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Germany: Stability and Change

Lukas Graf

Introduction¹

While the traditional typologies that contrast the German educational system with, for example, those of the French or the English have served as useful heuristic devices, they require revision to adequately represent contemporary changes in Germany resulting from endogenous reforms and exogenous pressures caused by Europeanization. Germany has traditionally provided a large proportion of its workforces with qualifications obtained in the dual vocational training system, a sector that is institutionally divided from general academic education and higher education. However, due to the growing demand for abstract and codified knowledge but, given recent European reforms demanding greater educational mobility and lifelong learning, it has become a key goal of German policy makers to increase permeability between the different sectors of the educational system. For this purpose, Germany is increasingly relying on hybridization at the nexus of vocational education and training (VET) and higher education (HE). One key instance of hybrid organizational forms is the rapidly growing dual study programmes, which systematically combine elements from vocational training and HE. While the case of Germany shows that educational systems are responding to Europeanization, it has thus far not departed from its specific developmental path, questioning popular notions of European convergence. The implementation of European educational guidelines remains significantly influenced by the specific mode of coordination in the German educational system and the national model of capitalism more generally. In this context this chapter shows that the German educational model continues to rely strongly on strategic interactions – rather than market coordination – between the various involved actors.

In the course of the current European economic crisis, and due to the relatively low levels of youth unemployment in Germany, many foreign observers of the German system pay most attention to the traditional German system of

dual apprenticeship training. However, this chapter will show that the traditional model of vocational training in Germany is under strain. For example, one urgent challenge for German policy makers is the search for balance between vocational training and academic education at secondary and post-secondary levels. As the corresponding developments at the nexus of vocational training and academic education to some extent mirror the character of the German educational system as a whole, they receive special attention in this chapter. Furthermore, the chapter places emphasis on the national system's development in today's era of Europeanization, focusing especially on the substantial impact of the Bologna Process for HE and the Copenhagen Processes for VET.² More generally, this chapter focuses on upper and post-secondary education, not least because the argument can be made that the German educational system is most distinct from other European countries at precisely these two levels.

The chapter offers a general description of the German educational system, covering the structures, contents, and governance of pre-secondary education, secondary and vocational education, and higher education. The main goal of the three subsequent sections is both to decipher the traditional German model of education and to examine whether, or to what extent, it has changed in recent times. The first of these sections specifies key characteristics of the German educational model through comparison with the most similar and most different national models within Europe. The second one focuses on three central developments in the German educational model and discusses how these signify either a transformation of the model or rather its creative maintenance. Here, the key topics are the rise and persistence of the pre-vocational training system, the hybridization of vocational training and higher education in the form of dual study programmes, and the rapid Bolognaization of the German HE system. The next section further characterizes the traditional German model of education in contrasting it with the emergent European model of education along three key dimensions: *vocational principle* versus *employability*, *learning inputs* versus *learning outcomes*, and *collective skill formation* versus *liberal market arrangement*. Finally, the chapter provides a short summary and an outlook.

General overview on the German educational system

Pre- and lower secondary level education

In Germany, schooling is highly stratified, and children continue to be streamed very early, after four or six years of primary schooling, among a variety of school

types. Lower secondary education exhibits a status hierarchy extending from academic secondary schools (*Gymnasien*) at the top to special needs schools (*Förderschulen*) at the low end (Table 6.1). Academic secondary schooling at lower secondary level prepares for the gymnasial sixth form (*gymniasale Oberstufe*), which in turn provides access to HE. The intermediate secondary school (*Realschule*) is usually completed with the intermediate secondary school-leaving certificate (*Realschulabschluss / Mittlere Reife*) after ten years of schooling. The general secondary school (*Hauptschule*) leads to the minimal school-leaving certificate (*Hauptschulabschluss*) that is obtained after nine or ten years of schooling. While the general secondary school used to be a major pathway to access quality VET programmes, this role has increasingly shifted to the intermediate secondary school. As a consequence, in several federal states (*Länder*) the general secondary school has been merged with the intermediate secondary school to avoid its further stigmatization (e.g. Baum, 2011). Furthermore, there are integrated comprehensive schools (*Gesamtschulen*) in which differentiation is brought to the level of each school, as for each subject students are allocated to courses that correspond to their individual performance in that field of study (see, e.g. Oelkers, 2006). Finally, special needs schools (*Förderschulen*) represent a highly differentiated field and are intended to address the individual demands of students with specific disabilities (see Powell, 2011 for a critical discussion). However, several federal states are shifting to integrative or inclusive education, thus reducing the number of separated special needs schools (see, e.g. Blanck et al., 2013). More generally, it can be noted that Germany exhibits a great diversity of organizational forms within the spectrum of main organizational forms outlined above, which is in particular due to the scope for autonomous educational policy given to each of the sixteen German federal states.

Table 6.1 Stylized description of current 'status hierarchy' of major organizational forms in the German educational system at lower secondary level

Status	Organizational form
Higher-end	Academic secondary school (<i>Gymnasium</i>)
Medium	Integrated comprehensive school (<i>Gesamtschule</i>); Intermediate secondary school (<i>Realschule</i>)
Lower-end	General secondary school (<i>Hauptschule</i>); Special needs school (<i>Förderschule</i>)

Source: LG, inspired by Graf et al. (2012, p. 153)

Upper secondary level education

Table 6.2 shows the number of students enrolled in the different types of school at upper-secondary level (ISCED 3). This is merely a rough indicator of the size of the respective sectors due to the variety and complexity of organizational forms at upper-secondary level in Germany, for example, in the category of full-time vocational schools. The two general summaries that can be drawn from Table 6.2 are that a large proportion of young people in Germany are enrolled in VET and that dual apprenticeship training (indicated by the number of people enrolled in part-time vocational schools) is a significant factor at the upper-secondary level.

Dual apprenticeship training combines training in a firm with classroom teaching in part-time vocational schools and leads to a recognized certificate according to the Vocational Training Act (*Berufsbildungsgesetz*, BBiG) or the Crafts Code (*Handwerksordnung*) (see, e.g. Baethge, 2008, p. 543). Within the sector of full-time school-based VET, there are the following three major categories of school programmes:

1. One-year pre-vocational programmes that are intended to prepare students for dual apprenticeship training (e.g. *Berufsvorbereitungsjahr* and *Berufsgrundbildungsjahr*).
2. Schools that mainly provide a general education and lead to certificates that grant either general or limited access (in terms of subject areas) to one or more organizational forms in the HE sector (*berufliche Schulen mit vorrangig allgemeinbildendem Charakter*). Examples are the vocationally-oriented secondary school (*Fachoberschule*) and the specialized academic upper-secondary school (*berufliches Gymnasium*).
3. Schools leading to certificates that fully qualify individuals to enter a specific occupation, for instance the full-time vocational schools (*Berufsfachschulen*) and the schools in the health-care sector (*Schulen des Gesundheitswesens*) (see, e.g. Steinmann, 2000, pp. 64–70; Baethge et al., 2007).

The latter form, 3, does not stand in direct competition with dual apprenticeship training as it mostly focuses on different types of occupations (e.g. Steinmann, 2000, p. 71). In comparison to VET, the structure of academic education at upper-secondary level is less complex as it is mainly offered by the academic secondary schools (*Gymnasium*) that end after 12 or 13 years (depending on the federal state) and lead to a general HE entrance certificate (*Abitur*) (see KMK, 2012).

Table 6.2 Students at upper-secondary level (ISCED 3), Germany, 2010

	Absolute	%
Total	3,780,320	100
General schools (<i>allgemeinbildend</i>)	1,092,300	29
Vocational schools (<i>beruflich</i>)	2,688,020	71
Of which:		
Full-time vocational schools	934,050	
Part-time vocational schools	1,753,970	

Source: KMK (2011b, p. x); translation and calculation of percentage values by LG.

Post-secondary level education

In the higher VET sector, trade and technical schools and *Meister* (Master craftsman) schools offer further vocational training targeted at the holders of initial VET (IVET) qualifications who are seeking to become technicians or *Meister* (either on full-time or part-time courses) (see CEDEFOP, 2011, pp. 69–70). Higher education consists mainly of public universities and a few private graduate or professional schools. In 2011/2012, 409 HE institutions enrolled 2.38 million students (DESTATIS, 2012a; 2012b). The German HE system is dominated by universities and universities of applied sciences (see Table 6.3) and, hence, this short description focuses on these two organizational types. The universities provide academic education at post-secondary level, the traditional Humboldtian *Leitidee* (rationale) of the German universities being autonomous science and the unity of teaching and research (see, e.g. Mayer, 2008; Powell et al., 2012a).³ Compared to universities of applied sciences, teaching at universities is typically more theory-oriented and research more oriented to basic/fundamental research (*Grundlagenforschung*). Research universities offer a full array of academic subjects, attach importance to basic research, and award doctorates and the post-doctoral lecturing qualification (*Habilitation*). Universities of applied sciences were introduced in the late 1960s/early 1970s as a new organizational form at HE level that focuses on more practical studies in fields such as economics, engineering, social work and health. Usually, professors at universities of applied sciences must have both academic qualifications and professional experience.

