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## **BORDERS IN PERSPECTIVE**

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# **BORDERS AND CROSS-BORDER LABOR MARKETS: Opportunities and Challenges**

UNIVERSITY OF LORRAINE & UNIVERSITY OF LUXEMBOURG  
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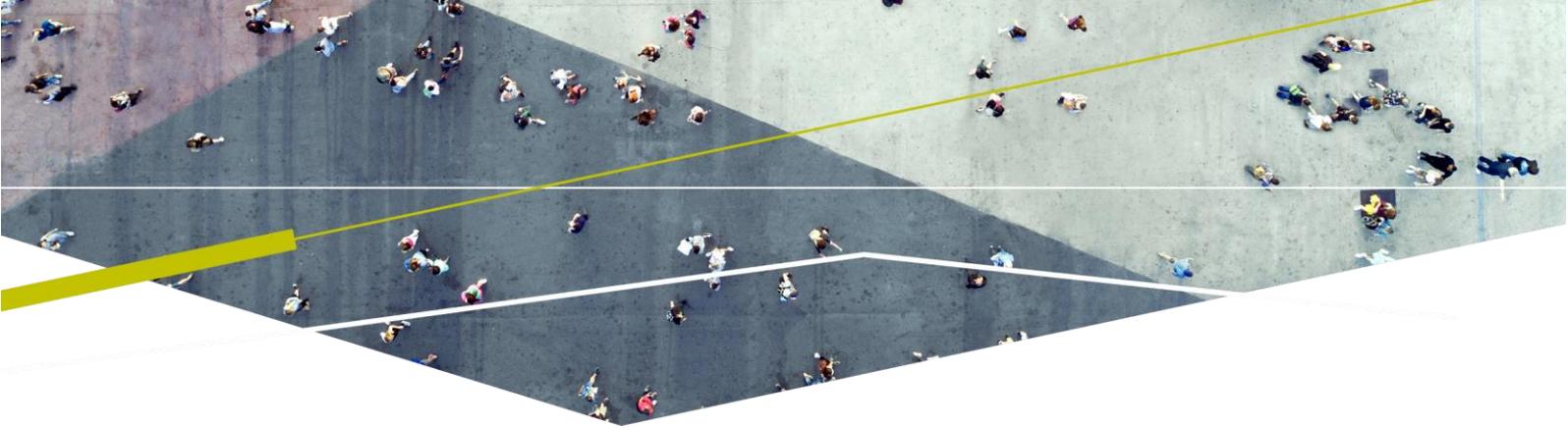
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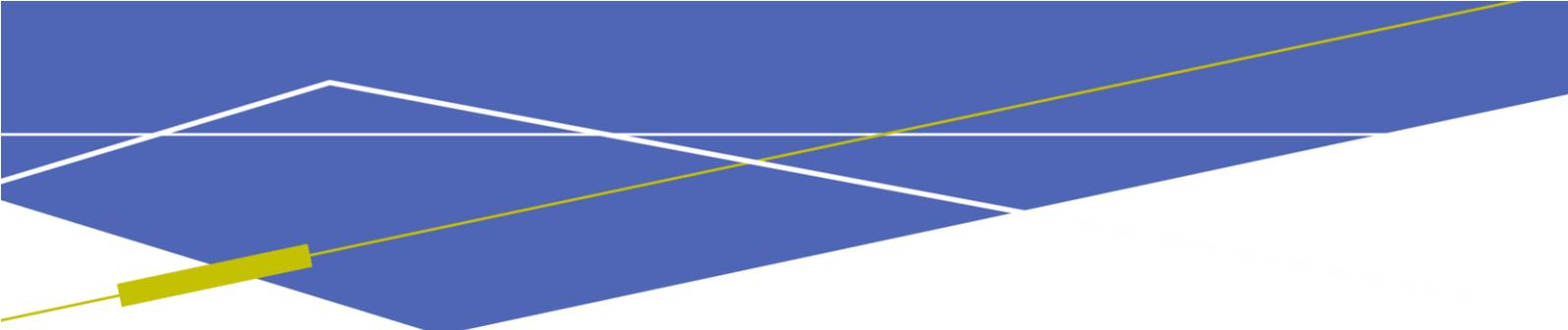
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# CROSS-BORDER SKILL FORMATION AND INSTITUTIONAL BRICOLAGE: the case of Luxembourg and its neighbors

