

**Skill formation under pressure:
How the collective governance of vocational
training adapts to rising skill demands**

DISSERTATION
of the University of St.Gallen,
School of Management,
Economics, Law, Social Sciences,
International Affairs and Computer Science,
to obtain the title of
Doctor of Philosophy in International
Affairs and Political Economy

submitted by

Gina Di Maio

from
Germany

Approved on the application of

Prof. Dr. Patrick Emmenegger

and

Prof. Dr. Christine Trampusch

Dissertation no. 5039

Difo-Druck GmbH, Untersiemaun 2021

The University of St.Gallen, School of Management, Economics, Law, Social Sciences, International Affairs and Computer Science hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St.Gallen, October 20, 2020

The President:

Prof. Dr. Bernhard Ehrenzeller

Acknowledgements

Completing a dissertation is a demanding endeavor. I would like to thank all the people who supported me and thereby made this dissertation possible.

I thank Prof. Dr. Patrick Emmenegger for his supervision and constructive feedback that he provided throughout all stages of my research. I am very grateful for having had the opportunity to work with my second supervisor Prof. Dr. Christine Trampusch with whom I co-authored one of the papers of my dissertation. Furthermore, I thank my third supervisor Prof. Dr. Gonon who has accompanied me on the dissertation process from the very beginning, providing helpful feedback along the way.

My special thanks go to my family, my partner and my friends who always supported me and without whom this dissertation would not have happened. I would especially like to thank the other PhD fellows at the Department of Political Science who provided the most collegial and fun environment a PhD student can ask for.

Zurich, October 2020

Gina Di Maio

Table of Content

1	Introduction	1
1.1	Skill formation	4
1.1.1	Collective skill formation.....	7
1.1.2	Challenges to collective skill formation.....	8
1.1.3	Changes in vocational training systems	10
1.2	Two goal dimensions in VET: social inclusion and economic efficiency	13
1.2.1	Social inclusion	14
1.2.2	Economic efficiency	16
1.2.3	How do VET systems balance social inclusion and economic efficiency?.....	17
1.3	Further Vocational Training.....	21
1.3.1	Professional education and training in Switzerland.....	22
1.3.2	Differences in the governance of further and initial vocational training	24
1.4	Methodology.....	26
1.4.1	Case studies.....	26
1.4.2	Data collection.....	28
1.5	References	30
1.6	Appendix	36
2	Torn between economic efficiency and social equality?.....	38
3	Embedded flexibilization and polite employer domination	77
4	Employers' cooperation in the knowledge economy	107
5	How rising skill demands undermine collective governance	141
6	Conclusion.....	178
6.1	Contributions	178
6.2	Limitations and subsequent questions.....	187
6.3	Final remarks	192
6.4	References	193

Summary

Why do economic and political institutions differ across countries and how do they change over time? This dissertation contributes in-depth knowledge to the comparative political economy literature in two ways. Firstly, I provide answers to the question of how to get employers to cooperate and thereby overcome collective action problems. Secondly, I contribute to a more fine-grained understanding of how collective governance systems adapt to global challenges and undergo processes of liberalization. I investigate these puzzles by studying collective skill formation in Switzerland. Collective skill formation systems provide vocational skills and are based on the cooperation of employers, intermediary associations, the state, unions, and educational organizations and therefore are a classic example of a key institution in coordinated market economies.

I investigate two fields in vocational training which both face the challenge to adapt to rising skill demands in particular. Firstly, I zoom in on inclusiveness-enhancing training that targets disadvantaged candidates. In times of rising skill demands, disadvantaged candidates find it increasingly difficult to land an apprenticeship position. From the employer's perspective, there is little incentive to invest in training that potentially requires more intense supervision. From the states perspective, inclusiveness-enhancing training is very important to allow a broad share of young people to receive quality training and thereby reduce (youth) unemployment. In my dissertation, I compare how Denmark, Germany and Switzerland balance social and economic goals in the institutionalization of inclusiveness-enhancing training. Furthermore, I trace the policy process that led to the introduction of inclusiveness-enhancing training in Switzerland in 2002.

Secondly, I analyse further vocational training which plays an important role for updating employees' skills. Further vocational training equips learners with advanced occupational skills and prepares them for leadership positions. My dissertation investigates factors that help to explain differences in the level of collective action in the provision and financing of further vocational training across different sectors in Switzerland. Moreover, I analyse processes of change in the provision of advanced professional skills in the Swiss banking sector to better understand different trajectories of liberalization.

Zusammenfassung

Warum unterscheiden sich wirtschaftliche und politische Institutionen von Land zu Land und wie verändern sie sich im Laufe der Zeit? Diese Dissertation trägt auf zweierlei Weise zur vergleichenden politischen Ökonomie bei. Erstens gebe ich Antworten auf die Frage, wie Arbeitgeber zur Zusammenarbeit bewegt und das Problem des kollektiven Handelns überwunden werden kann. Zweitens leiste ich einen Beitrag zum Verständnis, wie sich kollektive Governance-Systeme an globale Herausforderungen anpassen und auf welche Art und Weise Liberalisierungsprozesse verlaufen. Ich untersuche diese Fragen anhand des kollektiven Berufsbildungssystems in der Schweiz. Kollektive Berufsbildungssysteme basieren auf der Zusammenarbeit von Arbeitgebern, Verbänden, staatlichen Akteuren, Gewerkschaften und Bildungsorganisationen und sind daher ein klassisches Beispiel für eine Schlüsselinstitution in koordinierten Marktwirtschaften. Ich untersuche zwei Bereiche der Berufsbildung, die beide besonders stark von steigenden Qualifikationsanforderungen betroffen sind.

Zum einen schaue ich auf Ausbildungsangebote, die sich speziell an schwächere Bewerber_innen richten. Steigende Anforderungen auf dem Arbeitsmarkt verschärfen die Herausforderung einen Ausbildungsplatz zu finden und erfolgreich abzuschliessen. Aus Sicht der Arbeitgebenden gibt es wenig Anreize in Ausbildungen zu investieren, die möglicherweise eine intensivere Betreuung erfordern. Der Staat hat hingegen ein grosses Interesse daran auch diesen Jugendlichen den Einstieg in eine berufliche Lehre zu ermöglichen und so (Jugend)Arbeitslosigkeit zu reduzieren. In meiner Dissertation vergleiche ich wie Dänemark, Deutschland und die Schweiz soziale und wirtschaftliche Ziele bei der Institutionalisierung von beruflicher Bildung für schwächere Bewerber_innen vereinen. Darüber hinaus analysiere ich den politischen Prozess, der in der Schweiz 2002 zur Einführung von Ausbildungen für „praktisch Begabte“ führte.

Zweitens analysiere ich berufliche Weiterbildung. Berufliche Weiterbildung spielt eine wichtige Rolle, wenn es darum geht die Fähigkeiten und das Wissen von Arbeitnehmenden an die steigenden Anforderungen auf dem Arbeitsmarkt anzupassen. Berufliche Weiterbildung vertieft die berufsspezifischen Kenntnisse und bereitet auf Führungspositionen vor. Meine Dissertation untersucht Faktoren, die Sektor spezifische Unterschiede im kollektiven Handeln bei der Bereitstellung und Finanzierung beruflicher Weiterbildung erklären. Zudem analysiere ich Liberalisierungsprozesse in der beruflichen Weiterbildung im Schweizer Bankensektor.