Table 6.3 Higher education institutes and student enrolment in Germany, 2011/2012

Types of HE institute	No. of institutes	Students absolute	Students (%)
Universities	104	1,542,226	64.9
Universities of applied sciences	203	744,150	31.3
Academies of art	51	33,340	1.4
Public administration colleges	29	31,654	1.3
Teacher training colleges	6	23,221	1.0
Theological colleges	16	2,443	0.1
<i>Total</i>	<i>409</i>	<i>2,377,034</i>	<i>100</i>

Source: Data retrieved from DESTATIS (2012a; 2012b); sorted by number of students enrolled; translation and calculation of percentage values by LG.

Governance and key stakeholders

The modes of governance for VET and academic/HE sectors differ: initial vocational training in enterprises is regulated by a number of federal laws, while the legal basis for in-school vocational training is provided by *Länder* (federal state) legislation (CEDEFOP, 2011, p. 38). Close cooperation between employers, trades unions and the state is one of the central tenets of the German VET system (e.g. Baethge, 2008). At the federal level, the ministry responsible for education and research is the Federal Ministry of Education and Research (BMBF). The Federal Institute for Vocational Education and Training (BIBB), which is subordinate to the BMBF, plays an important role in developing profiles for VET programmes in cooperation with the social partners (see BIBB, 2012b). The trade unions are engaged in the collective bargaining process and in several functions in the governance of the dual apprenticeship training system (see, e.g. Baron, 2007, pp. 16–22 for details). On the employers' side, there are three types of relevant interest organizations. One of the major tasks of the employers' associations (*Arbeitgeberverbände*) is representing employers' interests during the process of collective bargaining. The trade associations (*Wirtschaftsverbände*) are specialized in lobbying for business interests within the political system. The chambers of industry and commerce (*Industrie- und Handelskammern*, IHK) are responsible for a number of tasks of economic self-governance, such as the testing system for apprentices. While membership of the employers' associations and the trade associations is voluntary, membership of the chambers is

compulsory (except for handicraft and agricultural enterprises) (Andersen and Woyke, 2003).

The academic secondary schools (*Gymnasien*) and the HE institutes are regulated by the sixteen *Länder* (KMK, 2011a). The German federal states also carry the responsibility to finance them (Kehm, 2006, p. 730). This relatively secure funding has led to the perception of HE as a public good. In the traditional Humboldtian model, institutional autonomy exists only in regard to teaching and research, which restricts entrepreneurial activity (Coate et al., 2005, p. 233). At the same time, the influence of the state is sanctioned by intermediary actors, whereby these cooperative and coordinating bodies (next to universities) are the most active actors of HE internationalization (Hahn, 2004, p. 82). They include the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* (KMK), the Joint Science Conference of the Federal and *Länder* Governments (GWK), the German Rectors' Conference (HRK), or the German Academic Exchange Service (DAAD). Broadly speaking, the interaction between German universities tends to be collaborative, largely due to the coordination and conflict-solving function of such national intermediary actors (see Kehm and Lanzendorf, 2006, p. 142). Furthermore, the competition of students for places at universities and competition between universities for students are far less pronounced than, for example, in countries like the UK or the US (see Nullmeier, 2000, p. 216).

It can be concluded that the mode of governance in the German educational system – both in VET and in HE – is based on strategic coordination and, thus, complementary to the mode of governance in the German coordinated market economy more generally.⁴ That is, the German educational system stands in a complementary relationship to other subsystems of the German coordinated market economy such as the labour market, industrial relations, or the national innovation system (see Graf, 2009).

After this general overview, the next section broadens the perspective to reveal essential characteristics of the German education system through a comparison with most similar and most different national models within Europe.

The German educational model in comparative perspective

In Germany, ideal-typically: HE stands for appropriate education for academic activities; and VET for well-developed, comprehensive vocational competence (*Beruflichkeit*). Both of these strands within the educational system are offered to distinct groups depending on prior primary-level school performance and

secondary-level educational attainment (Powell and Solga, 2011; Powell et al., 2012a). In international comparison, the Austrian and the Swiss educational systems can be considered as most similar to the German one (see also Rothe, 2001; Trampusch and Busemeyer, 2011; Ebner et al., 2013). For example, the three countries share crucial characteristics when it comes to transitions within the education system as well as from there into the labour market. In all three countries, students are sorted into a multi-tiered secondary school system at a very early age, where the respective tiers strongly condition later transitions into either VET or HE and, with that, into labour markets (see, e.g. Allmendinger, 1989; Shavit and Müller, 2000). Moreover, the three countries are relatively similar with regard to the institutional linkages between VET, HE and the national labour market. For example, the vocational principle (*Berufsprinzip*) has played a pivotal role as a central ideal shaping the institutional arrangements at the education–economy nexus (e.g. Kraus, 2007; Deißinger, 1994).

All three countries are known for their extensive systems of vocational education and training. Especially at upper-secondary level, the proportion of students in vocational programmes – compared to general education programmes – is high relative to most other countries in Europe. To illustrate this point, Table 6.4 shows the distribution of upper-secondary students by programme type (general versus vocational) in Germany, Austria, Switzerland and – to provide a comparison – the equivalent distribution in the UK as an ideal type for the liberal market model of vocational training.⁵

A variety of general typologies describe national VET systems (see, e.g. Greinert, 1999) as well as national HE systems (see, e.g. Clark, 1983; Teichler, 1990).⁶ In these typologies, Germany, Austria and Switzerland usually fall under the same category. Thus, taking the example of VET and referring to the typology by Greinert (1999), all three represent dual-corporatist models due to their historically evolved dual apprenticeship training systems.⁷ In addition, Austria, Germany and Switzerland are all classified as collective skill systems (Busemeyer

Table 6.4 Distribution of upper-secondary students (ISCED 3) by programme type (general or vocational) in Germany, Austria, Switzerland and the UK, 2009

	Germany	Austria	Switzerland	UK
General	46.8	22.7	34.5	69.5
Vocational	53.2	77.3	65.5	30.5

Source: Eurydice (2012, p. 74), based on Eurostat data extracted in July 2011.

and Trampusch, 2012). That is, their (dual) VET systems 'are collectively organized, because firms, intermediary associations and the state cooperate in the process of skill formation in initial vocational training' (Busemeyer and Trampusch, 2012, p. 4, emphasis in original; see also Thelen, 2006, p. 136 on collectivist skill formation).

In European comparison, the two countries that come closest to Germany, Austria and Switzerland in terms of their (dual) VET systems are Denmark and the Netherlands. However, upon closer inspection, the Danish and Dutch cases differ in notable ways from the three former countries. For example, the Danish VET system is, among other things, characterized by a training levy, a form of school-based training tailored to specific vocations that is to be completed prior to apprenticeship training (see, e.g. Ebner, 2009, p. 6),⁸ as well as by more flexible certification and accreditation procedures (see, e.g. Nelson, 2012, p. 179). In the Netherlands, public institutions and the state play a very strong role in the VET system, for instance in the governance of the so-called regional training centres as well as school-based VET more generally (see, e.g. Andersen and Nijhuis, 2012). Thus, both the Danish and the Dutch cases present a more blurred picture when compared to the dual apprenticeship training systems in Germany, Austria and Switzerland.

In Anglophone countries, VET tends to play a different role and – especially at upper-secondary level – usually does not enjoy the kind of reputation it does in Germany, Austria or Switzerland.⁹ Furthermore, work-based learning in countries like Australia or the UK is usually organized at a more individual level (e.g. through individual learning plans) (Boud and Solomon, 2001) than is the case in the nationally standardized VET systems in Germany, Austria and Switzerland.

While this international comparison has been helpful to derive a general picture of the German educational model, even within the group of relatively similar systems (Germany, Austria and Switzerland) there occurs significant variation (Graf, 2013; also Trampusch and Busemeyer, 2011). Therefore, the following section shifts the focus to evolutionary aspects that are more specific to the German context.