LUKAS GRAF and DANIEL TRÖHLER

The core argument of this paper is that Luxembourg's location between the larger European nations of France and Germany is constitutive of skill development in this small state. On the one hand, Luxembourg continuously borrows educational models and principles from its two large(r) neighbors – which both represent major European models of skill formation. Thus, in Luxembourg's skill formation system, elements from these two 'big' states get 'mixed,' although they are not necessarily complementary. On the other hand, Luxembourg compensates for its small size through impressive levels of cross-border activity with neighboring subnational regions in France, Germany, and Belgium – including in the cross-border provision of training. It does this through institutional bricolage and direct cooperation with neighboring countries – in this way significantly enlarging the scope and capacities of its national education system.

**Education and training, Cross-border regions, Institutional bricolage, Luxembourg, Greater Region**

## **Formation professionnelle transfrontalière et bricolage institutionnel: le cas du Luxembourg et de ses voisins**

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L'argument central de ce chapitre est que la position du Luxembourg entre les plus grands pays européens que sont la France et l'Allemagne est constitutive du développement des compétences dans ce petit État. D'une part, le Luxembourg emprunte continuellement des modèles et des principes éducatifs à ses deux grands voisins - qui représentent tous deux de grands modèles européens de formation des compétences. Ainsi, dans le système de formation professionnelle luxembourgeois, les éléments de ces deux «grands» États sont «mélangés», bien qu'ils ne soient pas nécessairement complémentaires. D'autre part, le Luxembourg compense sa petite taille par des niveaux impressionnants d'activités transfrontalières avec les régions voisines en France, en Allemagne et en Belgique - y compris par l'offre de formations transfrontalières. Ainsi, nous constatons que le Luxembourg compense partiellement sa petite taille par le bricolage institutionnel et la coopération directe avec les pays voisins, élargissant ainsi de manière significative la portée et les capacités de son système éducatif national.

**Education et formation, régions transfrontalières, bricolage institutionnel, Luxembourg, Grande Région**

## **Grenzüberschreitende Berufsausbildung und institutionelle Bricolage: Der Fall Luxemburgs und seiner Nachbarn**

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Das zentrale Argument dieses Artikels ist, dass die Lage Luxemburgs zwischen den größeren europäischen Ländern Frankreich und Deutschland konstitutiv für die Entwicklung von Kompetenzen in diesem kleinen Land ist. Einerseits greift Luxemburg fortwährend auf die Bildungsmodelle und Prinzipien seiner beiden größeren Nachbarn zurück, deren Ausbildungssysteme jeweils als bedeutsame europäische Modelle gelten. So werden im Ausbildungssystem Luxemburgs Elemente aus diesen beiden großen Staaten auf vielfältige Weise integriert, auch wenn einige dieser Elemente nur bedingt komplementär sind. Andererseits kompensiert Luxemburg seine geringe Größe durch eindrucksvolle grenzüberschreitende Aktivitäten mit den benachbarten Regionen in Frankreich, Deutschland und Belgien – einschließlich grenzüberschreitender Ausbildungsangebote. So stellen wir fest, dass Luxemburg seine Größennachteile durch institutionelle „Bricolage“ wie auch durch direkte Zusammenarbeit mit den Nachbarländern ausgleicht und so die Reichweite und Kapazitäten seines nationalen Bildungssystems erheblich erweitert.