1 Introduction

Why do economic and political institutions differ across countries and how do they change over time? These questions stand centre stage of comparative political economy research. A rich body of literature has studied the evolution of and differences between institutions of political economies. This literature has identified a great variety of factors that influence and at the same time reinforce institutional designs (Crouch, 1994; Hollingsworth & Boyer, 1997; Streeck, 1992; Streeck & Yamamura, 2001). Institutions of interest include for example industrial relations, corporate governance, social policies, financial regimes, and educational and training institutions.

Hall and Soskice (2001) developed the seminal approach *Varieties of Capitalism* that looks at institutions that shape the relation of firms with other actors to distinguish between *Liberal Market Economies* (LME) and *Coordinated Market Economies* (CME). The authors argue that institutions condition the interaction of key players in political economies because institutions have a socializing effect, they confer power, and they enable sanctioning and provide incentives for cooperation (Hall & Soskice, 2001a, p. 5). Liberal Market Economies are driven by competition and are based on the rules of the market. The relation among firms and between firms and other actors is shaped by the markets' demand and supply (Hall & Soskice, 2001a, p. 8). Examples include the USA, Great Britain, and Ireland.

In contrast, Coordinated Market Economies are based on a “non-market mode of coordination” (Hall & Soskice, 2001a, p. 8). The relations of firms with others are characterized by collaboration rather than competition. Institutions enable firms to seek strategic interaction instead of competition. Germany, Japan, Switzerland, Sweden, and Denmark are part of the CME family. Strategic cooperation can take place when institutions in CMEs reduce uncertainty. ‘Beneficial constraints’ allow firms to make credible commitments (Streeck, 1997). Institutions can reduce uncertainty by fostering the exchange of information, by monitoring and by sanctioning non-cooperation (Hall & Soskice, 2001a, p. 10). Typically, the institutional structure in CMEs includes powerful employer and business associations, unions, networks of cross-shareholding, and reliable regulatory systems that allow for sharing information and collaboration (ibid.). Moreover, CMEs are associated with the following four features that contribute to more egalitarian outcomes: “more patient capital”, “long term employment relations”, “stronger social

protection (especially against the risk of unemployment)”, and investments in “‘specific’ rather than ‘general’ worker skills” (Thelen, 2012, p. 152). One of the central questions that arises is what brings employers to cooperate? Literature has identified that intermediary associations such as employer associations play a key role in establishing and maintaining cooperation among employers (Streeck & Schmitter, 1985). Thereby employer associations fulfil two important roles. Firstly, associations represent the employers’ interests towards state actors and employee associations which is referred to as the ‘logic of influence’. Secondly, they bundle the interests of employers, which represents the ‘logic of membership’. Diverging interests within the employer camp, for example, conflicting interests between small and medium sized firms and large employers, challenge this role of associations. Thus, getting employers to cooperate is challenging even for intermediary associations.

Moreover, macro trends such as globalization and the rise of the service sector challenge institutional infrastructures. Against this backdrop, one question that drives scholars of institutional variation, is how institutions respond to structural challenges. Do institutions converge towards an “ideal type” or do profound differences prevail? Research finds that key elements of coordinated market economies, such as collective wage bargaining, are undermined by trends of de-centralisation and de-industrialisation (Hassel, 1999; Howell, 2006; Streeck, 2009). This strand in the literature concludes that institutions are subject to a common trend towards a neoliberal model (Baccaro & Howell, 2011) and that financial crises, in particular, increase the trends towards liberalization (Streeck, 2010; Trampusch, 2009). Another strand in the literature holds arguments against this liberalization theory. It argues that the fact that institutions are highly path dependent and that institutions reinforce each other, maintains key differences across varieties of political economies (Iversen & Soskice, 2009; Martin, 2000; Martin & Swank, 2012; Swenson, 1989). Institutions do adapt to social, political, and economic changes because change is necessary for the institutions’ survival. According to this body of literature, political economies do not converge towards one liberal model but adjust within their variety of capitalism (Hall & Gingerich, 2009). Thelen (2014) criticised the debate that evolves around the two ideas of changes either moving towards a neoliberal model or not changing the key characteristics of the market economy. She bridges the two strands by combining the aspect of strategic employer coordination and equality (Thelen, 2014). Based on this two-dimensional approach, Thelen identifies

three different trajectories of liberalization: deregulation, dualization and embedded flexibilization which all come with distinct characteristics with regard to employer co-operation and equality.

In summary, a rich body of literature has investigated the puzzle of how and why institutions adapt to political, social and economic changes. However, this literature has so far focused on rather classic examples of CMEs. For example, the literature has focused on Germany and the German vocational training system. My dissertation contributes to a better understanding of different trajectories of change and their effects on key characteristics of coordinated market economies such as collective action among employers by studying collective skill formation in Switzerland.

Collective skill formation systems (CSFS) are based on the cooperation of employers, intermediary associations, the state, and educational organizations (Busemeyer & Trampusch, 2012; Emmenegger, Graf, & Trampusch, 2019, p. 21; Gonon & Maurer, 2012). Thus, they are a classic example of an institutional structure that enables collaboration in coordinated market economies (Busemeyer, 2015; Cognard, 2011; Crouch, Finegold, & Sako, 1999; Culpepper, 2003; Hall & Soskice, 2001a; Thelen, 2014). Busemeyer and Trampusch (2012) characterize these collectively organized systems by underscoring four features (p.5). Firstly, employers are strongly, but voluntarily, involved in the provision and financing of workplace-based training. Secondly, intermediary associations govern the training content and play an important role for the administration and reform of training. Thirdly, the occupational skills provided are portable and certified. Fourthly, training is divided between schools and companies (and often also in training networks).

The fact that training content is regulated by intermediary associations such as occupational or employer organizations, enables graduates to move freely on the occupational labour market. However, the standardization of training also means that employers have to provide skills that do not directly correspond to their firm-specific needs. These features lead to a collective action problem. Being non-excludable means that from a rational point of view, there is no incentive to contribute to a collective good because benefitting does not require a contribution (Olson, 1965, p. 15). Thus, the provision of collective goods is difficult because individuals have an interest to free-ride instead of to cooperate. From a rational point of view, employers do not have an incentive to invest

in training. Instead, they have an incentive to poach skilled labour from other employers (Busemeyer, 2009). Not enabling employers to cooperate in skill formation will lead to underinvestment in skills. Collective skill formations systems face the challenge to make employers voluntarily train beyond their own needs (Thelen, 2007, p. 249).

In the form of four papers, my dissertation explores the question what brings employers to cooperate in collective skill formation and how collective skill provision changes over time. In order to introduce the topics of collective skill formation, different levels in vocational training and this dissertation's methodology, this introduction is structured as follows. Section 1.1 introduces skill formation and zooms in on collective skill formation, challenges these systems face and changes in collective skill formation that have been discussed in the literature. Section 1.2 presents the two goal dimensions in vocational training and discusses how these goals are balanced by the governance of training. Section 1.3 introduces further vocational training. Section 1.4 presents my methodology before section 1.5 leads over to the four papers of my dissertation.