Key developments in the contemporary German educational model

To examine institutional stability and change in a rapidly changing environment, this section presents three major developments in the German educational

model that are hotly debated among students, educators and policy makers. First, the rise and persistence of the pre-vocational training system is discussed as a questionable way of dealing with the problem of transitions in the educational system – and as an aspect of the German VET system that remains largely unnoticed by the increasing number of foreign policy makers who would like to transfer parts of the dual training principle to their home countries. Second, a growing trend in the German educational system is presented, namely the expansion of dual study programmes as a hybrid organizational form located at the nexus of VET and HE. The complex set-up of dual study programmes is examined at greater length, as it spans the boundary between VET and HE and, thus, can shed light on several key characteristics of the German educational system (e.g. the German educational schism). Third, the rapid country-specific implementation of the Bologna process in Germany is sketched to prepare the more general discussion of the impact of Europeanization on the German educational model in the final section.

The rise and persistence of the pre-vocational training system

In Germany, VET plays a far more significant role in preparing young adults for the labour market than in most European countries where general academic education is prime. The attraction of its VET system for other countries is the provision of highly-skilled workers, smooth transitions from school-to-work, and some insurance against the high youth unemployment rates that plague many other European countries (e.g. Verdier, 2008). Yet the dual system is no longer as successful in providing attractive training opportunities to the majority of a cohort leaving secondary schooling, in matching youth with firms offering stable career perspectives, or in providing youth from lower social backgrounds or from ethnic minority groups with work and social mobility.¹⁰ Less-educated youth, in particular, are in danger of not successfully garnering a place in the dual system and are likely to remain at the margins of the labour market (Solga, 2008).

Indeed, the intermediate secondary school-leaving certificate (*Realschulabschluss / Mittlere Reife*) has become the standard to access vocational training opportunities and therefore skilled jobs (Solga, 2005). In contrast, a great proportion of the students leaving general secondary schools (*Hauptschulen*) find no training opportunity and instead participate in the pre-vocational training system. This differentiated system provides a number of – typically one-year – programmes intended to prepare students for entry into the VET system

proper, but in which they are unlikely to acquire credits towards official qualifications. Today, between a quarter and a third of the young people entering VET do not enter regular vocational training and find themselves shunted into a range of state-funded, mainly school-based training pre-vocational programmes (Autorengruppe Bildungsberichterstattung, 2012, pp. 102–5). While these measures aim to enhance youth's work aptitudes, occupational orientations, or vocational preparation, this takes place outside the regular training system, often solely school-based and without the element of work experience in firms that is still expected by most employers (Baethge et al., 2007; Powell et al., 2012b). Several of the various programmes in this 'transition system' had already been created in the 1970s, yet it was in the early 1990s when their expansion greatly accelerated (Beicht, 2009). The tremendous costs of pre-vocational training – both in terms of public spending and reduced educational opportunities – indicate how highly institutionalized the idea of apprenticeships and the dual system is in Germany. Despite its obvious disadvantages, the pre-vocational system is maintained in an attempt to ensure the stability and smooth running of the traditional dual apprenticeship system (see also Thelen and Busemeyer, 2012).

In this sense, incremental change in one part of the educational system (the development of pre-vocational programmes) serves to shield the need for substantial reform in another part (the traditional dual apprenticeship training or full-time school-based VET). The next subsection provides another instance of this (the evolution of dual study programmes), which is again linked to the increasingly prevalent question of transitions and permeability between the different sectors of the educational system – in this case between VET and HE.

The hybridization of vocational training and higher education

As was mentioned before, Germany is a coordinated market economy, part of the collective skill system cluster, and renowned for its extensive dual apprenticeship training systems at upper-secondary level. However, it is also characterized by an institutional divide between the VET system and the academic or HE system (Baethge, 2006), and, hence, can also be referred to as a differentiated skill regime (Busemeyer, 2009, p. 394). Whereas HE has as dominant goals the development of personality, self-control and autonomy, that of VET is to develop individual vocational competence and agency to carry out specific tasks. The orientation when defining learning goals and elaborating

curricula is less a scientific approach guided by a canon of representative knowledge for academic education than a perspective towards the labour market and its demand for qualified workers. Whereas, in VET, individuals are quasi-employees, in general academic education they are pupils or students (Baethge, 2006; Powell et al., 2012b).

This institutional division between VET and HE, called the 'educational schism' (Baethge, 2006), has become increasingly contested due to a complex set of interrelated socio-economic factors resulting in an increasing demand for higher skills (e.g. Ebner et al., 2013). These challenges include the structural development towards the service and knowledge economy and more abstract and codified knowledge, related changes in the production model and work places, as well as rising educational aspirations of individuals (e.g. Mayer and Solga, 2008; Powell and Solga, 2010). In addition, recent European reforms, like the Bologna and the Copenhagen Processes, push for lifelong learning and greater mobility between VET and HE, among other things, to reduce social inequalities linked to educational opportunities (Powell et al., 2012a).

In order to deal with this challenge, Germany is increasingly relying on hybridization – a specific combination of institutional elements from the two organizational fields of VET and HE – to introduce gradual institutional reform within its long-established skill formation systems. This process of hybridization has led to the distinct organizational form of dual study programmes that straddle the boundary between VET and HE but also straddle the conventional divide between upper-secondary and post-secondary education – with specific implications for social inequality (Graf, 2013). The dual study programmes combine in-firm training with HE studies leading to a Bachelor degree and in some cases additionally to an official upper-secondary VET certificate.

Dual study programmes combine at least two learning environments (academic as well as firm-based), and in about a third of the dual study programmes the vocational school is integrated as a third location (Waldhausen and Werner, 2005). In dual study programmes, students and firms are usually bound by a training, part-time, practical training (*voluntariats*-), or internship contract (BIBB, 2012a). Dual studies usually lead to a Bachelor degree in about 3–4 years (dual studies at Master level are still very rare) and ideally connect two didactical principles, namely practical training and scientific orientation (Deißinger, 2000, p. 614 on vocational academies; Becker, 2006, p. 1 on dual studies in general). For example, the teaching staff is usually composed of trainers from industry, vocational school teachers and lecturers from universities and universities of applied sciences.

The field of dual study programmes is characterized by considerable heterogeneity of organizational forms. There are three major types of dual study programmes (the following typology follows Kupfer and Mucke, 2010):

1. Dual study programmes integrating an initial VET certificate (*ausbildungsintegrierende duale Studiengänge*) are typically designed for people holding a university or university of applied sciences entrance certificate but without VET training or vocational experience. Students acquire a Bachelor degree (post-secondary level) as well as an official VET certificate registered by the Chamber of Commerce/Chamber of Crafts or the certificates granted by full-time vocational schools (upper-secondary level).¹¹
2. Dual study programmes integrating work practice (*praxisintegrierende duale Studiengänge*) are mainly targeted at people holding a university or university of applied sciences entrance certificate, too. However, in the *praxisintegrierende* programmes the students 'merely' acquire a Bachelor degree (i.e. no official VET certificate). Yet, the phases of work experience still extend far beyond the obligatory internships in standard HE programmes. Also, in comparison to standard programmes at German universities of applied sciences, in *praxisintegrierende* dual study programmes more attention is paid to adjust the curricular to the in-firm phases within the respective courses of study.
3. Dual study programmes integrating an occupation (*berufsintegrierende duale Studiengänge*) are best suited for people who have completed initial VET training and have also acquired a university, or university of applied sciences, entrance certificate. An already existing part-time work contract is a precondition for this type of dual studies. In *berufsintegrierende* dual study programmes the curriculum is supposed to refer to the respective in-firm experiences, but the degree of integration between in-firm learning and HE learning is much lower than in the other two cases.

At present, there are few scientific studies of dual study programmes (see also Minks et al., 2011, p. 111). At the national level, the Federal Institute for Vocational Education and Training (BIBB) – which otherwise is not in charge of monitoring HE programmes – has started to map the occurrence of dual study programmes. The Confederation of German Employers' Associations speaks of more than 900 dual study programmes (and an increase in the number of programmes by 70 per cent between 2005 and 2011) (BDA, 2011, p. 7). The majority of dual study programmes are offered by universities of applied sciences

(59 per cent), the Baden-Wuerttemberg Cooperative State University (21 per cent), vocational academies (15 per cent) and universities (3 per cent), followed by other HE institutes (1 per cent) (BIBB, 2012a, p. 25). In total, around 27,900 cooperation links exist between firms and different educational providers within the dual studies framework (Kupfer and Stertz, 2011, p. 29). In April 2012, 64,093 students in *ausbildungsintegrierende* and *praxisintegrierende* dual study programmes were registered in the database AusbildungPlus.de (BIBB, 2012a, p. 25). This number increased by 7.5 per cent within one year between April 2011 and April 2012 (BIBB, 2012a, p. 25). However, the real number of students in dual study programmes is likely to be far higher as the providers of dual study programmes report student numbers on a voluntary basis (BIBB, 2012a, p. 25). Clearly, dual studies are a segment that is rapidly growing and attracting increasing attention by all major stakeholders. They are offered most commonly in 'engineering sciences', 'law, economics, and business sciences' and 'math and natural sciences'.

