

MEDIATING POLICY COMPETITION THROUGH CAMPUS DEVELOPMENT IN DUTCH LIMBURG

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ABSTRACT

Over the past decades, governments have switched from a managerial to an entrepreneurial style of governance in the strengthening of certain places at the expense of others. This coevolved with an increase in inter-urban and inter-regional competition for resources, also called 'policy competition'. The issue for regional governments is how they balance their wish to strengthen their economic structure, without creating conflicts of unfair competition in the designation of 'winners' and 'losers'. This paper addresses this balancing act in the Dutch Province of Limburg, where a multinational threatened to leave the region. The case is analysed with the help of actor-network-theory and follows the translations through which an innovative policy tool was constructed that allowed the Province to invest in real estate. Through the innovative 'campus' concept, the Province could comfort the vested interests of the multinational, while balancing out the interests of other economic cores in the region.

Key words: policy competition, campus development, innovation campus, Dutch Limburg, regional economic policy, actor-network-theory

INTRODUCTION

How can regional governments strengthen their competitiveness without creating unfair competition? – One of the key questions for both national and regional governments is how they can foster economic development in their jurisdiction, without violating the EU rules for State Aid (Colomb & Santinha 2012). This is even more pressing within areas facing economic decline, where any form of employment is carefully tended. While multinationals can shift employment to other regions, territory bound governments are left with social problems if no new employers appear. Against this relatively footloose situation of multinationals, territory bound governments develop strategies to maintain employment and thus

prosperity within their region, but face challenges to satisfy both the needs of local businesses and of the EU rules on competition. Next to the formal EU rules of competition, more informal and politically sensitive issues arise when specific companies benefit from state measures to promote the competitiveness of regions (Bontje & Lawton 2013).

Theoretically, the debate has focused on the policy competition between governments in attracting resources from higher-tier governments within the context of the hollowing out of the welfare state and, at the same time, a more entrepreneurial governance style (see Begg 1999; Malecki 2004; Jonas *et al.* 2010; While *et al.* 2013; Addie 2015). The governance style of regional governments has evolved from managerial to

entrepreneurial, focusing on fostering economic growth within their territories (Harvey 1989). This new style co-evolved with an increase in inter-urban and inter-regional competition in the light of globalisation (Malecki 2004; Jonas *et al.* 2010). Cities in growth regions such as Munich, Cambridge and Stockholm, struggle to shape a politics that channels investments from state resources, at the expense of other less privileged regions (see While *et al.* 2013). Although encouraged by EU policies such as the Lisbon Agenda of the 2000s, the implementation of such an entrepreneurial style is hardly straightforward, as conflicts arise from 'backing winners' at the cost of other areas that equally deserve support (Begg 1999). In light of the recent modes of liberal thinking on government spending, such an entrepreneurial stance is under pressure and inevitably leads to the support of some at the expense of others (While *et al.* 2013).

While the debate has so far focused upon more structural components of growth facilitation in terms of collective provision of infrastructure, land and services (de Vor 2011; Jonas *et al.* 2010; While *et al.* 2013; Addie 2015), the tactics of lower-tier governments in policy competition remain underexplored. This paper addresses this policy competition and the issues of regional governments and their balancing acts between unfair competition in general and binding multinationals to their region. Two important dimensions that shape these balancing acts are the economic context within the region, that is, what other firms or developments can claim resources from the region, and the dovetailing with broader policy discourses (Begg 1999; While *et al.* 2013). Consequently, the research question is as follows: how can regional governments strengthen their competitiveness through the facilitation of 'winners' without creating unfair competition?

This research question is answered with the help of a case study on the Dutch Province of Limburg, a province in the south of the Netherlands (see Figure 1). This region has faced serious economic and demographic decline since the end of the mining industry in 1973 (Elzerman & Bontje 2013). While some of the pain has been remedied through bringing in

public services such as Statistics Netherlands (Centraal Bureau voor de Statistiek), the Tax Administration (Belastingdienst) and Maastricht University (UM), its economic structure has been dominated by the chemical industry multinational the Dutch State Mines (DSM) (Dohmen 2007; Elzerman & Bontje 2013; Jeannot & Schreuder 2015).