1.1 Skill formation

Skills have a strong influence on social well-being, economic growth, and competitiveness (Gonon, 2016). Skills and education enable people to engage in political and social activities and educational certificates are the entrance ticket to the labour market (Busemeyer, 2015). Thus, policy makers are interested in establishing and maintaining high quality skills systems. However, skills systems are very complex and their governance comes with a lot of challenges (OECD, 2020). Skill formation is situated at the cross roads of different policy fields such as the labour market, welfare policies or industrial relations. This means that a great variety of different actors with different interests are involved, for example, employers, unions, state representatives, teachers and learners.

Next to my research for my dissertation, I had the chance to contribute to the research project *Strengthening the governance of skills systems: Lessons from six OECD countries* (2020) which was guided by the research question “how can the governance of skills systems be strengthened and improved in order to promote the development and effective use of skills?” (OECD, 2020, p. 4). The project was financed by the Organisation for Economic Co-operation and Development (OECD). It identified four main

challenges for the governance of skills systems: 1) promoting co-ordination, co-operation and collaboration across the whole of government; 2) engaging with stakeholders throughout the policy cycle; 3) building integrated information systems; and 4) aligning and co-ordinating financing arrangements (OECD, 2020, p. 15). Skills systems in six different countries were analysed along these four challenges. The country studies were divided among the team of Professor Marius Busemeyer (Professor of Political Science at the University of Konstanz), Lina Seitzl, Daniel Unterweger (PhD candidates at the University of St. Gallen) and me.

I conducted two case studies which included eleven semi-structured expert interviews in each country and intense desk research. The first case study concentrated on the Estonian Education Information System. Estonia is well known for its very advanced digital societies. In the course of digitalization starting in the 1990s, Estonia established and maintains a digital, online and encompassing database that brings together data on important parts of the education system such as schools, pupils, teachers, exams and qualifications (Di Maio, 2020a, p. 40). My research revealed, among other things, that this database provides very accurate data but that the potential for interconnected analysis is not fully tapped yet and that data collection should be more driven by concrete questions. The second case study dealt with Lifelong Learning in Korea. I looked at the example of Suwon City, which is a city that maintains a very dense network of learning places and established a culture of learning among its citizens (Di Maio, 2020b, p. 83). My analysis showed that the governance system allows local policy makers a lot of freedom to tailor lifelong learning strategies to the needs of the citizens. However, due to great differences in the governance of local learning systems, quality management and cooperation between different stakeholders could be improved (Di Maio, 2020b, p. 93 ff.).

This OECD research project compared very different skills systems. Each national skill formation system comes with its own characteristics but four main families of skill formation can be distinguished. Busemeyer and Trampusch (2012) developed a typology along two factors - firm involvement and state involvement in training - which helps to cluster skill formation systems. The authors argue that on the one hand, the degree of firm involvement is central to training regimes. Firms' involvement refers to the willingness of firms to engage in dual vocational education and training (VET) and to

commit to collective training. The authors point out that intense firm involvement might lead to higher specificity of vocational skills. At the same time, firms' involvement signals their willingness to invest in polyvalent and thus portable skills (Busemeyer & Trampusch, 2012). On the other hand, the degree of public commitment to vocational training is key to distinguish between the families of skill formation systems. This commitment of the state to dual VET is expressed by public subsidies and public policies enabling the monitoring through the certification and standardization of dual VET. Also, the authors underline that the state can influence the role that dual VET plays in the institutional set up of the educational system (ibid). Along these lines, Busemeyer and Trampusch distinguish four different ideal-type skill formation systems in advanced industrial democracies: (1) liberal, (2) segmentalist, (3) statist, and (4) the collective skill formation system.

Table 1: The variety of skill formation systems in advanced industrial democracies

Public commitment to vocational training	High	Statist skill formation system (SW, FR)	Collective skill formation (GE)
	Low	Liberal skill formation system (US, IR)	Segmentalist skill formation system (JAP)
		Low	High
		Involvement of firms in initial vocational training	

Source: Busemeyer & Trampusch, 2012, p.12

In the liberal system, “skill formation is largely provided through markets and in the general education system” (Busemeyer & Trampusch, 2012). The state, as well as firms are not committed to a great extent to vocational training. The US and Ireland are examples. Similarly, in the segmentalist system, the state plays a minor role. But in contrast to the liberal model, firms are much more involved and willing to invest more in vocational training. This model can be found in Japan, for example. The statist system represents the opposite to the segmentalist system. Firms are less committed but the state

plays a key role. This is the case in Sweden and France, for example. Collective skill formation systems combine high involvement of the state with high involvement of firms in vocational training. The collective aspect is expressed by close cooperation between the state and private actors which enables the provision of vocational skills.

In my dissertation, I focus on the family of collective skill formation systems. There are two reasons for this case selection. Firstly, collective skill formation is of high societal and political relevance. For example, vocational skills are argued to increase employability, thereby reducing unemployment, to increase firm-productivity, and to enhance social inclusion (Cedefop, 2010). Secondly, CSFS are characterized by a complex governmental system that is challenged by macroeconomic trends. This allows for the study of central questions in the political economy such as how to overcome collective action problems or how institutions change over time. The following sections elaborate on the nature (section 1.1.1), challenges (section 1.1.2) and changes (section 1.1.3) of collective skill formation.

1.1.1 Collective skill formation

As described above, one important feature of collective skill formation is the close cooperation between the state and private actors. Ornston and Schulze-Cleven (2014) distinguish between two forms of cooperation: “concertation” and “coordination” (Ornston & Schulze-Cleven, 2014, p. 1). The authors describe concertation as a “conflict-focused and power-driven process of negotiation” among “producer associations and other civil society groups in policy formulation” (p. 2). Coordination refers to “cooperation among organized producer associations in the act of production” (p. 2). Coordination requires firms to share sensitive information and requires a high level of trust which makes it much harder to establish coordination. It requires monitoring and sanctioning mechanisms (Hall & Gingerich, 2009; Soskice, 1990) and often path dependency plays an important role (Iversen & Soskice, 2009). Collective skill formation feeds from both types of cooperation. In my dissertation, I am mainly interested in cooperation that leads to the provision of training. Thus, in my research, I refer to cooperation that can be characterized as coordination in the terms of Ornston and Schulze-Cleven.

Next to cooperation, four more characteristics constitute collective skill formation systems (Busemeyer & Trampusch, 2012). Firstly, firms are directly engaged in the provision and financing of vocational skills and a comparatively high share of firms does participate. Secondly, intermediary organizations are endowed with key tasks. Intermediary organizations are central to the administration and reform of training and bundle central resources and information (Gonon, 2016; Gonon & Maurer, 2012). Thirdly, collective skill formation systems “provide portable, certified occupational skills that are standardized and fully recognized on national labour markets” (Busemeyer & Trampusch, 2012, p. 15). On the one hand, these skills enhance the mobility of employees. For this reason, unions are supportive of collective training systems. On the other hand, standards reduce the flexibility of on-the-job training for firms. Fourthly, the dual character of training is rather unique to collective systems. Training is divided into theoretical school-based training and practical work-based training (Gonon & Maurer, 2012). Austria, Denmark, Germany, the Netherlands, and Switzerland are typical examples of collective vocational training systems.