Dual study programmes tend to be established 'bottom-up' through regional initiatives by firms and, for example, local universities of applied sciences. Between these actors, a mutual interest prevails, which facilitates the time-efficient set-up of such programmes (see Mucke and Schwiedrzik, 2000). The rise of the dual study programmes can be seen to support the argument that the dual principle has 'extended' and moved up to the HE sector (Drexel, 1993; Deifinger, 2000, p. 615; Sorge, 2007, p. 240). However, it is also important to take into account the important role that employee organizations and trade unions traditionally play within the system of dual apprenticeship training but do not play with regard to dual study programmes (Graf, 2013).

The profile of a dual study programme is largely determined by internal negotiations and a cooperation agreement between the training firm and the organizational provider (Mucke and Schwiedrzik, 2000, p. 15; Becker, 2006). This implies that there is a significant degree of flexibility in the specific forms of coordination between firms and educational organizations (e.g. loose or tight) (e.g. Reischl, 2008). Only in the case of the *ausbildungsintegrierende* programmes (i.e. those dual study programmes that grant a Bachelor degree and an official VET certificate) is the involvement of the chambers formally required. In the relationship between the firm and the educational organization, formally it is the latter that has the final say and can set the standards for the participating firms (e.g. Akkreditierungsrat, 2010). The firms nevertheless have significant influence in the set-up of dual study programmes, for instance, as they can choose between different educational providers (Becker, 2006, p. 36).

Moreover, the employer associations often support dual study programmes through policy statements or through their actual engagement in a specific dual study programme (e.g. BDA, 2011). However, there is no federal standard with regard to the salaries of those enrolled in dual study programmes. Only in the case of the *ausbildungsintegrierende* dual study programmes is it decreed that the student should receive at least the same payment that a traditional apprentice at upper-secondary level would receive. The actual payment for students in dual study programmes is sometimes higher, depending on specific local regulations or sometimes even on individual negotiations between the student and the firm (Graf, 2013). It should also be noted that the educational organizations that offer dual study programmes are subject to the differing laws and accreditation processes in the sixteen *Länder* (see, e.g. Akkreditierungsrat, 2010), which leads to further differentiation.

The historical development of the dual study programmes represents a form of institutional layering through historical contingency (Graf, 2013; see also Streeck and Thelen, 2005 on the concept of layering). As Kahlert (2006) notes, the vocational academies (which were the first educational organizations providing dual study programmes) were not mentioned in any general education policy plan; their genesis rather happened as a side effect of the politically planned creation of the universities of applied sciences. In the beginning, the vocational academies were not taken seriously by most of the established actors in the fields of VET and HE; rather, they were seen as a thought experiment. In fact, the emergence of the dual study programmes from the late 1960s onwards was largely a 'subversive response' by large industrial firms to the perceived academic drift related to the politically determined upgrading of former vocational and engineering schools into universities of applied sciences. That is, influential large firms in Baden-Wuerttemberg launched them precisely to secure their hold on high-end vocational education and training, which they feared they would lose in the face of the greater academic autonomy of the new universities of applied sciences (Kahlert, 2006). In this sense, the first dual study programmes were created from the bottom-up through layering by local stakeholders who found a niche in the grey zone between the fields of HE and VET (see also Graf, 2012). However, these stakeholders sought to entirely displace neither the newly established universities of applied sciences nor the dual apprenticeship programmes, but aimed to establish a new organizational form as an institutional layer at the fringes of these two established forms (Graf, 2013).

In a nutshell, dual study programmes combine learning processes from both VET and HE and they usually stress the equal importance of academic and

firm-based learning. The best example for the way in which they also link upper- and post-secondary education is the double qualification granted by the *ausbildungsintegrierende* programmes. Furthermore, these programmes are neither solely subject to traditional HE governance nor to traditional VET governance, but to a mix of both. Thus, dual study programmes as a hybrid organizational form are a means of reducing the institutional distance between VET and HE, despite the German educational schism that prevails between the traditional organizational forms in these two fields respectively. As in the case of the pre-vocational training system, with the dual study programmes, a new organizational form has been created to adjust to changing environmental conditions – rather than pushing a reform of the core organizing principles of vocational training in HE. This hints at the stability of these traditional organizational forms. However, the next example shows that substantial institutional reform of such core organizational forms is still possible if exogenous pressure (e.g. European educational reforms) and endogenous demands for reform by key domestic stakeholders coincide.

The rapid Bolognazation of the German higher education system

German HE has been depicted as a system of ‘political legalism’ in which legal procedures dominate conflict resolution (Goldschmidt, 1991, pp. 5–6). Clark defines its governance regime as ‘a combination of political regulation by the state and professional self-control by “academic oligarchies”’ (Clark, 1983, p. 140). Four prominent ‘traditional’ features of German HE discussed by Teichler (2002, pp. 349–50) are that:

- 1 universities are strongly oriented towards science;
- 2 universities are of more or less the same quality;
- 3 programmes usually lead to degrees that are oriented towards a vocation (see also Müller et al., 2002, p. 42);
- 4 *Länder* governments steer HE (see also Müller et al., 2007).

The ‘German model’ of HE gained prominence based on both the Humboldtian ideal of a community of professors and students and on the principle of ‘education as a public good’ (as opposed to ‘education as a commodity’ and the principle of competition) (Powell et al., 2012b).

With regard to evolutionary dynamics, German HE is usually considered as conservative, slow-moving, and inclined towards incremental rather than radical changes (Krücken, 2003; Teichler, 2005). Given this tendency towards

inertia, recent rapid shifts in academic programmes, such as the widespread implementation of new degree structures (BA/MA) throughout the country, represent a rather unexpected case to study institutional change. The implementation of the Bologna Process has been described as a large experimental ‘field trial’ with many unknown consequences and risks. Traditional degrees like *Magister*, *Diplom* and *Staatsexamen* (all used to be roughly equivalent to the Master level in Anglophone countries) have been gradually replaced (though not in all fields), leading to the parallel existence of old and new degrees. Often, in these new courses, ‘competences and educational objectives are defined with a view to the demands of labour markets’ (KMK, 2007, p. 11). Hence, the new BA programmes seem to be more vocationally-oriented than before (Krücken, 2007). These changes have altered the relationship between HE and VET, increasing competition between the two (see Powell et al., 2012b).

The Bologna Process was swiftly implemented in Germany. Despite repeated protests by students and academic staff who feared that policy-makers would use Bologna as a tool to increase competitive market elements in the national HE system, the endogenous conditions for change were favourable given that the majority of policy makers and HE managers had already felt the need for reform for some time (see Bernhard et al., 2013; pp. 180–3). Interestingly, the implementation of European educational policies in the field of VET is fraught with more conflict than it is in the field of HE. One reason is that the social partners are worried that they will lose some of their stakes in the VET system as the national governments and Brussels step up their cooperation in the policy field of education. While the social partners are to some extent involved in the European policy-making processes, their influence in Brussels is lower than when compared to the historically evolved balance of power in the national arena. However, this is not so much an issue as far as traditional HE is concerned, as the social partners are not involved to the same extent in its governance as they are in the case of VET (and especially dual apprenticeship training) (Graf, 2013).

While ‘marketization’ is not coterminous with Europeanization (Powell et al., 2012a), recent liberalization raises questions about the future stability of its traditional mode of coordination, or regulation mode, in which collective decisions in state-subsidized organizations guide HE reforms (Graf, 2009). Decentralized reforms include the formalization of the three-cycle degree structure, the introduction and retraction of tuition fees (up to €500 in some *Länder*), performance-based pay, greater autonomy for universities and university presidents, and the ‘Excellence Initiative’ that provides additional funds for

research to selected organizations (see Flink et al., 2012 on the 'Excellence Initiative'). As the HE sector is partly deregulated and New Public Management strategies gain a foothold, some claim that Germany has switched to a 'neo-liberal' market model in which universities acquire the status of organizational actors and reduce the power of the academic oligarchy (Krücken, 2007).

In summary, current developments in the German HE system appear to lead to transformative change that goes beyond minor incremental adjustments or the development of alternative educational pathways (as in the case of the pre-vocational programmes and the dual study programmes). Given this potential, the next section deepens the discussion of the emerging European educational model and the increasing challenge it presents to the historically evolved educational model in Germany.