This history of Limburg has fuelled the need for economic development strategies through 'cluster development', which were launched through the 'acceleration agenda' of 2003, aimed at the strengthening of the 'power clusters' of 'chemistry', 'health care & cure', 'agro-food/nutrition' and 'new energy' (Jacobs & Kooij 2013). These clusters mirrored the economic cores of the province (i.e. DSM in Geleen, UM in Maastricht, Greenport in Venlo and Solland Solar in Heerlen/Aachen on AVANTIS) and thus balanced the interests of the economic cores. The province's policy was aimed at shaping the right preconditions for these clusters through general provincial policies, for example, mobility, labor market and education (Taskforce Versnellingsagenda 2005).

However, in 2008, the Province developed new policies for the development of specific areas within these clusters, aimed at 'campus development' (Jacobs & Kooij 2013), in which it prioritised the developments around DSM's Chemelot Campus in Geleen and around UM's Health Science Campus in Maastricht, above developments in Venlo and Heerlen. In contrast to the Province's cluster policy between 2005 and 2008, two specific sites benefited from the province's new policy. This paper focuses on this tension and analyses the policy development in the Province on a micro-level to understand the issues involved with the balancing between unfair competition and strengthening the competitiveness of the region. It does so by focusing on the 'translation' and 'net-working' effects of the campus concept within the region of Limburg, with specific attention to the policy sphere of the Dutch Province of Limburg.

Actor-network-theory as a way to understand the micro-politics and tactics in Limburg – The mainstream literature on policy competition is dedicated to comparative case studies



Figure 1. Campuses and clusters in Dutch Limburg. [Colour figure can be viewed at wileyonlinelibrary.com]

on a general level to equate collective provision competition in one region with another. This approach highlights the general patterns

and issues of policy competition, but excludes detailed insights in the tactics and micro-politics of policy competition. Therefore, this

paper uses the perspective of actor-network-theory (ANT), drawing upon the work of Callon (1986), Law (1992, 2008) and Latour (1986, 2005). This approach focuses on the relations between actors to understand the entities that we encounter in our world, such as organisations, machines, knowledge, documents etc. In ANT, both things and ideas are conceived of as actors, hence, actor-network-theory (Murdoch 2006; Hendriks 2014). Central is the emergence and disintegration of relations between entities that form actor-networks, mainly analysed through tracing relations between entities. The building of relations is referred to as 'translation', meaning the circulation, transformation and representation of 'things', which also includes the orchestration, ordering and resistance of these processes.¹

The networks of actors can be traced by following the actors and their flows (Latour 2005). This study traced the translations of the campus concept by analysing policy documents, minutes of Provincial State meetings and commission meetings, press releases and newspaper articles, all referred to in the text. Fourteen semi-structured interviews were carried out with different actors involved in the campus plan, including civil servants of the province and officials working on particular campus developments, a member of the Provincial Executive, and both present and former officials of the regional investment LIOF.

The analytical framework focuses on four moments of translation: *problematization*, *interessement*, *enrolment* and *mobilisation* (Callon 1986). *Problematization* is the process through which an actor makes itself indispensable in the light of a constructed problem. *Interessement* includes how allies are locked into place in the light of a problematisation. *Enrolment* entails how roles of actors are defined and co-ordinated. *Mobilisation* implies the emergence of faithful and representative spokesmen for the entire network. As mentioned before, translations and networking do not occur in a vacuum, but ideas and things are circulated through intermediaries in the form of texts, technical objects, embodied practices and money (Callon 1991; Latour 1986).

In what follows, this paper analyses the translation of the campus across the region using the four moments of translation, from a private initiative of DSM in 2003, towards the public embrace of the campus in 2014 by the Province of Limburg as an important policy tool.