1.1.2 Challenges to collective skill formation

Collective skill formation systems have attracted a lot of attention from international policy makers because they are associated with low youth unemployment, even in times of crises. However, the division of competences between state and business actors is very complex and leads to a high potential of conflict. Busemeyer and Trampusch (2012) identify four neuralgic points of contention. Firstly, the question of who controls the training can be conflictual. This includes the relationship between firm autonomy and (semi-)public monitoring (p.16). Monitoring can be understood as the certification, standardization, and definition of occupational profiles. Secondly, the division between school-based and workplace-based training, in other words the provision of training, has to be negotiated (p. 19). Thirdly, the financing of the system has to be split among the actors. Fourthly, the relationship between vocational and the general education system, which comes with the question of portability of skills and permeability, has to be agreed upon. Emmenegger, Graf and Trampusch (2019) add to this list the task of system development and the matching of supply and demand. The authors argue that the governance of collective skill formation has to take care of these tasks in order to overcome the

collective action dilemma. Collective skill formations systems vary with regard to the implementation of these different points of contention.

The implementation of these different tasks is influenced by political as well as economic factors. Literature has identified a long list of influential factors such as partisan politics and federalism (Martin 2012), production regimes, and firm structures (Thelen 2004). Busemeyer and Trampusch (2012) describe “*four political arenas* in which political conflicts about the design of training institutions is played out” (p. 22). Firstly, the authors underline that employers have to be regarded as a heterogeneous group. Within this group, different lines of conflict divide the employer’s camp such as craft vs. industry or small vs. big firms. Similarly, labour is a heterogeneous group in which different unions might pursue different preferences. Thirdly, the relationship between business and labour has a strong influence on collective training systems. The balance of power between these two poles is also connected to the fourth arena: the partisan politics and the state structure. In short, collective skill formation is challenged by inherent lines of conflict. Additionally, global and structural changes pressure skill formation.

One of the structural trends that challenges CSFS is the decline of manufacturing and rise of service sectors (Culpepper, 1999; Culpepper & Thelen, 2008; Gonon & Maurer, 2012, p. 132; Thelen, 2007, p. 253). This shift means a shrinkage of the traditional base of vocational training. Furthermore, technological innovations change and raise the skill demands of employers (Gonon, 2005). Employers require more theoretical and more flexible skills (Thelen, 2007, p. 250). This means that training content has to be adapted quickly in order to keep up with the changes which however makes the governance of training more expensive (Thelen, 2007, p. 252). Also, increasing the share of theory-oriented training, means that firm-specific training is reduced and the apprentices are costlier for employers because they cannot contribute to the productivity when they are at school. Globalization and global competition exacerbate this problem as firms become more cost sensitive and out-source jobs through international corporations (Gonon & Maurer, 2012, p. 132). Moreover, the supply of apprenticeship positions is closely related to economic fluctuations. Economic crises reduce the employer’s capacity and willingness to engage in training activities. One of the most recent challenges that cannot be left unmentioned, is the Covid-19 crisis that holds the world firmly in its grip as I

finish this dissertation. Lüthi and Wolter (2020) estimate that the supply of apprenticeship positions could drop by about 20% due to the Corona virus crisis (Lüthi & Wolter, 2020, p. 2). This means that especially candidates with disadvantaged profiles will have a harder time landing a training position (Lüthi & Wolter, 2020, p. 4).

In summary, structural changes intensify the challenge to establish and maintain employer's cooperation in training. Competition for apprenticeship positions tightens and the demand for advanced skills rises. This puts especially the “upper” and “lower” end of vocational training under pressure. The governance of vocational training has to find ways to provide training options to disadvantaged candidates. At the same time, the provision of advanced vocational skills has to be supported in order to meet the changing skill demands of employers. My dissertation investigates how the governance of vocational training reacts to these challenges by focusing on training options for disadvantaged candidates on the one hand and further vocational training on the other hand. The following section reviews the literature on changes in collective skill formation systems as reaction to structural changes.

1.1.3 Changes in vocational training systems

One of the seminal works in the political economy literature on changes as reaction to structural changes, is Thelen's discussion of different “Trajectories of liberalization” (2014). Thelen's starting point is the critique of the prevalent one-dimensional understanding of liberalization as a (declining) degree of coordination. As an alternative, she suggests differentiating between trajectories of liberalization on a two-dimensional field in which strategic employer coordination and equality play the central role. Furthermore, she underscores taking the power balance of the organized interest into account (Thelen, 2014, pp. 30-31). Thelen identifies three ideal typical models of liberalization: (1) deregulation, (2) dualization, and (3) embedded flexibilization.

Deregulation is characterized by declining coverage rates and the “active dismantling of coordinating capacities” of the employers (Thelen, 2014, p. 13). Business- and market-friendly policies are likely to replace rules and regulations that protect collective interests (Streeck, 2009, p. 13). In vocational training, deregulation translates into low standardization and low levels of cooperation. Business designs content and access regulation while the state plays a minor role. Equality as well as employer coordination score very

low in this scenario. Dualization is characterized by “distinct narrowing in the number of firms and workers covered” by traditional corporatist regulations (Thelen, 2014, p. 14). Encompassing coverage of employers is reduced to coverage on the sector- and firm-level which leads to an intensified insider-outsider dynamic (Emmenegger, Häusermann, Palier, & Seeleib-Kaiser, 2012). With regard to training policies, large business players profit from this trend because their position is strengthened and they are able to adapt training to their needs and internal labour markets. Embedded flexibilization “involves the introduction of new forms of flexibility within the context of continued strong and encompassing framework that collectivizes risk” (Thelen, 2014, p. 14). The introduction of new training options makes training more flexible which means that training can correspond better to the individual needs. Embedded flexibilization maintains high levels of solidarity and inclusiveness. This is achieved by empowering vulnerable (worker) groups to thrive on a changing labour market while simultaneously maintaining the participation and support of the employers’ side. Broad access to training, including disadvantaged groups, plays an important role and is actively supported by the state. However, the extent of employers’ cooperation is reduced especially due to state intervention. This is potentially linked to a partial disengagement of employers from apprenticeship training, as their influence in this form of training is reduced (Carstensen & Ibsen, 2019).