**Bildung und Berufsausbildung, grenzüberschreitende Regionen, institutionelle Bricolage, Luxemburg, Großregion**

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Recent research on small (and micro) states points out that these “cannot insulate themselves from global economic pressures individually” (Jules, 2015, p. 202), a situation which “calls for greater flexibility in the approach of small states to the development and utilization of their own human resources” (Bacchus, 2008, p. 127), with people being “the greatest resource of many small states” (Crossley, 2008, p. 251)<sup>i</sup>. Although Luxembourg – as a very small country – is often ignored in comparative education and political economy research, it is of substantive conceptual interest as a multilingual and multicultural country located centrally in western Europe and a founding member of the European Union. Luxembourg’s three official languages are German, French and Luxembourgish, whereby the latter is the *national* and the middle the *political-administrative* language. Luxembourg City is seat of important European institutions and considered one of the capitals of the European Union. Luxembourg, with a population of just under 613,900 (and a foreign population of 47.5%) (STATEC, 2019), is the economic hub of the Greater Region, which besides Luxembourg comprises the neighboring regions of Belgium, France, and Germany. Despite its comparatively modest size, Luxembourg is nonetheless in possession of a highly differentiated and extremely complex national vocational education and training (VET) system. We describe this system and its current development, especially in the wake of the major vocational training reform of 2008 that was initiated in the context of a thorough reform of the whole educational system, following the OECD emphasis on competences (Ananiadou and Claro, 2009). This VET reform aimed at modernizing Luxembourg’s skill formation system and addressed the question of what specific challenges Luxembourg’s VET system faces and what opportunities it has, given the country’s size and its strongly pronounced international elements and influences. Given its deep confidence in (large-scale) evidence-based education policy and the consistent emphasis on a particular national identity and cultural otherness, expressed in its trilingualism, Luxembourg administers a constant balancing act between the global and the local, translating global (EU, OECD) policy recommendations into the particular national idiosyncrasy. Against this backdrop, we address the question of how Luxembourg’s vocational education and training system is configured in view of these specific characteristics. The paper primarily deals with the upper secondary level of the school system, firstly because it addresses the core of basic vocational education, and secondly because at this level, a specific model of vocational training (partly)

exists, namely the so-called dual apprenticeship training. This corporatist dual model combines vocational schooling (mainly state-based) with training in the workplace. Dual apprenticeship training is also common in a few other European countries (in particular Switzerland, Germany and Austria) and is once again being praised in the current educational debate on the low levels of youth unemployment that have become associated with it (Busemeyer, 2015). Since there is very little research on this subject in Luxembourg (Milmeister and Willems, 2008, p. 202)<sup>ii</sup>, the paper will first describe the VET system and then analyze education policy sources and expert interviews. The interviews were conducted with experts or key stakeholders in the context of Luxembourg’s vocational training system<sup>iii</sup>.

The core argument is that Luxembourg’s location between the larger European nations of France and Germany is constitutive of skill development in this small state. On the one hand, Luxembourg continuously borrows educational models and principles from its two large(r) neighbors – which both represent major European models of skill formation (Bernhard, 2017). Thus, in Luxembourg’s skill formation system, elements from these two ‘big’ states get ‘mixed,’ although they are not necessarily complementary. On the other hand, Luxembourg compensates for its small size through impressive levels of cross-border activity with neighboring subnational regions in France, Germany, and Belgium – including the cross-border provision of training (Graf and Gardin, 2018). It achieves this through institutional bricolage (see Campbell, 2004), i.e. by integrating and combining strong features from the national educational models of their neighbors as needed, and through direct cooperation with neighboring countries, thereby enlarging the scope and capacities of its educational system far beyond its national borders.

The first section describes Luxembourg’s VET system, with a focus on the political and administrative governance of the system and the VET reform of 2008. Subsequently, key international elements and influences are discussed, and in the last section we present some conclusions on skill development in a small European state at the political, economic and cultural crossroads of two larger ones, namely France and Germany.

## VOCATIONAL TRAINING IN LUXEMBOURG

Like many other countries, Luxembourg has a binary or twin-track system at the secondary level, which consists of two areas that are insti-