CAMPUS DEVELOPMENT IN LIMBURG

The issue: the withdrawal of DSM – In 2003, DSM decided to develop a 'research campus' in Geleen, a 'business campus', distinct from the conventional notion of 'university campus' (DSM & LIOF 2003; Netherlands Academy of Technology and Innovation 2003; DSM 2004b). This decision was a consequence of DSM's renewed strategy to withdraw from bulk chemistry and to focus on life sciences and chemical materials, which eventually led to the sale of DSM's petrochemical businesses to Saudi Basic Industries Corp (SABIC) in 2002 (DSM 2013). The Research Campus was constructed as a place to open up DSM's work terrain to 'techno starters' and the research and development (R&D) divisions of other companies. Opening up for other companies was framed as a step forward, but the action was mainly a strategy to find new tenants for the site's vacant real estate, a financial problem for DSM (Netherlands Academy of Technology and Innovation 2003; DSM & LIOF 2003; DSM 2004b). Until 2005, this real estate initiative was essentially part of DSM's private strategy and -in contrast to the developments later in the process – not one that was actively supported by the government or other actors.

Problematization: how to keep DSM in the region? – DSM's withdrawal from the region was exemplified by its operation called 'Copernicus' (2002–04). This was a restructuring operation that included the loss of around 500 jobs in manufacturing and support services (DSM 2004a). In 2004, the operation led to protests from the trades unions, which ultimately led to an agreement between the unions, DSM, the municipality of Sittard-Geleen and the Province of

Limburg, which stated that DSM would make an effort to attract new job opportunities (Chemelot 2013).

This retreat was recognised by the province's civil servants, who started to explore how to bind DSM to the region. In the next part of this paper, we follow these civil servants from the strategy department, because they can be considered essential in the translation process. It was these civil servants that started to explore strategies to bind DSM to the region. At that time, the ruling economic policy was the cluster policy, and they explored possibilities to bind DSM physically to the region through cluster development, but these were not fit for this purpose.

From 2006, however, visits to Basel, contacts with Martin Hinoul of the Interuniversity Microelectronics Centre (IMEC) in Leuven, and visits to the High Tech Campus in Eindhoven (HTC) made the civil servants realise that 'campus development' could play a role in the cluster development. IMEC Leuven and HTC in Eindhoven were prime examples of a new style of campus development also called the 'innovation campus' (see also Kooij 2015), in which innovation and regional-economic policy materialised in the form of buildings dedicated to research and development. Thus, in 2006 the province's civil servants took a first step to translate 'campus development' into existing regional policies and the acceleration agenda. At that time, direct investments of the Province that would bind DSM were not possible, because the cluster policies were mainly focused on mobility, job market and education, etc., and not on physical developments, so the civil servants needed to find new opportunities to link DSM to the region.

Interessement: from 'power clusters' to campus development – After the 2007 provincial elections, the ideas of the civil servants made it into the board of the province, since the new provincial executives continued the acceleration agenda and explored the possibilities for campus development as the integration of different sectoral policies, such as physical environment, labour market, economic policy and innovation policy. The province's civil servants continued to explore campus development as

part of cluster development. One way to anchor campus development was to couple it with the rise of open innovation concepts within the industry, a concept that was embraced by DSM and Philips in 2003, but the development was also linked to DSM's vacant real estate problems and its problematic retreat from the region. In looking for solutions, the civil servants tried to understand what a provincial government could do to foster such a campus development.

The province's perspective on campus development was articulated in a memorandum for the Economic Provincial Council Commission (Statencommissie Economisch Domein) in March 2008 (Provincie Limburg 2008), which was positively welcomed by the Commission (Statencommissie voor het Economisch Domein 2008). The positive receipt of this perspective on campus development made it in theory possible to bind DSM to the region, but this same possibility could also be used by other economic players in the region. The civil servants had to restrict the extent to which the campus concept could be applied, in order to avoid overexploitation of the campus concept and hence overexploitation of financial resources. This was done through the memorandum, which was produced by the provincial civil servants and the provincial executive to explicitly define the campus concept. The memo was not written for purely semantic reasons because its aim was to distinguish between 'real' campuses and the 'ordinary' industrial and business estates that were only using the campus label for marketing reasons. Moreover, the memo detailed the province's commitment to 'real' campuses and to other initiatives that were not considered to be 'real'. In the memo, the province 'acknowledged' two campus developments within the region: the 'Research and Business Campus' in Geleen and the 'Health Sciences Campus' in Maastricht, through which the civil servants and the executive detailed roles for both the province and the two 'real' campuses in Geleen and Maastricht (Provincie Limburg 2008). Other initiatives such as Greenport Venlo or AVANTIS in Heerlen/Aachen were not considered campuses by the province because they did not meet the criteria mentioned in the memo (cf. Jacobs & Kooij 2013).