Next to these trajectories of liberalization, a process referred to as ‘segmentalism’ has been discussed in the literature. Segmentalism describes the increasing influence of large employers on training policies. This means that the orientation of training in collective skill formation systems shifts from the sectoral and occupational level to the firm level (Thelen, 2012; Thelen & Busemeyer, 2011). Collective governance is replaced by de-centralized, large employer-oriented governance. Large employers are able to increase their influence because structural changes reduce the training activities of smaller and medium sized employers which leaves the large employers in a structurally stronger position (Thelen & Busemeyer, 2012). In simple terms, collective skill formation systems (especially state actors) increasingly depend on large firms offering apprenticeship positions and are thus increasingly willing to institutionalize the needs of large firms in vocational training policies (Thelen & Busemeyer, 2012). Additionally, large employers have more resources to invest in training (Culpepper, 2007). This power imbalance enables large employers to tailor training content to the specific needs of their internal

labour markets which is to the disadvantage of small and medium size firms because their skill demands differ (Culpepper & Thelen, 2008). The introduction of short-track training programs (Busemeyer, 2012) and dual study programs in Germany (Graf, 2018) are often discussed as prominent examples in which large employers established training programs tailored towards their specific needs. Traditionally, general and vocational training represent distinct pathways (Gonon, 2005, p. 6). Dual study programs blur the institutional divide between these pathways which is referred to as hybridization (Gonon, 2016; Graf, 2018). Thelen and Busemeyer find that in Germany, segmentalism pulls the “system away from its collective heritage” (Thelen & Busemeyer, 2012, p. 12). Emmenegger and Seitzl (2018) find that segmentalism is not restricted to Germany and that in Switzerland, large banks managed to align initial commercial training to their specific needs in a reform process in the 1990s (Emmenegger & Seitzl, 2019).

In my dissertation, I investigate how the Swiss vocational training system responds and changes in reaction to structural challenges such as rising skill demands. To shed light on this puzzle, I apply the concepts of the different trajectories of liberalization and segmentalism to the Swiss case. The process of segmentalism has been identified and analysed in different initial vocational training systems. I contribute to the literature on segmentalism by adding insights into the processes of segmentalism in Swiss further vocational training. My findings broaden our understanding of segmentalism because on the one hand, further vocational training is part of collective skill provision but on the other hand, it differs from initial vocational training in some respects. Section 1.3 discusses these differences. Furthermore, I look at changes in the Swiss training system that were introduced as a reaction to the apprenticeship crisis in the 1990s which left many candidates without an apprenticeship. In my dissertation, I apply the concept of liberalization to the introduction of short-track dual training programs. My analysis shows that the Swiss training system changed in a way that can be categorized as embedded flexibilization. However, in contrast to embedded flexibilization that is typically found in Scandinavian countries, the Swiss case was characterized by “polite employer domination”. This finding broadens our understanding of liberalization processes in the Swiss training system and contributes to the theoretical discussion on different trajectories of change. As discussed above, my dissertation concentrates on the “upper” and “lower” levels in vocational training. The following two sections present these two levels in detail, starting with the latter one.

1.2 Two goal dimensions in VET: social inclusion and economic efficiency

Collective skill formation systems are associated with (comparatively) low rates of youth unemployment (Gonon, 2013). For example, in February 2020 (pre-Corona crisis time), the average youth unemployment rate in the European Union stood at 15.2% (eurostat, 2020). In contrast, the rates in the typical collective skill formation countries were much lower with Germany reaching 5.6%, Austria standing at 9.3% (eurostat, 2020) and Switzerland displaying a rate of 7.7% (BFS, 2020). It is argued that the positive effect of vocational training on the employment rate of young people is based on the smooth school-to-work transition (Busemeyer, 2014). The vocational skills taught in VET qualify VET graduates to directly enter the labour market and work in well-paid jobs. Furthermore, the entry into vocational programmes usually does not require any additional qualifications. Thus, VET is an important means to open the door to high quality training and well-paid jobs for candidates with more disadvantaged backgrounds. In this way, vocational training contributes to (social) inclusion and equality. However, it also becomes clear that this inclusiveness effect depends on employers' participation in training and their demand for skills taught in VET. The skills taught have to be of use to employers and the benefits of training have to be higher than the costs for employers in order to make employers participate in training. Thus, next to social inclusion, collective skill formation systems have to fulfil a second very important function: economic efficiency. VET systems have to cater for both dimensions in order to survive and to be sustainable (Carstensen & Ibsen, 2019, p. 9). Table 2 provides an overview of the two goal dimensions in vocational education and training and the following two sections elaborate on the two goal dimensions in greater detail.

Table 2: Overview of two goal dimensions in VET: social inclusion and economic efficiency

	Social inclusion	Economic efficiency
Goal	Equality, inclusiveness	Economic competitiveness
Underlying logic	Education system logic	Labour market logic
Mechanism	Provision of quality training to every candidate, including disadvantaged	Provision of well-trained work force Overcome collective action problem
Skills	Skills that allow mobility on labour markets and in educational system	Highest level of business-relevant skills
Access	Unrestricted access	Employers as gate-keepers, thus highly selective which excludes disadvantaged candidates
Key interest group	State (unions)	Employers

Source: Authors' own (based on arguments discussed in Bonoli & Emmenegger, 2020; Carstensen & Ibsen, 2019; Di Maio, Graf, & Wilson, 2019)

1.2.1 Social inclusion

Social inclusion refers to the functions of VET that are rooted in the logic of educational systems. These include that skills should serve the learner and support his or her individual development and welfare. The ability of vocational training to offer education to youth that otherwise would have dropped out of the education system attracts a lot of international attention (Gonon, 2013, p. 8). Carstensen and Ibsen (2019) distinguish three aspects of vocational training that are important to understand equality (effects) of VET: access, permeability, and funding of VET (Carstensen & Ibsen, 2019, p. 8). From a social inclusion perspective, access to VET should not be restricted in order to

guarantee all candidates to receive quality education and training, including those candidates lacking strong academic credentials (Protsch, 2014; Solga, 2005). Furthermore, research has shown that a lower degree of institutionalized differentiation, such as tracking of students, in education systems comes with higher levels of equality and educational quality (Pfeffer, 2008, 2015). In other words, allowing permeability between different levels and tracks in education systems supports social equality. Moreover, funding plays an important role in creating social inclusion. As Carstensen and Ibsen (2019) put it, VET needs to be “well-funded to offer an attractive alternative to taking up unskilled employment” (p. 8). Also, any type of private contributions to training, such as tuition fees, represent a hurdle that candidates with less financial resources might not be able to overcome and thus, leads to the exclusion of disadvantaged candidates. In the employers’ cost-benefit calculations of training participation, not only the apprentice’s salary plays a role. Also supervision costs such as for vocational trainers in the firm as well as contributions to external providers are important. Furthermore, the funding of educational systems is highly political and electoral institutions influence decisions on spending on educational systems (Busemeyer & Iversen, 2014). In my dissertation, I use the term “social inclusion” to subsume different functions of vocational training. These include: to enable disadvantaged candidates to access training, to complete training, and to allow permeability between different tracks and levels in training, to keep costs for the apprentices low in order to reduce hurdles to training.

Social inclusion faces different challenges in VET. Therefore, social inclusion is supported by a variety of inclusiveness enhancing measures. These measures can be divided into *external* and *internal* measures. External measures are usually initiated and financed by the state. They include, for example, an additional school year, school-based (non firm-based) workshops or a transition system (*Übergangssystem*). External measures do not build on employers’ participation and are thus relatively easy, but expensive, for the state to establish. However, the lack of employer involvement might reduce the measures’ inclusiveness enhancing effect in the long run (Bonoli & Wilson, 2019). For example, the effect of the German transition system on inclusiveness is highly controversial (Baethge, Solga, & Wieck, 2007).