tutionally separate in many respects: the university-oriented general secondary schools (*secondaire générale*) and the more practically VET-oriented schools (*secondaire technique*). In the school year 2016/2017, 11,950 students were enrolled in a more prestigious *secondaire générale* (30.5%) and 27,221 were enrolled in a *secondaire technique* (69.5%) (MEN, 2018, p. 14). Eighty percent of the students at the more prestigious classical secondary school have Luxembourgish nationality and only 20% have a foreign nationality, while in the less prestigious technical secondary schools, foreign students make up almost 46% of an age cohort, with Portuguese representing the main foreign nationality in the VET system (MEN, 2018, p. 18). Accordingly, the social, cultural and political relevance of VET is secondary, somewhere between the relevance in France (low) and in Germany (high). In particular, Luxembourg's VET system is composed of four different types of regimes: the lower level technical secondary education (46.9%), the technical regime (25.9%), the technician's regime (12.9%), and the vocational regime (14.4%) (see MEN, 2018, p. 33 for details). A high proportion of students who graduate from a vocational or technical program successfully transition into employment – in 2007/2008 the proportion was 85% three years after program completion (CEDEFOP, 2015, p. 56). More generally, upper-secondary level certificates significantly reduce the risk of unemployment, which is related to Luxembourg's strong labor market and the public sector acting as a major employer. That is, a VET certificate combined with relevant language skills provides a good starting position for entering Luxembourg's labor market (Hartung et al., 2018, p. 109).

## The political and administrative governance of VET

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The drafting of bills for vocational training is the task of the *Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse*, which has general responsibility for financing the school-based portion of vocational training. In Luxembourg's education system, in addition to the tasks for which the national education ministry is responsible, there are some issues regulated at the local level (Pull, 2004). However, this does not mean that Luxembourg is a case of educational federalism. The state covers the employer's share of social costs for apprentices and additionally reimburses a portion of salary costs for apprentices educated in the dual system (between 27% and 40%) (Biré and Cardoso, 2012, p. 38), which is the point where the cooperative

approach to governing Luxembourg's vocational training system by the government, social partners and economic interest groups becomes particularly evident (Koenig, 2007, p. 476). The latter group is organized in the different *Chambres*, the employers' chambers (Chamber of Commerce, Chamber of Crafts and Chamber of Agriculture) as well as the Chamber of Workers; these chambers contribute their part to designing the various training programs (Milmeister and Willems, 2008, pp. 184-185). The VET reform of 2008 further strengthened the influence of the chambers (Biré and Cardoso, 2012, p. 11). The chambers are hence involved in the relevant VET governance processes; they are regularly consulted on matters of vocational training and they are, for example, represented in the *Conseil économique et social du Grand-Duché* of Luxembourg and the *Comité de coordination tripartite*, which brings together the government and the social partners (Cedefop, 2014).

## The VET reform of 2008

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In Luxembourg, the political sphere promotes high standards regarding the quality of vocational training for the graduates of the less prestigious technical track of secondary education, with its disproportionate share of immigrants: "Vocational training is not the last choice if nothing else works out. For this it is simply too demanding" (Claude Meisch, Minister of Education, Children and Youth in D'Lëtzebuurger Land, 2014; authors' translation). This statement reflects the orientation towards the value of practice-oriented education in Germany and other countries with dual training systems (Mayer and Solga, 2008). However, there are differing opinions among the Luxembourgish actors, which include, for instance, social partners, state agencies and civil society, regarding the worth and perceived value of the different training programs in the *secondaire technique* (Graf and Tröhler, 2015). In general, the requirements for most courses at upper secondary level are high to very high, which should prevent a "*Nivellement vers le bas*" (race to the bottom), but which in many cases leads to a higher dropout rate and prolonged training periods. The VET reform from 2008 aimed to counteract this problem without lowering the high standards for VET. Interestingly, the drivers of these reforms are rather similar to those in other countries with dual VET systems (Graf, 2013). However, one key difference is that Luxembourg relies heavily on the expertise of VET experts from Germany but also Switzerland in developing these VET reforms (Euler and Frank, 2011), that in Luxembourg do not enjoy

the same social, cultural and political relevance, or only for a particular stratum of young people. The three key elements of the 2008 reform of vocational training were (a) a competence-oriented and work process-oriented approach (rather than one based on subjects and disciplines), (b) a modular design based on building blocks and partial qualifications and (c) the systematic connection of company and school-based learning phases – and generally the increased integration of the required operational knowledge into the training regulations (MEN, 2011). The reform was originally planned to implement the changes successively in the period from 2010 to 2015 (MEN, 2014). But in practice, some problems have emerged that need to be corrected by adjusting the reform concept; these also relate to the efficient organization of the modularized structure to avoid a fragmentation of the system (Tröhler, 2014, p. 6; SEW, 2014, see also discussion below). The proportions of students who drop out of training (about 30%) or do not complete it in the standard time (also about 30%) have remained almost unchanged despite the reform (MEN, 2014, pp. 118-120), which is the reason for the need for a reform of the reform. The ministry has taken up this challenge. Hence, for example, the evaluation criteria were lowered to some extent to make it easier to pass the modules. Even before the reform, students had the option to make up for modules in a fourth training year (Meisch in D'Lëtzebuurger Land, 2014). The theme of VET reform will be taken up again in the final section.