However, in line with most of the Dutch provinces, the official policy was still aimed at cluster development, and the decision in favour of campus development had to be democratically organised through the Provincial States. To align their ideas with the prevailing policy discourse, the civil servants had to find a way to interest other actors to actively argue for campus development, but how?

Interessement: in sync with the national discourse – Two national reports on campus development conducted for the Ministry of Economic Affairs (EZ) in 2009 (BCI 2009; Boekholt *et al.* 2009) played an important role in aligning campus development in Limburg with the national policy discourse. These reports turned out to be well in line with Limburg's vision, because the provincial civil servants had actively contacted EZ and the organisations working on the reports to inform them about Limburg's view and activities for campus development. This contact proved to be very productive for the province because the second of the two reports qualified the 'Research Campus' in Geleen as a 'mature campus' of 'national importance' and the 'Maastricht Health Campus' as a campus in its 'growth-phase' and 'potentially of national importance' (BCI 2009). This report aligned the Limburg memorandum on campus development with the networks of the national government, which made campus development a contemporary policy tool.

Very important for the Limburg case, the first report also explained the possible roles for governments in campus development, without transgressing the European rules concerning state aid (Boekholt *et al.* 2009). According to the report, it was possible for governments to assist initiatives through investments in infrastructure such as roads, but real estate was considered to be the limit (Boekholt *et al.* 2009). Moreover, because the reports were written for EZ and were in line with the province's view on the matter, the province could use these reports to further prioritise the only two 'real' campuses in the province.

Enrolment: from innovation of the regional economy to real estate development – The network of civil servants succeeded in

involving the actors within the province with the national discourse, but the actors still needed to be enrolled to create and sustain a stable network. Therefore, in 2010, the Province enrolled DSM and UM into a consortium, and they started working on a master plan for the 'CHEMaterials' cluster. The goal of the master plan was to develop the 'Chemelot Campus' – as it was now called instead of 'Research Campus' – to become the Euro-regional and international location for businesses, education and research organisations in the 'CHEMaterials' (Wagemans & Przybylski 2011). The province would contribute 80 per cent of the funds for the campus' real estate while the other two consortium members, DSM and UM, would each contribute 10 per cent of the funds, the argument being 'market failure' (Provincie Limburg 2011a). However, these plans had to be approved by the provincial states, which implied that they needed to be enrolled, which was not an easy task as the political landscape was scattered with three parties in office and five in opposition.

Enrolment: the campus real estate plans in the provincial states – The preliminary work was done in a commission of the provincial states, where the plans were discussed with the representatives of the eight political parties. The members of the Economic Provincial Council Commission criticised the real estate investments of the province, because the province, in fact, was financing the solution for DSM's written-off real estate. However, the provincial executive counter-argued that if the province did not participate in the real estate of the Chemelot Campus, DSM would probably leave the region (Statencommissie voor het Economisch Domein 2011).

What members of the commission doubted specifically about the campus, however, was the amount of estimated jobs for 'knowledge workers' and the consequences for semi and unskilled workers in the region that the campus would bring. Job creation for semi and unskilled workers was the key argument for the Province to invest in the campus plan and – indirectly – to support companies and research institutes. However, in actuality, these arguments were weak and based on

projections. In general, the commission members' doubts were about the project's goals and assessments, so the provincial executive decided to monitor and assess the project's progress and thus the consequences for the labour market via a regular reporting system (Provincie Limburg 2011b; Statencommissie voor het Economisch Domein 2011).