Increasing European challenges to the German educational model

This section discerns three 'Europeanization challenges' to skill formation in Germany. It describes elements in the Bologna and Copenhagen Processes that can be regarded as generally challenging for the traditional mode of skill formation in Germany. Whenever applicable the impact of these Europeanization challenges on the German hybrid organizational form of dual study programmes will also be mentioned.

The European Qualification Framework (EQF) – which was formally adopted by the European Parliament and Council in April 2008 – encompasses all educational levels and forms. Based on non-binding recommendations, member states voluntarily committed themselves to develop a national qualification framework that will later be referenced to as the EQF. The official goal of the EQF with its eight reference levels is to diffuse and promote lifelong learning and to make national qualification systems more readable and understandable within and across different countries to facilitate national and international mobility. The EQF represents a central tool in the Bologna Process and Copenhagen Process, respectively. I argue here that key characteristics that underwrite the EQF as well as the two-tiered degree structure (linked to the Bologna Process) are in conflict with the traditional institutional configuration in Germany, namely the European foci on (1) employability, (2) learning outcomes, and, more generally, (3) a liberal market arrangement in skill formation. In contrast to these European foci, skill formation in Germany has traditionally relied more on (1)

the vocational principle, (2) input and process orientation, as well as (3) strategic (or collective) coordination. Below, I sketch these tensions between the current European processes and the historical status quo in Germany. The EQF serves as the major point of illustration.

Employability *versus* the vocational principle

The vocational principle promotes more narrowly defined occupational skills than the somewhat more broadly defined concept of employability. Employability can be defined as 'the capability to gain initial employment, maintain employment and obtain new employment if required' (Hillage and Pollard, 1998, p. 1). Kraus (2008, p. 77) observes that '[a]s the traditional earning schema in an English-speaking context, employability clearly differs from the concept of vocation in Germany and has been developed in accordance with different structures in the education system, labour market and the welfare state'. This concept of employability is also embedded in the development of the EQF. The first qualification frameworks were designed for the specific historical and systemic context in Anglophone countries (see Allais et al., 2009b, p. 2). In the UK, for example, the development of qualification frameworks in the 1980s was part of a wider marketization in education (Cort, 2010, p. 311) and, as such, characterized by a quasi-market logic organized around standards for certification (Verdier, 2009, p. 10). Thus, originally, qualification frameworks were designed as a means to cope with an education landscape that is far less standardized than that in Germany (Graf, 2013). The development of the EQF was inspired by these first NQFs in England, Scotland and New Zealand (all of which are liberal market economies). However, Germany has, nevertheless, signed up to the EQF, for example to position its national qualifications at the European level. Interestingly, the European focus on employability represents less of a challenge for the German dual study programmes as a hybrid organizational form. As this hybrid combines occupationally specific skills with more general academic training, its qualifications fit more smoothly into the European employability scheme than traditional dual apprenticeship training or the Humboldtian study programmes.

Learning outcomes instead of learning inputs

The professionalism that individuals acquire in dual apprenticeship training is in part a result of their early integration into a community of practitioners, which,

however, is not an element prominent in the EQF or the new German Qualification Framework (Drexel, 2005; Banscherus et al., 2009, p. 57). The EQF's focus on (formal, informal and non-formal) learning outcomes challenges the vocational principle, which emphasizes inputs and processes of training (in the workplace) (Powell and Trampusch, 2012c, p. 285). In doing so, the EQF suggests replacing trust in organizational forms with trust in 'outcomes' (Allais et al., 2009b, p. 3). However, Allais, Young and Raffe (2009b, p. 3) argue that 'as outcomes themselves are a form of "proxy" for what people know or can do, the institutional basis of trust is inescapable and that at least implicitly people will continue to rely on institutions [i.e. educational organizations, LG]'. Generally speaking, the shift to learning outcomes contrasts with the common practice in Germany, which has traditionally relied on learning inputs such as the type of educational organization or study duration (see also European Commission, 2011). Thus, it is perhaps not surprising that the implementation of the EQF (an outcome-oriented scheme) to education systems that are traditionally input-oriented is leading to some unintended results. For example, in Germany, after tough negotiations between VET and HE stakeholders, it was decided in 2012 that qualifications from general schooling will not initially be allocated to the German Qualification Framework (BMBF, 2012). More generally, for educational organizations in Germany, including its new hybrid organizational form, the paradigm shift towards learning outcomes manifests itself as a rather long and winding road.

Liberal market arrangements instead of strategic coordination

Rasmussen, Lynch, Brine and colleagues (2009, p. 159) observe that 'European policies in the areas of welfare and education are marked by a fundamental tension between the pursuit of capitalist growth on one hand, the pursuit of social justice and equality on the other'. In this context, it is crucial to take into account that current European activities in the fields of VET as well as HE and research are intertwined with the Lisbon Strategy (see, e.g. Hanf et al., 2009), which aims to direct these fields towards the ideals of 'efficient' human capital investment and 'competitive' knowledge-based economic growth (see, e.g. Bruno, 2008). The Lisbon Strategy, devised by the European Council in 2000, was influenced by the perceived pressure to catch up with the knowledge-based growth of the 'new economy' in the United States with its liberal market institutions (see Bruno, 2008; Watson, 2001). Moreover, one of the principal goals of EU VET policy is to open up educational markets (Drexel, 2005;

Trampusch, 2008, p. 603). Private providers of educational programmes in particular are very interested in European mechanisms for ensuring quality (to create trust) to facilitate market exchanges (see Cort, 2010, p. 306). Arguably, 'the EQF is not neutral but will influence national education policies in the direction of a higher degree of standardization and commodification of education and an introduction of market principles into the education sectors' (Cort, 2010, p. 307). The European trend towards a more market-oriented skill regime presents a significant challenge to Germany as a case of collective skill formation that builds on strategic coordination between all involved stakeholders. In as far as the hybrid organizational form of dual study programmes in Germany builds on traditional collective elements (e.g. in terms of educational governance), this trend is likely to be to the detriment of their hybrid status.

The three paragraphs above mostly refer to the EQF. However, a similar case can be made for the two-tiered degree structure (which is the traditional degree configuration in liberal market economies like the US and the UK). For example, the new Bachelor and Master degrees use ECTS credits to measure learning outcomes and the Bachelor degree is typically aimed at employability as it is supposed to qualify students for labour market entry. While the Europeanization processes claim to be neutral policy tools, it turns out that policy-makers are, nevertheless, promoting a specific educational ideology. Due to the voluntary character of both the Bologna and the Copenhagen Processes, they represent an ideational and normative challenge to Germany rather than directly regulative pressure. However, if European and German educational policy-makers want to optimally promote permeability between VET and HE, then more attention needs to be paid to the complexity of national and local institutional conditions and established innovative organizational solutions, like the hybrid dual study programmes that have evolved in Germany.

Discussion and outlook

After a general overview on the German educational system, the chapter has derived essential characteristics of the German education system through comparison with most similar and most different national models within Europe. Furthermore, it described evolutionary aspects that are specific to the German case. Here the focus has been on the increasingly important question of transitions and permeability between the different sectors of the educational system. The analysis showed that incremental change in one part of the

educational system (the development of pre-vocational programmes) serves to shield off substantial reform in another part (the traditional dual apprenticeship training or full-time school based VET). Similarly, with the dual study programmes a new organizational form has been created to adjust the system to changing environmental conditions – rather than pushing reforms with regard to the traditional core organizations of vocational training and HE. This hints at the system's capacity to maintain historically evolved organizational forms through adjustment at their fringes. However, transformative institutional reform at the core is also possible if exogenous pressure and endogenous demands for reform by key domestic stakeholders coincide. This has been illustrated at the example of the rapid implementation of the Bologna Process reform and especially the new degree structure in Germany. Thus, whether traditional classifications of the German educational model still fit – i.e. whether the activities in the educational policy field represent 'merely' creative maintenance of the status quo or rather model transformation – depends crucially on the interplay of endogenous and exogenous conditions in the specific sector of the education system.

The chapter has also outlined key features of the emergent European educational model (employability, learning outcomes and liberal market arrangement) that stand in contrast to traditional characteristics of the German education model (vocational principle, learning inputs and strategic coordination). Following the argument above, the extent to which the new European norms will affect the German model crucially depends on the willingness of powerful actors in the German educational system to stick with or depart from the system's historical developmental path. However, the still considerable reliance on strategic coordination as the dominant mode of governance challenges popular notions of rapid European convergence.