## **INTERNATIONAL ELEMENTS AND INFLUENCES IN VET: CHALLENGES AND OPPORTUNITIES**

### **The emergence of the Luxembourg vocational training system at the interface between the German and French models**

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The emergence of Luxembourg's vocational training system goes back to two different developments: in the craft field, the vocational training system originated from the guilds, while it emerged in the industrial technical field in the context of industrialization since the early 20th century (Huck, 1995, p. 28). The first Apprentices Act was proposed in 1927 by the Chamber of Crafts and was adopted by the parliament in

1929. The system was reformed directly after the Second World War, and attending a vocational school was made a compulsory part of the process. Another important step was the Act on Technical Secondary Education from 1979, which for the first time unified the various existing forms of training within one system. This history, the presence of the dual training principle and the important role the various chambers play in the political and administrative governance of the apprenticeship system suggest similarities to developments in German-speaking countries (Busemeyer and Trampusch, 2012), as the European Centre for the Development of Vocational Training (Cedefop) has also highlighted (Cedefop, 2014, p. 4).

However, there are some elements of Luxembourg's VET system that are clearly more similar to the French system, particularly given that, in both models, VET programs are to a significant extent organized by the state. In both countries – France and Luxembourg – central government exerts a significant influence on educational policy (which is reinforced in Luxembourg by the relative smallness of the country). An expression of this is the fact that since 1994, all newly established secondary schools in Luxembourg are required to offer both the classical upper-secondary education as well as the range of vocational training programs of the *secondaire technique*, to mitigate negative effects of social selectivity where possible by spatially merging the different school types (Koenig, 2007, p. 480). The related idea of the "Lycée for all" and the relatively high proportion of students who receive school-leaving certificates that allow them to attend university point to parallels with the French educational system. The *Brevet de technicien supérieur* (Higher Technician Certificate) represents another similarity to the French model (Interview LU 3). This model of vocationally oriented short courses at tertiary level originated in France (Powell et al., 2012). The proximity to the French system is also seen in the strong internship orientation of the full-time vocational training programs (see also the Discussion and Outlook section).

### **The problem of critical mass: cross-border education as a solution**

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The high degree of differentiation of the VET system – in Luxembourg there are training programs for around 120 occupations – is often talked about as a good way of dealing with the very diverse student body (Koenig, 2007; D'Lëtzebuurger Land, 2014). Simultaneously, this strong differentiation can be considered prob-

lematic, not least because of the small number of students and the associated difficulties in obtaining adequate class sizes for specialized training programs – a challenge that Luxembourg shares with other small nations. In addition, there have also been discussions on whether the high number of specific job designations should be bundled together into broader occupational profiles in light of the increasing flexibility of the labor market and the resulting frequent job changes (D’Lëtzebuurger Land 2014).

The size of the country also necessitates close cooperation with neighboring countries and regions, since due to the small number of students, not all highly specialized occupations can be taught in Luxembourg (Koenig, 2007; Biré and Cardoso, 2012, p. 9). In line with this, there are a variety of cross-border dual apprenticeships, in which the theory-based part of the program is carried out in neighboring countries and the company-based part in Luxembourg (interviews LU2, LU3). Accordingly, there is close exchange between the responsible authorities in Luxembourg (in particular employers’ chambers and the Ministry of Education) and the relevant institutions in neighboring countries (Huck, 1995, p. 50). In this context, cross-border cooperation can be considered an example of the more general inclination and capacity of small states to rely on regional networks in their effort to find solutions to policy challenges (Jules, 2012, p. 8). Cross-border skill formation, coupled with the different language skills of the workforce, have been beneficial for the diversification and adaptability of Luxembourg’s employment system and internationally oriented global economy. It represents one of the key factors in the country’s competitiveness strategy, by allowing employers to gain access to, and then capture and maximize the very different national skill sets available (Graf and Gardin, 2018).