The promises of the Executive were sufficient to bring the plans to the provincial states where the decisions had to be made. During the meeting, the members of the provincial states no longer had substantial critique on the campus plans and on the province's financial commitment, an investment of about €65 million. However, because none of the parties in the consortium of DSM, UM and the Province of Limburg wanted to directly invest in real estate, a real estate company was established with the three parties as the only shareholders. The Province would participate in 80 per cent of the investments and DSM and UM would be responsible for 10 per cent each (Provincie Limburg 2011c; Statencommissie voor het Economisch Domein 2011). Financial resources were enrolled and a stable network – as detailed in the *interessement* phase – materialised.

Mobilisation: the Limburg Campus Plan and tickets to Limburg's bright future – The created network was represented through the launch of a joint campus plan. This 'Limburg Campus Plan' was discussed at length in the media through joint press releases of the consortium, and it was publicly presented to the minister of EZ in The Hague with much media fanfare (Provincie Limburg 2011a), including '4D movies' and interviews with all the consortium's leading figures (e.g. *CampusplanLimburg* 2011).

In 2011, the campus master plans were further translated into business plans, and at the start of 2012, these plans were discussed in the provincial states and they approved the financing of another €34,650,000. Ranging from loans to participations, these funds were for the real estate of the Chemelot campus, the participation of a new venture fund (Limburg Ventures II), the development of a science programme and the establishment of

advanced shared services on the Chemelot site (enabling technologies) (Provincie Limburg 2012a, 2012b).

Ultimately, these decisions by the provincial states, together with the internal decisions of DSM and UM, led to the creation of Chemelot Vastgoed (real estate) CV (Limited partnership) on 16 October 2012, owned for almost 80 per cent by the Province of Limburg (Provincie Limburg 2013). This meant that DSM was successfully tied to the region, and with the launch of a new brand in 2014, 'Brightlands', a representative spokesperson was created for the network of DSM, UM, Chemelot Vastgoed, the Chemelot Campus, the Maastricht Health Campus and the Province of Limburg (Brightlands 2014).

CONCLUSION

This paper dealt with the issue of policy competition that comes with an entrepreneurial governance style and picking 'winners' and 'losers'. More specifically, it dealt with the balancing act of a regional government between unfair competition on the one hand, and the looming retreat of a multinational on the other. These issues were explored in a region in decline: the Dutch Province of Limburg. The analysis drew upon an analytical framework developed by Callon (1986), Law (1992, 2008) and Latour (1986, 2005), and focused upon the various moments of translation to understand the stabilisation of a network dedicated to the binding of a multinational to the region.

Initially in 2005, the DSM Research Campus in Geleen was a private real estate development of DSM to counterbalance DSM's empty real estate caused by its switch from bulk chemistry to life sciences and materials. Until then, the Province was not engaged in campus development but only in cluster policies. The problematisation that was formulated by the provincial civil servants was triggered by DSM's Copernicus operation: how to bind DSM to the region? Next, a moment of translation, *interessement*, consisted of various ways to involve other actors, such as the province, DSM, UM to create a network. This was carried out through the

concept of ‘campus development’, a new policy practice dedicated to the strengthening of R&D infrastructure. Important in the *inter-essement* phase was the aligning with the national discourse to justify the campus policy for the Provincial States of Limburg. During the third moment, enrolment, actors were enrolled to form a network around campus development, and specifically around the DSM campus ‘Chemelot’ in Geleen and the Health Campus in Maastricht. Plans were developed by a consortium of DSM, UM and the provincial civil servants, which had to pass the provincial states. Through aligning with the national discourse on campuses (see Figure 1 and Kooij 2015), and threats that DSM would leave the region, the plans were politically approved which led to the province’s active participation in the real estate development of the Chemelot Campus for an 80 per cent share. Mobilisation occurred in the first instance through representatives from the consortium, but soon through the launch of a new spokesperson called ‘Brightlands’ which represented the campus network and helped to stabilise it.