Notes

- 1 I would like to thank Justin J. W. Powell, Nadine Bernhard, Heike Solga, Laurence Coutrot, and Annick Kieffer for their excellent support and close cooperation during the past years.
- 2 The Bologna Declaration was signed in 1999 by twenty-nine European educational ministers to establish a Europe-wide HE area. The key instrument in the Bologna Process is the two-tiered degree structure (Bachelor/Master), defined in terms of learning outcomes and measured by the European Credit Transfer and Accumulation System (ECTS). In 2002, the Copenhagen Declaration was signed by

- thirty-one ministers to enhance European cooperation in vocational education and training. A central initiative initially launched within the Copenhagen Process is the development of the European Qualification Framework (EQF).
- 3 The specificities of the traditional model of German HE are further discussed below.
- 4 Analysing the way coordination problems are solved in these different institutional spheres, the Varieties of Capitalism literature (see especially Hall and Soskice, 2001) defines two distinct modes of coordination – namely market coordination and strategic coordination. The UK and the US are discussed as ideal types of a liberal market economy largely based on coordination through competitive markets. In contrast, Germany is considered to be an ideal type of a coordinated market economy relying more on strategic interactions between the various stakeholders.
- 5 See, for instance, Greinert (2005) and Powell, Bernhard, and Graf (2012a) for more details on key specificities of the liberal market model of VET in the UK in comparative perspective.
- 6 See Powell, Graf, Bernhard et al. (2012b) for a review of these typologies.
- 7 In Greinert's typology, the other types are the state-regulated bureaucratic model (e.g. France) and the aforementioned liberal market economy model (e.g. the UK) (Greinert, 1999).
- 8 Ebner (2013, p. 207) distinguishes between two types of dual apprenticeship training systems: the 'German type' (Germany, Austria, and Switzerland), which features a high degree of standardization, and the 'Danish type', which is less standardized. Moreover, the 'German type' produces more vocational specificity than the 'Danish type'.
- 9 For example, due to the strong position of VET in Germany, Austria, and Switzerland, some occupations that are part of the VET portfolio at upper-secondary level in these countries belong to HE in other countries (e.g. Banschbach, 2007, p. 66 on the German case).
- 10 For critical reviews of current developments in the German VET system, see, e.g. Solga (2009), Thelen (2007), or Kupfer (2010).
- 11 Training in vocational schools can be, but need not be, part of *ausbildungsintegrierende* programmes.

References

- Akkreditierungsrat (2010) *Handreichung der AG 'Studiengänge mit besonderem Profilspruch'*. Drs. AR 95/2010 (10 Dec. 2010). Bonn: Akkreditierungsrat.
- Allais, S., Raffé, D., and Young, M. (2009a) *Researching NQFs: Some Conceptual Issues*. Geneva: International Labour Organization.

- Allais, S., Young, M., and Raffé, D. (2009b) 'Introduction', in S. Allais, D. Raffé, R. Strathdee, L. Wheelahan and M. Young (eds), *Learning from the First Qualification Frameworks*. Geneva: International Labor Office, pp. 1–4.
- Allmendinger, J. (1989) 'Educational systems and labor market outcomes', *European Sociological Review*, 5: 231–50.
- Andersen, K. M. and Nijhuis, D. O. (2012) 'The long road to collective skill formation in the Netherlands', in M. R. Busemeyer and C. Trampusch (eds), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp. 101–25.
- Andersen, U. and Woyke, W. (2003) *Handwörterbuch des politischen Systems der Bundesrepublik Deutschland* (5th edn). Opladen: Leske+Budrich.
- Autorengruppe Bildungsberichterstattung (2012) *Bildung in Deutschland 2012*. Bielefeld: Bertelsmann.
- Baethge, M. (2006) 'Das deutsche Bildungs-Schisma: Welche Probleme ein vorindustrielles Bildungssystem in einer nachindustriellen Gesellschaft hat', *SOFI-Mitteilungen No. 34*. Soziologisches Forschungsinstitut an der Universität Göttingen, pp. 13–27.
- Baethge, M. (2008) 'Das berufliche Bildungswesen in Deutschland am Beginn des 21. Jahrhunderts', in K. S. Cortina, J. Baumert, A. Leschinsky, K. U. Mayer, and L. Trommer (eds), *Das Bildungswesen in der Bundesrepublik Deutschland*. Reinbek: Rowohlt, pp. 541–97.
- Baethge, M., Solga, H. and Wieck, M. (2007) *Berufsbildung im Umbruch: Signale eines überfälligen Aufbruchs*. Berlin: Friedrich-Ebert-Stiftung.
- Banschbach, V. (2007) 'Bildungsbeteiligung im Tertiärbereich – Stärken und Schwächen Deutschlands im internationalen Vergleich', *Beiträge zur Hochschulforschung*, 29: 54–75.
- Banscherus, U., Gulbins, A., Himpele, K. and Staack, S. (2009) *Der Bologna-Prozess zwischen Anspruch und Wirklichkeit. Die europäischen Ziele und ihre Umsetzung in Deutschland*. Frankfurt am Main: Gewerkschaft Erziehung und Wissenschaft.
- Baron, S. C. (2007) *Das duale System der Berufsausbildung unter dem Einfluss der europäischen Berufsbildungspolitik. Entwicklungsprozesse und Herausforderungen*. Inaugural-Dissertation. Duisburg-Essen: University Duisburg-Essen.
- Baum, K. (2011) 'Aus 2 mach 1: Die bundesweite Zusammenlegung von Haupt- und Realschulen zur Oberschule', *ifo Dresden berichtet*, 4/2011, pp. 29–32.
- BDA (2011) *Erfolgsmodell duales Studium*. Berlin: Bundesvereinigung der Deutschen Arbeitgeber (BDA).
- Becker, A. (2006) *Duale Studiengänge. Eine Übersichtsstudie im Auftrag der IG Metall-Jugend*. Frankfurt am Main: IG Metall Vorstand.
- Beicht, U. (2009) 'Verbesserung der Ausbildungschancen oder sinnlose Warteschleife? Zur Bedeutung und Wirksamkeit von Bildungsgängen am Übergang Schule – Berufsausbildung', *BIBB Report*, 3, pp. 1–16.
- Bernhard, N., Graf, L. and Powell, J. J. W. (2013) 'Auswirkungen des neuen europäischen Bildungsmodells auf die Verknüpfung zwischen Berufs- und Hochschulbildung in

- Deutschland, Österreich und Frankreich', in K. Amos, J. Schmid, J. Schrader, and A. Thiel (eds), *Europäischer Bildungsraum. Europäisierungsprozesse in Bildungspolitik und Bildungspraxis*. Baden-Baden: Nomos, pp. 175–92.
- BIBB (2012a) *AusbildungsPlus in Zahlen. Trends und Analysen*. Bonn: Federal Institute for Vocational Education and Training (BIBB).
- BIBB (2012b) *Über das BIBB*. Bonn: Federal Institute for Vocational Education and Training (BIBB): <http://www.bibb.de/de/26173.htm> [accessed: 16 April 2012].
- Blanck, J. M., Edelstein, B., and Powell, J. J. W. (2013) 'Persistent school segregation or change towards inclusive education? The impact of the Convention on the Rights of People with Disabilities on Reform Processes in Germany's Bundesländer', *Swiss Journal of Sociology*, 39: 267–92.
- BMBF (2012) *Wichtiger Schritt hin zum Bildungsraum Europa*. Berlin: Federal Ministry of Education and Research (BMBF).
- Boud, D. and Solomon, N. (eds) (2001) *Work-based Learning. A New Higher Education?* Berkshire: Open University Press.
- Bruno, I. (2008) *À vos marques, prêts . . . cherchez! La stratégie Européenne de Lisbonne, vers un marché de la recherche*. Bellecombe-en-Bauges: Éditions du Croquant.
- Busemeyer, M. R. (2009) 'Asset specificity, institutional complementarities and the variety of skill regimes in coordinated market economies', *Socio-Economic Review*, 7: 375–406.
- Busemeyer, M. R. and Trampusch, C. (eds) (2012) *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press.
- CEDEFOP (2011) *Germany. VET in Europe. Country Report 2011*. Thessaloniki: European Centre for the Development of Vocational Training (CEDEFOP).
- Clark, B. R. (1983) *The Higher Education System. Academic Organization in Cross-National Perspective*. Berkeley, CA: University of California Press.
- Coate, K., Kontigiannopoulou-Polydorides, G., Luijten-Lub, A., Papadiamantaki, Y., Stamelos, G., Van der Wende, M., and Williams, G. (2005) 'International comparative analysis', in J. Huisman and M. Van der Wende (eds), *On Cooperation and Competition II – Institutional Responses to Internationalisation, Europeanisation and Globalisation*. Bonn: Lemmens, pp. 201–33.
- Cort, P. (2010) 'Stating the obvious: the European Qualifications Framework is not a neutral evidence-based policy tool', *European Educational Research Journal*, 9: 304–16.
- Deißinger, T. (1994) 'The evolution of the modern vocational training systems in England and Germany: a comparative view', *Compare*, 24: 17–36.
- Deißinger, T. (2000) 'The German "philosophy" of linking academic and work-based learning in higher education: the case of the "vocational academies"', *Journal of Vocational Education & Training*, 52: 605–26.
- DESTATIS (2012a) *Hochschulen insgesamt*. Wiesbaden: Federal Statistical Office (DESTATIS): <https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/BildungForschungKultur/Hochschulen/Tabellen/HochschulenHochschularten.html> [accessed: 16 April 2012].