In contrast to external measures, internal measures are located within the collective skill formation system as they build on the cooperation between the state and business actors

(Bonoli & Wilson, 2019). Examples include subsidies for training firms, the introduction of dual training tracks that lead to “lower ambition certificates” and firm-based pre-apprenticeships (Bonoli & Wilson, 2019). The challenge in establishing internal measures is to get employers on board and to design the measures in a way that they benefit employers as well as the candidates. Inclusiveness and employers’ interests are not easy to combine and also cases that are supported by employers, such as the German “Training bonus” (*Ausbildungsbonus*) can fail to promote inclusiveness (Bonoli & Emmenegger, 2020). Emmenegger and Bonoli (2020) conclude that the governance of vocational training can promote inclusiveness, but only “up to a point” (p. 2). Nevertheless, social inclusion is an important goal of VET. However, in order to function in the long run, VET systems have to serve the economy and be economically efficient: the following section presents the economic goal dimension.

1.2.2 Economic efficiency

Collective skill formation systems are dependent on the participation of employers and their intermediary associations in the governance of training. Business is the “pivotal” player in VET (Busemeyer, 2012). Thus, the economic goal dimension of VET is of high importance. The economic dimension can best be understood by looking at the question of what are the interests of business and how do employers benefit most from training? Employers are interested in maximizing their influence while keeping their costs low. With regard to the skills provided, “maximizing efficiency means developing the highest level of relevant skills, the key interest of firms” (Carstensen & Ibsen, 2019, p. 9). In other words, business is interested in tailoring the skills as much as possible to their needs. When skills are relevant to the labour market, graduates who enter the labour market contribute to economic competitiveness. Furthermore, firms want to keep the training costs low. This includes the time spent on in-firm training and supervision by trainers. This is a key point as of why firms are reluctant to take on candidates with disadvantaged backgrounds. Employers fear that disadvantaged candidates require more, and thus more expensive, supervision. This aspect is closely related to the restricted access to training from the economic perspective. Employers know best which candidate fits best to their demands which makes the access to the VET system highly selective. Employers are the gate-keepers and choose which candidates they offer an apprenticeship position to. Moreover, Carstensen and Ibsen (2019) underline that

economic efficiency is also related to the function of VET as a means to overcome the collective action problem among employers. They argue that employers need “institutionalized assurance” (Carstensen & Ibsen, 2019, p. 5) that reduces the danger of poaching in order to commit to training.

From a theoretical point of view, social inclusion and economic efficiency represent two opposing goals within VET. However, it has to be mentioned that in practice, the two goals are often interrelated. For example, the provision of labour market-relevant skills is the key to allow a smooth school-to-work transition for graduates. Furthermore, some sectors explicitly welcome candidates who are interested (and talented) in hands-on tasks. For example, in my interviews with employers in the Swiss construction sector (INT8, 14, 15), the interviewees explained that they need apprentices who are willing to perform physically demanding tasks and who are interested in working in these jobs for some time instead of moving on to further education right after initial vocational training. Nevertheless, research has shown that inclusiveness enhancing structures and measures often favour the least disadvantaged within the group of disadvantaged candidates (Pisoni, 2018). This “cream-skimming”, also called *Matthew Effect*, makes it even more difficult for the more and most disadvantaged candidates to enter and succeed in VET. Thus, the question, how VET systems balance social inclusion and economic efficiency is of high importance.

1.2.3 How do VET systems balance social inclusion and economic efficiency?

Every VET system has to find its own way to combine social inclusion and economic efficiency. Thereby, these two goal dimensions have to be understood as the ends of a continuum. However, there is no blueprint on how to “best” serve both demands and where to locate a VET system on the continuum but, as Carstensen and Ibsen (2019) argue, it is a “political question that cannot be settled objectively” (p. 9).

Research has shown that a variety of factors influence how the governance of VET systems combines the needs of disadvantaged candidates and business (Durazzi & Geyer, 2019). Furthermore, the combination of both goal dimensions has to be understood as a dynamic process. This is due to two reasons. Firstly, new challenges arise such as the knowledge economy or the challenge to integrate an increasing number of refugees. New challenges require new solutions. Secondly, to what extent VET serves social

inclusion or economic efficiency depends on coalition building and power relations within the governance of VET. Thus, changes in the way the two goal dimensions are addressed are very likely to occur because power relations and coalitions are likely to change (Carstensen & Ibsen, 2019, p. 7). A growing number of research studies institutional change in VET to better understand how and why the governance of VET combines social inclusion and economic efficiency (see for example Bonoli & Emmenegger, 2020; Carstensen & Ibsen, 2019; Di Maio, Graf, & Wilson, 2020; Durazzi & Geyer, 2019) .

This literature has generated important insights on how to better understand and analyse the governance of the two goal dimensions. Carstensen and Ibsen (2019) suggest to distinguish between “three dimensions of institutional contention: efficiency, equality, and governance” (Carstensen & Ibsen, 2019, p. 1). As discussed above, the efficiency dimension refers to the task of how to “incentivize companies to cooperate on skill formation” (Carstensen & Ibsen, 2019, p. 5). The equality dimension refers to the expansion of access, a high level of permeability and a high level of funding of VET (Carstensen & Ibsen, 2019, p. 8). Additionally, the authors highlight the “governance dimension” which refers to the organizational interests of the actors involved in the governance of VET. Bonoli and Emmenegger (2020) distinguish between the “firm-level” and the “system-level”. The interests and power differ between the two levels. The authors argue that on the firm-level, the government faces the resistance of the firm to take on disadvantaged candidates. On the system-level, employers’ interests are represented by business associations. These associations have the same interests as the government, namely to maintain the collective system. However, making inclusiveness enhancing measures work, depends on the participation of the firms.

To what extent the governance of VET caters to social or economic goals depends on a variety of factors. The literature agrees that business plays the decisive role in allowing or limiting the extent of social inclusion (Bonoli & Emmenegger, 2020). However, from research in the field of political economy, we know that business is not a uniform block which has a clear set of interests. Research has shown that there are different division lines within the business camp (Culpepper & Thelen, 2008). For example, there are differences in the interests between sectors, between small firms and large firms (Trouvé, 2001), between firms and their associations (Schmitter & Streeck, 1985; Traxler, 2010),

between (the density) of business associations (Hall & Soskice, 2001b) and between import and export-oriented firms.

Nevertheless, the actor most interested in pushing for integration is the state. Partisan politics, however, influence the state's willingness to invest in training and the decision what competences are delegated to business actors. Recent research by Durazzi and Geyer (2019) explains institutional differences between the German and Austrian training system with regard to the inclusion of disadvantaged candidates. They find that "unions are important allies" (p.18) for the state in the establishment of institutions enhancing inclusion. The position of unions thereby depends on their resources and legacies. Unions with high institutional resources and positive legacies support and succeed in the establishment of new measures (Durazzi & Geyer, 2019). It has to be mentioned, however, that these measures were located outside the collective system (non-firm-based training). Moreover, unions cannot threaten to exit the training system because the system does not depend on them. Also, the role of unions differs between collective skill formation systems which has a decisive effect on the governance (Emmenegger, Graf, & Strebel, 2019).