In conclusion, the campus case in Limburg shows that overcoming the issues of policy competition was realised through a set of strategies that worked on network-building within the province, as well as networking with national discourses on campus development. Both network-building internally within the region, and externally to assure alignment with broader policy discourses was crucial in creating a stable actor-network that could channel resources towards two ‘winners’, that is, Chemelot and Health Campus Maastricht. The role of the civil servants in this matter was crucial in the stabilisation of the networks, although their capacities stem from their networked position instead of unique talents. They worked ‘behind the screens’ to develop a new policy tool to bind businesses to the region, which was at the same time politically acceptable. This policy innovation was only possible through the networking of the actors, through which practices and ideas from other campuses were translated into new financial constructions to invest in real estate to bind multinational DSM to the region. If understood through an ANT-lens, the translation

processes around spatial-economic concepts show that seemingly innocent concepts have far reaching economic consequences for a region. It allows us to understand the far from straightforward issues of governments in attempts to strengthen their territories, and in this case, that innovative policy concepts needed to be developed to comfort the vested interests within the region.

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Note

1. In this paper, translation is thus broader conceived than just merely translating words or texts into another language or medium, see Law 1992, 2008.

REFERENCES

- ADDIE, J.-P. D. (2015), On the road to the in-between city: Excavating peripheral urbanisation in Chicago’s ‘Crosstown Corridor’. *Environment and Planning A* 48, pp. 825–843
- BCI (2009), *Fysieke investeringsopgaven voor campusen van nationaal belang*. Nijmegen: BCI.
- BEGG, I. (1999), Cities and Competitiveness. *Urban Studies*, 36, pp. 795–809.
- BOEKHOLT, P., NAGLE, M. & ZUIJDAM, F. (2009), *Campusvorming. Studie naar de meerwaarde van campussen en de rol van de overheid met betrekking tot campusvorming*. Amsterdam: Technopolis.
- BONTJE, M. & P. LAWTON, P. (2013), Mobile policies and shifting contexts: city-regional competitiveness strategies in Amsterdam and Dublin. *Tijdschrift voor economische en sociale geografie*, 104, pp. 397–409.
- BRIGHTLANDS (2014), *Brightlands announced in The Hague*. Geleen and Maastricht: Brightlands.
- CALLON, M. (1986), Some elements of a sociology of translation: domestication of the scallops and the fishermen of St. Brieuc Bay. In: LAW, J. (ed.) *Power, action and belief. A new sociology of*