- DESTATIS (2012b) *Studierende. Insgesamt nach Hochschulen*. Wiesbaden: Federal Statistical Office (DESTATIS): <https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/BildungForschungKultur/Hochschulen/Tabellen/StudierendeInsgesamtHochschulart.html> [accessed: 4 April 2012].
- Drexel, I. (1993) *Das Ende des Facharbeiteraufstiegs? Neue und mittlere Bildungs- und Karrierewege in Deutschland und Frankreich*. Frankfurt am Main: Campus.
- Drexel, I. (2005) *Das Duale System in Europa*. Berlin/Frankfurt am Main: Vereinte Dienstleistungsgewerkschaft/IG Metall.
- Ebner, C. (2009) 'Neue Wege für die Berufsausbildung – ein Blick auf Österreich, die Schweiz und Dänemark', *WZBrief Arbeit*, 4 (November 2009).
- Ebner, C. (2013) *Erfolgreich auf dem Arbeitsmarkt? Die duale Berufsausbildung im internationalen Vergleich*. Frankfurt am Main: Campus.
- Ebner, C., Graf, L., and Nikolai, R. (2013) 'New institutional linkages between dual vocational training and higher education. A comparative analysis of Germany, Austria, and Switzerland', in M. Windzio (ed.) *Integration and Inequality in Educational Institutions*. Dordrecht: Springer, pp. 281–98.
- European Commission (2011) *The European Qualification Framework (EQF)*. Brussels: European Commission (EC): http://ec.europa.eu/education/lifelong-learning-policy/doc44_en.htm [updated: 23 November 2011, last accessed: 18 February 2012].
- Eurydice (2012) *Key Data on Education in Europe 2012*. Brussels: Eurydice.
- Flink, T., Rogge, J.-C., Roßmann, S., and Simon, D. (2012) Angleichung statt Vielfalt. Deutsche Universitäten auf der Suche nach Profil, *WZBrief Bildung*, 22 (June 2012).
- Goldschmidt, D. (1991) 'Idealtypische Charakterisierung sieben westlicher Hochschulsysteme', *Zeitschrift für Sozialforschung und Erziehungssoziologie*, 11: 3–17.
- Graf, L. (2009) 'Applying the varieties of capitalism approach to higher education: comparing the internationalization of German and British universities', *European Journal of Education*, 44: 569–85.
- Graf, L. (2012) 'Wachstum in der Nische. Mit dualen Studiengängen entstehen Hybride von Berufs- und Hochschulbildung', *WZB Mitteilungen*, 130: 49–52.
- Graf, L. (2013) *The Hybridization of Vocational Training and Higher Education in Austria, Germany and Switzerland*. Opladen: Budrich UniPress.
- Graf, L., Lassnigg, L., and Powell, J. J. W. (2012) 'Austrian corporatism and gradual institutional change in the relationship between apprenticeship training and school-based VET', in M. R. Busemeyer and C. Trampusch (eds), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp. 150–78.
- Greinert, W.-D. (1999) *Berufsqualifizierung und dritte industrielle Revolution: Eine historisch vergleichende Studie zur Entwicklung der klassischen Ausbildungssysteme*. Baden-Baden: Nomos.
- Greinert, W.-D. (2005) *Mass Vocational Education and Training in Europe*. Luxembourg: Office for Official Publications of the European Communities.

- Hahn, K. (2004) Germany, in J. Huisman and M. Van der Wende (eds), *On Cooperation and Competition – National Policies for the Internationalisation of Higher Education*. Bonn: Lemmens, pp. 51–79.
- Hall, P. A. and Soskice, D. (2001) 'An introduction to varieties of capitalism', in P. A. Hall and D. Soskice (eds), *Varieties of Capitalism – The Institutional Foundation of Comparative Advantage*. New York: Oxford University Press, pp. 1–68.
- Hanf, G., Luomi-Messerer, K., and Rein, V. (2009) 'Österreich und England', in J. Markowitsch (ed.), *Der Nationale Qualifikationsrahmen in Österreich – Beiträge zur Entwicklung*. Vienna: LIT-Verlag, pp. 15–28.
- Hillage, J. and Pollard, E. (1998) *Employability: Developing a Framework for Policy Analysis*. Brighton: Institute for Employment Studies, Department for Education and Employment (DfEE).
- Kahlert, H. (2006) *Vergessene Aktion – Wie die Fachhochschule entstanden ist*. Bremen: Stiftung für Sozialgeschichte des 20. Jahrhunderts: <http://www.stiftung-sozialgeschichte.de/index.php?selection=17&zeigebeitrag=27&PHPSESSID=c70eb334f15aafb141c9> [accessed: 28 April 2011].
- Kehm, B. M. (2006) Germany, in P. G. Altbach and J. J. F. Forest (eds), *International Handbook of Higher Education – Part Two: Regions and Countries*. Dordrecht: Springer, pp. 729–45.
- Kehm, B. M. and Lanzendorf, U. (2006) 'Germany – 16 Länder approaches to reform', in B. M. Kehm and U. Lanzendorf (eds), *Reforming University Governance – Changing Conditions for Research in Four European Countries*. Bonn: Lemmens, pp. 135–86.
- KMK (2007) *Bologna-Prozess – Nationaler Bericht 2005 bis 2007 für Deutschland von KMK und BMBF*. Bonn: Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (KMK).
- KMK (2011a) *The Education System in the Federal Republic of Germany 2010/11*. Bonn: The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK).
- KMK (2011b) *Schüler, Klassen, Lehrer und Absolventen der Schulen 2001 bis 2010*. Statistische Veröffentlichungen der Kultusministerkonferenz Dokumentation Nr. 195 (December 2011). Berlin: The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK).
- KMK (2012) *Die gymnasiale Oberstufe* [Online]. Berlin: The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK): <http://www.kmk.org/bildung-schule/allgemeine-bildung/sekundarstufe-ii-gymnasiale-oberstufe.html> [accessed: 23 August 2012].
- Kraus, K. (2007) 'Die "Berufliche Ordnung" im Spannungsfeld nationaler Tradition und europäischer Integration', *Zeitschrift für Pädagogik*, 53: 382–98.
- Kraus, K. (2008) 'Does employability put the German "Vocational Order" at risk?', in P. Gonon, K. Kraus, J. Oelkers, and S. Stolz (eds), *Work, Education and Employability*. Bern: Peter Lang, pp. 55–81.

- Krücken, G. (2003) 'Learning the "New, New Thing": on the role of path dependency in university structures', *Higher Education*, 46: 315–39.
- Krücken, G. (2007) 'Organizational fields and competitive groups in higher education: some lessons from the Bachelor/Master reform in Germany', *Management Revue*, 18: 187–203.
- Kupfer, A. (2010) 'The socio-political significance of changes to the vocational education system in Germany', *British Journal of Sociology of Education*, 31: 85–97.
- Kupfer, F. and Mücke, K. (2010) *Duale Studiengänge an Fachhochschulen nach der Umstellung auf Bachelorabschlüsse – Eine Übersicht* (Version: 2009). Bonn: Federal Institute for Vocational Education and Training (BIBB).
- Kupfer, F. and Stertz, A. (2011) 'Dual courses of study – the supply and demand situation', *BWP Vocational Training in Research and Practice*, BWP Special Edition: 29–30.
- Mayer, K. U. (2008) 'Das Hochschulwesen', in K. S. Cortina, J. Baumert, A. Leschinsky, K. U. Mayer, and L. Trommer (eds), *Das Bildungswesen in der Bundesrepublik Deutschland*. Reinbek: Rowohlt, pp. 599–645.
- Mayer, K. U. and Solga, H. (eds) (2008) *Skill Formation: Interdisciplinary and Cross-National Perspectives*. New York: Cambridge University Press.
- Minks, K.-H., Netz, N., and Völk, D. (2011) *Berufsbegleitende und duale Studienangebote in Deutschland: Status quo und Perspektiven*. Hanover: Higher Education Information System (HIS).
- Mücke, K. and Schwiedrzik, B. (2000) *Duale berufliche Bildungsgänge im tertiären Bereich – Möglichkeiten und Grenzen einer fachlichen Kooperation von Betrieben mit Fachhochschulen und Berufsakademien* (Version: July 2000). Bonn: Federal Institute for Vocational Education and Training (BIBB).
- Müller, W., Brauns, H., and Steinmann, S. (2002) 'Expansion und Erträge tertiärer Bildung in Deutschland, Frankreich und im Vereinigten Königreich', *Berliner Journal für Soziologie*, 12: 37–62.
- Müller, W., Mayer, K. U., and Pollak, R. (2007) 'Institutional change and inequalities of access in German higher education', in Y. Shavit, R. Arum and A. Gamoran (eds), *Stratification in Higher Education: A Comparative Study*. Stanford, CA: Stanford University Press.
- Nelson, M. (2012) 'Continued collectivism: the role of trade self-management and the Social Democratic Party in Danish Vocational Education and Training', in M. R. Busemeyer and C. Trampusch (eds), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp. 179–202.
- Nullmeier, F. (2000) "'Mehr Wettbewerb!" – Zur Marktkonstitution in der Hochschulpolitik', in R. Czada and S. Lütz (eds), *Die Politische Konstitution von Märkten*. Wiesbaden: Westdeutscher Verlag, pp. 209–27.
- Oelkers, J. (2006) *Gesamtschule in Deutschland – Eine historische Analyse und ein Ausweg aus dem Dilemma*. Weinheim: Beltz.
- Powell, J. J. W. (2011) *Barriers to Inclusion: Special Education in the United States and Germany*. Boulder, CO: Paradigm Publishers.