### **Pupils from immigrant backgrounds and the German-speaking vocational education system**

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Looking at the relatively early separation between technical and classical academic education at the age of 12, the Luxembourgish education system can be described as highly selective (Koenig, 2007, p. 474). This early selectivity is particularly problematic in the context of Luxembourg’s diverse social structure, since it offers children from an immigrant background fewer opportunities to adapt to the very specific and multilingual education system. Hence, the proportion of learners without Luxembourgish citi-

zenship is much higher in the *secondaire technique* (44.2%) than in the *secondaire générale* (20%) (MEN, 2014, p. 30). A specific example of this is the proportion of students with Portuguese citizenship: it is about 28% in the *secondaire technique*, but only 7% in the *secondaire générale*. By contrast, young Luxembourgers with Luxembourgish citizenship make up 80% of students in the *secondaire générale* and 55.8% of students in the *secondaire technique* (MEN, 2014, p. 16). An additional barrier is that most programs in Luxembourg’s VET system are taught in German, but the majority of less socio-economically advantaged migrants come from families speaking Romance languages. This reduces their chances of successfully completing a vocational training program compared to native Luxembourgish students (interview LU3). For this reason, students from families where parents speak Romance languages sometimes complete training in France or Wallonia (i.e. the French-speaking part of Belgium) (Milmeister and Willems, 2008, p. 181) – although the vocational training in these countries focuses more on full-time schooling.

## **DISCUSSION AND OUTLOOK**

When considering the specifics of vocational education in Luxembourg, one is almost inevitably struck by the multiple links between the national system and the international context. An example of this is the ongoing ideological influence of the dominant training systems of the neighboring countries – in particular the state-centered model in France and the social partnership model in Germany (Greiner, 2005). We have shown that a certain institutional bricolage (“mix and match”) of different elements and educational ideals can be found in Luxembourg’s vocational training system (interviews LU2, LU3), contributing to the strong differentiation in diverse educational paths at secondary level. Moreover, strong international connections (and dependencies) also emerge as a result of the relatively small number of individuals in the highly-differentiated education system, which means that in Luxembourg some training programs can only be offered in cooperation with actors and institutions from neighboring countries. At the same time, the very international and heterogeneous student body in Luxembourg’s multilingual education system is an enormous challenge, especially in the field of vocational training, absorbing a large percentage of foremost socially underprivileged, often immigrant youth. Hence, for Luxembourg’s vocational training system, a worthy aspiration may be to ensure

that the apprenticeship system neither becomes a dead end for academically talented but socially and/or linguistically disadvantaged students with an immigrant background, nor an educational option that is unattractive for practically gifted and talented Luxembourgers for reasons of prestige. This, in turn, would require a policy-booster change in the cultural self-perception of a more and a less prestigious secondary school track, closer and more efficient collaboration between the partners in VET, preferential treatment of companies offering vocational training in government contracts, and the end of the circumstance that the state and the municipalities offer no vocational apprenticeships at all. Additionally, to develop appropriate solutions in light of these cultural policy-related and inequality-related issues, more international comparative research seems essential.

An additional area meriting more in-depth analyses involves assessing the impact of the vocational educational reform of 2008. At present, it is unclear what the reasons are for a number of potentially problematic developments in the system. It should be discussed, for example, whether the move towards modularization has led to an unintended fragmentation of the already small-scale vocational training system, which would go against the occupational principle and the coherence of the occupations in question. In this context, the question also emerges of how the number of occupations and training modules could be adjusted to the context of a small country with a limited number of potential participants. This is also the reason why borrowing policy from larger nations can sometimes turn out to be detrimental, given that smaller nations may lack the critical mass of people to support a highly fragmented system. It should also be discussed whether existing integration projects – in which the connections between the modules are to be established – must be further developed (SEW, 2014). Another relevant factor may be the “evaluation compulsion” or “evaluation inflation” promoted by international organizations such as the OECD (Euler et al., 2011, p. 58). In this context, the sharp focus on controlling outputs is a point to be criticized, as under certain circumstances, it can lead to an underestimation of the importance of instruments of input control, such as curriculum development or teacher training (Tröhler 2014, p. 11). Problem-oriented basic research would be able to investigate such factors in detail and could formulate concrete recommendations for action.