- knowledge? London & Boston MA: Routledge & Kegan Paul.
- CALLON, M. (1991), Techno-economic networks and irreversibility. In: LAW, J. (ed.) *A Sociology of Monsters: Essays on Power, Technology and Domination*. 38 ed. London and New York: Routledge.
- CAMPUSPLANLIMBURG (2011), Limburgs Campusplan.
- CHEMELOT (2013), *Geschiedenis van Chemelot*, Geleen, Chemelot.
- COLOMB, C. & G. SANTINHA (2012), European Union Competition Policy and the European Territorial Cohesion Agenda: An Impossible Reconciliation? State Aid Rules and Public Service Liberalization through the European Spatial Planning Lens. *European Planning Studies*, 22, pp. 459–480.
- DE VOR, F. (2011), The Impact and Performance of Industrial Sites: Evidence from the Netherlands. Amsterdam, Vrije Universiteit Amsterdam (PhD thesis).
- DOHMEN, J. (2007), *De Vriendenrepubliek. Limburgse kringen*, Amsterdam, Boom.
- DSM (2004a), *DSM to reorganize Geleen (Netherlands) production site to boost its performance*. Heerlen: DSM Press release.
- DSM (2004b), *Jaarverslag 2003 Koninklijke DSM N.V.* Geleen: DSM.
- DSM. (2013), History. Available at <http://www.dsm.com/corporate/about/our-company/dsm-history-timeline.html> [Accessed 20 August 2013].
- DSM & LIOF (2003), Limburg investors join forces in venture capital. *Press release*. Available at <http://www.limburgventures.com/p3/news-and-events/news-archive/77-limburg-invest-ors-join-forces-in-venture-capita> [Accessed 26 March 2012].
- ELZERMAN, K. & M. BONTJE (2013), Urban Shrinkage in Parkstad Limburg. *European Planning Studies*, 23, pp. 87–103.
- HARVEY, D. (1989), From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism. *Geografiska Annaler. Series B, Human Geography*, 71, pp. 3–17.
- HENDRIKX, B. (2014), Scenes from a movement: an actor-network analysis of the global rise of the homeless street pape (PhD.thesis, Radboud University).
- JACOBS, A.J. & H.J. KOOIJ (2013), Fading EUphoria at the Dutch-German Border? The Case of Avantis. *Tijdschrift voor Economische en Sociale Geografie*, 104, pp. 379–387.
- JEANNET, J.-P. & H. SCHREUDER (2015), *DSM: From Dutch State Mines to Chemicals Company. From Coal to Biotech*. Berlin: Springer.
- JONAS, A.E., A.H. WHILE & D.C. GIBBS (2010), Managing infrastructural and service demands in new economic spaces: the new territorial politics of collective provision. *Regional Studies*, 44, pp. 183–200.
- KOOIJ, H.J. (2015), Space for Innovation, Innovation in Space (PhD thesis, Radboud University).
- LATOUR, B. (1986), Visualization and Cognition. *Knowledge and society*, 6, pp. 1–40.
- LATOUR, B. (2005), *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford: Oxford University Press.
- LAW, J. (1992), Notes on the theory of the actor-network: Ordering, strategy, and heterogeneity. *Systems Practice*, 5, pp. 379–393.
- LAW, J. (2008), On sociology and STS. *The Sociological Review*, 56, pp. 623–649.
- MALECKI, E. (2004), Jockeying for Position: What It Means and Why It Matters to Regional Development Policy When Places Compete. *Regional Studies*, 38, pp. 1101–1120.
- MURDOCH, J. (2006), *Post-structuralist Geography. A Guide to Relational Space*. London: Sage Publications.
- NETHERLANDS ACADEMY OF TECHNOLOGY AND INNOVATION (2003), Universiteiten, Bedrijfsleven en Overheid Stimuleren Innovatief Ondernemerschap. Press release. Available at <http://www.acti-nl.org/Pages/ACT/5/508.bGFuZ-zLOTA.html> [Accessed 16 August 2013].
- PROVINCIE LIMBURG (2008), *Innoveren in Limburg – campusontwikkeling*. Maastricht: Gedeputeerde Staten van Limburg.
- PROVINCIE LIMBURG (2011a), Campusplan Limburg overhandigd aan minister. Available at <https://youtu.be/ZFz9oJ62OjM>. [Accessed 20 August 2013].
- PROVINCIE LIMBURG (2011b), *Notulen Statenvergadering van 10 en 11 februari 2011*. Maastricht: Provincie Maastricht.
- PROVINCIE LIMBURG (2011c), *Statenvoorstel Chemelot Campus Sittard Geleen*. Maastricht: Gedeputeerde Staten van Limburg.
- PROVINCIE LIMBURG (2012a), *Notulen van de Statenvergadering van 2 maart 2012*. Maastricht: Provincie Limburg.
- PROVINCIE LIMBURG (2012b), *Statenvoorstel Campussen Zuid-Limburg (Chemelot Campus &*

- Maastricht Health Campus*). Maastricht: Provincie Limburg.
- PROVINCIE LIMBURG (2013), *Globale toetsing voortgangsrapportage Groot Project Chemelot Campus en Brains Unlimited (van de Maastricht Health Campus)*. Maastricht: Provincie Limburg.
- STATENCOMMISSIE VOOR HET ECONOMISCH DOMEIN (2008), *Verslag van de Vergadering van 4 april 2008*. Maastricht: Provincie Limburg.
- STATENCOMMISSIE VOOR HET ECONOMISCH DOMEIN (2011), *Verslag van de Vergadering van de Statencommissie voor het Economische Domein op 28 januari 2011*. Maastricht: Provincie Limburg.
- TASKFORCE VERSNELLINGSAGENDA (2005), *Versnellingsagenda 2005. Limburg op weg naar 2012*. Maastricht: Provincie Limburg.
- WAGEMANS, G. & V. PRZYBYLSKI (2011), *Consortium Chemelot Campus. Masterplan 2010-2020*. Geleen: Chemelot.
- WHILE, A., D. GIBBS & A.E.G. JONAS (2013), The Competition State, City-regions, and the Territorial Politics of Growth Facilitation. *Environment and Planning A*, 45, pp. 2379–2398.