- Powell, J. J. W. and Solga, H. (2010) 'Analysing the nexus of higher education and vocational training in Europe: a comparative-institutional framework', *Studies in Higher Education*, 35: 705–21.
- Powell, J. J. W. and Solga, H. (2011) 'Why are participation rates in higher education in Germany so low? Institutional barriers to higher education expansion', *Journal of Education and Work*, 24: 49–68.
- Powell, J. J. W. and Trampusch, C. (2012c) 'Europeanization and the varying responses in collective skill systems', in M. R. Busemeyer and C. Trampusch (eds), *The Comparative Political Economy of Collective Skill Systems*. Oxford: Oxford University Press, pp. 284–316.
- Powell, J. J. W., Bernhard, N., and Graf, L. (2012a) 'The emerging European model in skill formation: comparing higher education and vocational training in the Bologna and Copenhagen Processes', *Sociology of Education*, 85: 240–58.
- Powell, J. J. W., Graf, L., Bernhard, N., Coutrot, L., and Kieffer, A. (2012b) 'The shifting relationship between vocational and higher education in France and Germany: towards convergence?', *European Journal of Education*, 47: 405–23.
- Rasmussen, P., Lynch, K., Brine, J., Boyadjieva, P., Peters, M. A., and Sünker, H. (2009) 'Education, equality and the European social model', in R. Dale and S. Robertson (eds), *Globalization and Europeanization in Education*. Oxford: Symposium Books, pp. 159–77.
- Reischl, K. (2008) 'Bestandaufnahme der bisher in Deutschland akkreditierten dualen Studiengänge', in BLK (ed.) *Tagungsband zur Fachtagung des BLK-Projektes*. Bonn (4 March 2008): Bund-Länder-Kommission (BLK).
- Rothe, G. (ed.) (2001) *Die Systeme beruflicher Qualifizierung Deutschlands, Österreichs und der Schweiz im Vergleich*. Villingen-Schwenningen: Neckar-Verlag.
- Shavit, Y. and Müller, W. (2000) 'Vocational secondary education: where diversion and where safety net?', *European Societies*, 2: 29–50.
- Solga, H. (2005) *Ohne Abschluss in die Bildungsgesellschaft*. Opladen: Verlag Barbara Budrich.
- Solga, H. (2008) 'Lack of training: employment opportunities for low-skilled persons from sociological and microeconomic perspectives', in K. U. Mayer and H. Solga (eds), *Skill Formation: Interdisciplinary and Cross-National Perspectives*. New York: Cambridge University Press, pp. 173–204.
- Solga, H. (2009) *Der Blick nach vorn: Herausforderungen an das deutsche Ausbildungssystem*. Berlin: Social Science Research Center (WZB).
- Sorge, A. (2007) 'Was ist von einer produktiven Wissensgesellschaft durch nachhaltige Innovation und Berufsbildung zu erwarten?', in J. Kocka (ed.), *Zukunftsfähigkeit Deutschlands – Sozialwissenschaftliche Essays*. Berlin: WZB Jahrbuch 2006. Edition Sigma.
- Steinmann, S. (2000) *Bildung, Ausbildung und Arbeitsmarktchancen in Deutschland. Eine Studie zum Wandel der Übergänge von der Schule in das Erwerbsleben*. Opladen: Leske + Budrich.

- Streeck, W. and Thelen, K. (eds) (2005) *Beyond Continuity. Institutional Change in Advanced Political Economies*. New York: Oxford University Press.
- Teichler, U. (1990) *Europäische Hochschulsysteme: Die Beharrlichkeit vielfältiger Modelle*. Frankfurt am Main: Campus.
- Teichler, U. (2002) 'Hochschulbildung', in R. Tippelt (ed.), *Handbuch Bildungsforschung*. Opladen: Leske + Budrich, pp. 349–70.
- Teichler, U. (2005) *Hochschulstrukturen im Umbruch*. Frankfurt am Main: Campus.
- Thelen, K. (2006) 'Institutions and social change: the evolution of vocational training in Germany', in I. Shapiro, S. Skowronek, and D. Galvin (eds), *Rethinking Political Institutions. The Art of the State*. New York: New York University Press, pp. 135–70.
- Thelen, K. (2007) 'Contemporary challenges to the German vocational training system', *Regulation & Governance*, 1: 247–60.
- Thelen, K. and Busemeyer, M. R. (2012) 'Institutional change in German vocational training: from collectivism to segmentalism', in M. R. Busemeyer and C. Trampusch (eds), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp. 68–100.
- Trampusch, C. (2008) 'Jenseits von Anpassungsdruck und Lernen: die Europäisierung der deutschen Berufsbildung', *Journal for Comparative Government and European Policy*, 6: 577–605.
- Trampusch, C. and Busemeyer, M. R. (2011) 'Berufsbildungs- und Hochschulpolitik in der Schweiz, Österreich und Deutschland', *Swiss Political Science Review*, 16: 597–615.
- Verdier, E. (2008) 'L'éducation et la formation tout au long de la vie', *Sociologie et sociétés*, 40: 195–225.
- Verdier, É. (2009) *Lifelong learning regimes versus VET systems in Europe*. Conference paper, 21st Annual Conference of the Society for the Advancement of Socio-Economic Studies, 16–18 July 2009. Paris, Science Po.
- Waldhausen, V. and Werner, D. (2005) *Innovative Ansätze in der Berufsbildung – Höhere Durchlässigkeit und Flexibilität durch Zusatzqualifikationen und duale Studiengänge*. Cologne: Deutscher Instituts-Verlag.
- Watson, M. (2001) 'Embedding the "New Economy" in Europe: a study in the institutional specificities of knowledge-based growth', *Economy and Society*, 30: 504–23.

Greece: Vocational Education and Training in Economic Change

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1 Introduction

The debt crisis, and subsequent economic recession, that began in Greece in 2009, following the Great Financial Recession that shocked the world a year earlier, has exposed and worsened a series of structural weaknesses that were present in the Greek economy. These weaknesses were to be found in key pillars of the Greek economic and social infrastructure, one of which was the divide between its education and training system and the labour market.

The collapse in the economy in Greece resulted in an astounding increase in the number of people in unemployment, from about 350,000 people (corresponding to an unemployment rate of about 7–8 per cent) in 2007 to more than 1.4 million individuals (27 per cent Q3 2013) in 2013. The youth unemployment rate stood at the historically high 55.3 per cent in 2012, the largest rate in the EU. While there is no room for doubt that the massive unemployment rates experienced in Greece today are a reflection of ineffective aggregate demand as a result of economic depression, it also stands to reason that facilitating the recovery of the country from its recent recession will require a sound long-term planning and restructuring of its skill creation and skill utilization systems. Indeed, the worlds of education and training and of the labour market in Greece have for a long time, too long, acted as 'rival suitors of Penelope', refusing to interact with one another and to pursue a common goal of enhancing the employability of graduates in jobs that can fully exploit and reward their human capital potential.

The present chapter aims to analyse some of the root causes underlying the divide between the Greek education and training system and its job market. It also considers potential courses of action to reform the systems of skills