 2016. *Canadian Federal and Provincial Fiscal Tables*. Royal Bank of Canada, April 19, [http://www.rbc.com/economics/economic-reports/pdf/provincial-forecasts/prov\\_fiscal.pdf](http://www.rbc.com/economics/economic-reports/pdf/provincial-forecasts/prov_fiscal.pdf) (accessed: 6 May 2016).

Scharpf, Fritz W. 1988. The Joint Decision Trap: Lessons from German Federalism and European Integration. In: *Public Administration* 66: 239-278

. 2010. Verfassungsreform mit Vetospielern. In *Die Gemeinschaftsaufgaben von Bund und Ländern in der Wissenschafts- und Bildungspolitik. Analysen und Erfahrungen*, ed. Margrit Seckelmann / Stefan Lange / Thomas Horstmann. 23-36. Baden-Baden: Nomos Verlagsgesellschaft

Seckelmann, Margit. 2010. Konvergenz und Entflechtung im Wissenschaftsföderalismus von 1998 bis 2009 – insbesondere in den beiden Etappen der Föderalismusreform. In *Die Gemeinschaftsaufgaben von Bund und Ländern in der Wissenschafts- und Bildungspolitik. Analysen und Erfahrungen*, ed. Margrit Seckelmann / Stefan Lange / Thomas Horstmann. 65-90. Baden-Baden: Nomos Verlagsgesellschaft

. 2011. Transparenzschaffung oder neue Intransparenzen? Eine Bilanz der Föderalismusreform (2006/09) im Bereich der Wissenschaftspolitik. *Die hochschule. journal für wissenschaft und bildung*, Vol. 20, No. 1: 19-37

Scharpf, Fritz W., Bernd Reissert, Fritz Schnabel. 1976. *Politikverflechtung. Theorie und Empirie des kooperativen Föderalismus in der Bundesrepublik*. Kronberg/Ts.: Scriptor

Snoddon, Tracey R.. 1998. The Impact of the CHST on Intergovernmental Redistribution in Canada. In *Canadian Public Policy* 24, 49-70.

Tupper, Allan. 2003. The Chrétien Governments and Higher Education: A Quiet Revolution in Canadian Public Policy. In *How Ottawa Spends, 2003-3004*, ed. G.B. Doern. Toronto: Oxford University Press

Tupper, Allan. 2009. Pushing Federalism to the Limit: Post-Secondary Education Policy in the Millennium. In *Research and Innovation Policy. Changing Federal Government-University Relations*, ed. G. Bruce Doern and Christopher Stoney. 35-58. Toronto, Buffalo, London: University of Toronto Press

Wells, Paul. 2009. Our universities can be smarter. In *Maclean's*, July 28

Woodard, Colin. 2010. Does Centralizing Research Hurt the Provinces? In *The Chronicle of Higher Education*, June 21