Rising skill demands and macro as well as micro economic changes pose new challenges to collective skill formation and are likely to increase the risk of disadvantaged candidates to fail entering VET. Baethge and Wolter (2015) predict that "the broad trend toward upskilling in the German labour force will continue and the integration of low-qualified youth into VET and the labour market will become more precarious than in the past" (Baethge & Wolter, 2015, p. 97). The literature review has shown that we start to better understand the underlying dynamics and factors of how VET systems cater to social and economic demands. However, many questions still remain unanswered. For example, we still know little about the institutionalization of *internal* inclusiveness enhancing measures. On the one hand, these measures stir up the hopes to have a stronger effect on inclusion than external measures. On the other hand, these measures are much more difficult to establish as they depend on employers supporting inclusion. Under which conditions do employers support inclusion and which competences does the state have to delegate to employers in order to get them on board? Which trajectories of change enable the governance of VET to introduce inclusiveness enhancing measures?

My dissertation contributes to closing this gap in the literature. I do this by analysing a central internal inclusiveness enhancing measure that has been established in three typical collective skill formation systems: short-track dual vocational training programs (“short-tracks”). Short-tracks are characterized by a shorter duration of training, usually they take two years instead of three or four years. Short-tracks target disadvantaged candidates who find it difficult to land a “regular” apprenticeship. Training is divided between school-based and on-the-job training which is central for short-tracks to qualify as an internal measure that builds on the participation of employers as providers of training. Furthermore, these short-tracks lead to standardized certificates which distinguishes them from transition measures. Due to pressure on the apprenticeship market, Denmark, Germany and Switzerland institutionalized short-tracks in reform processes in the 1990s and early 2000s. How do these three countries institutionalize the social and economic goals? How does the institutionalization of the short-tracks differ? The paper *Torn between economic efficiency and social equality? Short-track apprenticeships in Denmark, Germany and Switzerland* which was published in the *European Educational Research Journal* (2019, Vol. 18, No. 6) investigates the similarities and differences. This paper was co-authored by Lukas Graf and Anna Wilson. Lukas Graf held a position as Post-Doctoral Researcher at the University of St. Gallen when we started our collaboration in 2016. Since September 2017, he works as Assistant Professor for Educational Governance at the Hertie School of Governance in Berlin. Anna Wilson is a PhD candidate at the University of Lausanne (as of July 2020). We find significant cross-national variation but also within-country variation with regard to the goal orientation of short-track dual training.

How can we explain these differences? Which factors influence the specific characteristics of the institutionalization? We (Lukas Graf, Anna Wilson and me), investigate these questions with a follow-up case study: the paper *Embedded flexibilization and polite employer domination: the case of short-track apprenticeships in Switzerland*, which was published in *Empirical Research in Vocational Education and Training* (2020, Vol. 12, No. 2) analyses the reform process that introduced short-tracks in Switzerland and focuses on the role of employers and the state. With this study, we contribute to our understanding of trajectories of change that enable the introduction of inclusiveness-enhancing measures and the factors influencing the institutionalization process.

The two papers of my dissertation that deal with the question of social inclusion and liberalization are located in the research field that concentrates on initial vocational training. They are in good company because public debates and also most political economy research concentrate on initial vocational training (see, for example, Busemeyer & Trampusch, 2012). However, this perspective on vocational training neglects an important part of collective vocational training, namely further vocational training (Schmid & Gonon, 2013). Rising skill demands and increasing competition between education systems challenge the provision of further vocational training (Schmid & Gonon, 2013) but we know little about how these challenges affect further training. I contribute to closing this gap in the literature by studying collective action and institutional changes in further vocational training in Switzerland. The following sections introduce further vocational training (1.3.1), key differences to initial vocational training (1.3.2), and my two papers on further vocational training.

1.3 Further Vocational Training

Rising skill demands increase the importance of lifelong learning. Keeping skills up to date is essential for employers as well as employees to maintain their competitiveness, in particular, facing rising skill demands. Collective skill formation systems have a long tradition in providing advanced skills through further vocational training (also referred to as continuing vocational training). Further vocational training equips learners with advanced professional skills and prepares them for leadership positions. It is an important means to keep the dual training systems attractive and enable graduates from initial vocational training to successfully advance their career (Gonon, 2013, p. 10). The field of further training is very complex. Thus, I would like to highlight three characteristics that help to better understand the nature of further collective vocational training. Firstly, intermediary associations are involved in the content definition, as is the case in initial vocational training (Wettstein, Schmid, & Gonon, 2014). Certificates are standardized and officially recognized by the state, as is the case in initial vocational training. Thirdly, participation usually requires an initial vocational certificate. Next to these similarities with initial vocational training, there are some important differences which will be discussed below. In my dissertation, I concentrate on further vocational training in Switzerland which is called professional education and training (*Höhere Berufsbildung*).

The following section introduces the main characteristics of Swiss professional education and training.

1.3.1 Professional education and training in Switzerland

Professional education and training (PET) has a long tradition in Switzerland going back to the 1930s (Wettstein et al., 2014). In the craft and industrial sectors, in particular, professional PET schools have been developed as an integral part of the training system (Schmid & Gonon, 2013). In the 20th century, access to universities was restricted to a small share of the population and higher vocational training was the golden standard to advance one's career. However, academization and rising skill demands pressure professional education and training which led to the decision of the Swiss government in the early 2000s to lift PET to the tertiary level. Since 2002, the Swiss national vocational training law defines PET as “tertiary B” (tertiary non-academic) education. PET is usually organized as part-time training, with classes taking place on one to two days a week but there are also full-time study programs available. The training takes about three years until the students are prepared for the final exams or thesis. Even though university training becomes more popular, a comparison of tertiary certificates on the level of a Bachelor degree show that professional education and training made up 46% of these certificates awarded in 2018 (BFS, 2019a, 2019b). In contrast to initial vocational training, professional education and training is school-based and most participants choose the part-time option which allows them to keep working in their job on a (typically) 80% workload. This allows that part-time work is an important difference to university-based education which is usually offered as full-time study program. PET is an attractive tertiary educational option for employees who did not complete the vocational baccalaureate (which is required to enter universities of applied sciences) and who do not want to study full-time. Traditionally, employers co-finance the training of their employees. A study showed that about half of the students in PET receive financial support from their employers (Schärrer, Fritschi, Dubach, & Oesch, 2009, p. 32ff.). In return for this support, the employees usually commit to staying with the employer for some more years. Moreover, in some sectors collective training funds contribute to training costs. The federal state used to subsidize PET through payments to the training providers. However, since the beginning of 2018, the so-called “subject financing” scheme (*Subjektfinanzierung*) is in place (SBFI, 2019). The subject financing scheme provides

financial support directly to the learners instead of to the providers. The new scheme finances only courses that are registered with the State Secretariat for Education, Research and Innovation. After completing the final examination, the participants can apply for the reimbursement of the training costs (independent from the result of the final exam). To what extent this rather profound change of financing affects the collective funding mechanisms and the willingness of employers to finance training, has to be studied in further detail in the future.