However, the key here is that such research should bear in mind the specifics of Luxembourg’s small size and its location between the

larger European nations of France and Germany – which has resulted in a bricolage of elements of the educational models from both countries. While it is beyond the scope of this paper to explore the mechanisms of educational policy diffusion in detail (on these, see Dobbin, Simmons and Garrett, 2007; Rohstock and Lenz, 2012; Gardin, 2015), more generally, such borrowing is considered to be legitimate due to the geographic, socioeconomic and historical proximity of Luxembourg to France and Germany as two of the most influential educational models in continental western Europe (Greinert, 2005). This, in conjunction with Luxembourg’s small size, means that the country is unlikely to develop an “autonomous” national educational model – but is more likely to keep drawing extensively on external reference frames, resulting in a range of hybrid characteristics within its skill formation system. As such, research into small states seems to be naturally drawn to conceptualizations that go beyond the study of education within the still common “methodological nationalism” (Robertson and Dale, 2008, p. 21). This then draws attention to the complex institutional configuration of education in small states and calls for a critical examination of the patterns of interaction between such different institutional components.

At a conceptual level, the case of Luxembourg, located at the nexus of the French and the German models, points to the tendency of small states to orient themselves towards the educational systems of dominant nations within their vicinity (if available). At the same time, it is important to note that the institutional elements that are mixed may not always be complementary – especially in the case of small states that offer fewer regional niches for policy innovation (Graf and Gardin, 2018). On a more positive note, small states are in a position to compensate for their small size through direct cooperation with neighboring countries – in this way enlarging the scope and capacities of their educational system far beyond their national borders. This, in turn, can be seen as a case of “educational geostrategic leveraging” (Jules and Ressler, 2016, p. 32) or, in this context, small states’ “strategic capacity to act rather big in certain areas” (ibid.). In the Luxembourgish case, a key instance of this is cross-border educational provision. This cross-border provision may also cater specific migrant groups within the country, who sometimes find it easier to advance their educational careers in those neighboring regions in which they face fewer cultural and language barriers. More generally, in Luxembourg it is the norm rather than the exception that the employee has not been educated within the country – to which

cross-border skill formation (Graf and Gardin, 2018) as well as a vast number of daily cross-border commuters (around 177,000 on a work day in 2016 (Le Gouvernement, 2019)) are key contributing factors. Whereas in many other countries such a high degree of transnationality would be considered highly problematic, for instance, regarding the risk of rising populism, the case of Luxembourg rather suggests that the country continues to strategically apply significant elements of transnationalization to its skills regime (Graf and Gardin, 2018). For instance, today, the different language skills of the workforce coupled with fundamentally different educational backgrounds have been hugely beneficial for the diversification, functioning and adaptability of Luxembourg's highly stratified skills regime and labor market (Graf and Gardin,

2018). At the same time, to reduce inequalities and ensure long-term social cohesion, educational policy needs to address the long-term negative implications of a segregation of immigrants with language disadvantages into more vocationally-oriented programs.

In sum, the specific relationship of a small state to the greater region in which it is embedded is both a potential problem – for instance, when incompatible institutional elements get mixed within a narrow policy space or language skills become a segregating factor – and an opportunity – when this situation can be exploited to draw on the comparative strength of the nearby educational models and, thus, helps to create institutional innovation.

## NOTES

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<sup>i</sup> We thank Matias Gardin and Justin Powell for very valuable input on this paper. All remaining shortcomings are the authors' responsibility.

<sup>ii</sup> A possible reason for this is that due to the country's exceptionally strong economic performance, some of the structural problems in Luxembourg's VET system

received very little attention until recent years (see Milmeister and Willems, 2008).

<sup>iii</sup> All interviews took place in Luxembourg. Interview LU1: 9 May 2014; interview LU2: 2 June 2014; interview LU3: 11 June 2014.

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