In the 1990s and early 2000s, different reforms substantially influenced PET in Switzerland. Professional schools lobbied for the introduction of universities of applied sciences because they were afraid of losing touch with global and European developments of academization (Gonon & Maurer, 2012; Trampusch, 2010). In order to update the Swiss education system to international standards, in the 1990s, the first universities of applied sciences were introduced by upgrading professional schools (Culpepper, 2007). Half of the PET tracks were transferred to the new universities of applied sciences (Baumeler, Dannecker, & Trede, 2014, p. 21). Universities of applied sciences aim at deepening theoretical knowledge but they have a more applied, vocational focus compared to universities. At the same time, the Federal Vocational Baccalaureate (*Berufsmaturität*) was introduced. This qualification enables students to enter universities of applied sciences after their vocational training. Universities of applied sciences are very popular and the number of students is rising ever since their introduction. In the book chapter entitled “Meeting rising skill demands: Higher vocational training in Switzerland as an example of tertiary vocational training” I discuss the role and challenges of Swiss professional education and training to meet rising skill demands in greater detail (this book chapter is not an official part of my dissertation). The chapter has been accepted for publication in the book *Opening and Extending Vocational Education and Training* which is edited by Philipp Eigenmann, Philipp Gonon and Markus Weil and is in the publication process (as of July, 2020). My dissertation uses the case of professional education and training to broaden our understanding of factors that support or hinder collective action in vocational training systems. Studying professional education and training generates new insights because further vocational training differs from initial vocational training. These differences and resulting questions are discussed in the following section.

1.3.2 Differences in the governance of further and initial vocational training

In general, investing in skills is in the interest of employers and employees (learners) because it increases the competitiveness of both (Crouch et al., 1999, p. 17ff.). However, as discussed above, investments in training requires employers to overcome the collective action problem. This dilemma applies to initial as well as further vocational training but “significant differences between the political economy of initial training and the political economy of continuing training” (Bowman, 2005, p. 586) require a closer look at the collective action problem in further training.

One of the differences between initial vocational training and further vocational training is the higher degree of transferability of skills in further training. Further vocational training broadens and deepens occupational skills and thereby makes skills more transferable. The fact that further training usually does not contain on-the-job training, but is taught by external providers and is based on standardized curricular developed by intermediary associations, enhances the transferability even further. The transferability of skills is the source of the collective action problem in collective skill formation systems because the provision of transferable skills means that other employers cannot be excluded from benefitting from these well-trained employees. Thus, transferable further training is not in the interest of employers (Johansen, 2002, p. 303). This is the reason why Bowman (2005) concludes that employers are willing to finance further education but only “as long as they retain control over which employee receives training and what kind” (Bowman, 2005, p. 588).

Another important difference between initial and further vocational training are the differing interests between smaller and large employers. Research has shown that in further training, differences of interests between smaller firms and large firms are more divided compared to conflicts of interests in initial vocational training (Cognard, 2011). This is due to different reasons. Smaller firms benefit more from participating in initial vocational training than large firms because smaller firms tend to rely more on apprentices as part of their workforce (Cognard, 2011, p. 30). In further training, training does not take place in the company, but is usually based on external courses. This requires employees to leave their work place to participate in further training which means that further training comes with opportunity costs for the firm (Cognard, 2011, p. 31). For smaller firms, it is more difficult to substitute or make up for absenteeism. This is one

of the reasons why smaller firms are more reluctant to invest in further vocational training. Large firms have more interest in further training because they have the organizational capacity to allow employees to leave their work place and spend time in training courses. Furthermore, large firms have more resources at hand that they can invest in training and large firms require a higher skilled work force (Almeida & Aterido, 2015) and are thus more dependent on investing in further training of their employees.

The fact that further training is provided by external providers which usually does not include on-the-job training raises an important question with regard to the process of segmentalism. Literature argues that segmentalism in initial vocational training is fostered by the fact that large employers are training providers and that the functioning of the dual systems depends on their participation and supply of apprenticeship positions. This role in the system in initial vocational training equips employers with structural power (Busemeyer, 2012). In further vocational training however, employers are not the training providers. They support training of their employees through financial contributions and can influence the decision of which training provider the employer signs up with. This raises the question how segmentalism works in further vocational training.

Research on factors influencing the decision of employers to participate in further training has shown that, for example, the (perceived) competition between the large employers can influence training participation. Furthermore, Johansen argues that superordinate bodies that create high opportunity costs for non-compliance can create cooperation (Johansen, 1999). Trampusch and Eichenberger (2012) find that support of public authorities, the commitment of unions and the cooperation culture matters for the development of continuing vocational training through collective labour agreements (Trampusch & Eichenberger, 2012).

The question, what brings employers to cooperate in the provision and financing of further vocational training, has not yet been conclusively answered. I address this question in two papers. Firstly, the paper *Employers' cooperation in the knowledge economy: continuing vocational training in Switzerland*, co-authored with Professor Christine Trampusch, who is Professor for International Comparative Political Economy and Economic Sociology at the University of Cologne, compares collective action in the provision and financing of further vocational training in four sectors in Switzerland. We look at the construction sector, the metal machinery sector, the banking sector and the

pharmaceutical sectors. The construction sector and metal machinery sector are characterized by high levels of collective action in the provision and financing of professional education and training. Collective training funds support employers and educational providers that are run by the employer's associations. In contrast, the banking and the pharmaceutical sector display very low levels of collective action, represented, for example, in the lack of collective funding mechanisms. Our comparative approach allows us to identify specific features that influence employer's willingness to collectively provide and fund transferable skills. The paper has been accepted for publication in the book *Collective skill formation in the knowledge economy* which is being edited by Professor Patrick Emmenegger and Professor Giuliano Bonoli.

Secondly, I study institutional change in the level of collective action in the Swiss banking sector in the paper entitled *How rising skill demands undermine collective governance – An analysis of institutional change in further training in the Swiss banking sector*. This study is motivated by the findings of the comparison of the first paper which revealed very low levels of collective action in the banking sector even though collective further training has had a long tradition in further training. I trace institutional change in the provision of professional skills in the Swiss banking sector. My findings contribute to a more fine-grained understanding of the process of segmentalism in vocational training systems (large firms increasing their influence on training content and thereby undermining collective governance structures). I investigate these puzzles based on a qualitative research design which is explained in the following sections.

1.4 Methodology

I apply the case study approach and my data collection is based on 42 semi-structured expert interviews and document analyses. The following section presents these two aspects of my methodology in greater detail.

1.4.1 Case studies

My dissertation focuses on a small number of cases (small-N study). A case study is “an intensive study of a single case or a small number of cases which draws on observational data and promises to shed light on a larger population of cases” (Gerring, 2007, p. 28). The aim is “to develop or test historical explanations that may be generalizable to other

events“ (George & Bennett, 2005, p. 5). The case study approach enables the researcher to zoom in on and focus on a specified aspect of a broader context and to capture complex and causal relationships and interactions of different features which is difficult when applying a quantitative approach. A case might evaluate an untested theory and thereby contribute to its establishment. While clarifying the relationship between the case and the theoretical frame, the researcher needs to define the dependent and independent relevant variables and justify why the case qualifies to be studied (George & Bennett, 2005; Gerring, 2007). The nature of the contribution is closely related to the case selection. Descriptive case studies use typical or diverse cases. Studies aiming at causal arguments (how X affects Y) can make use of extreme cases, index cases (the first instance of a phenomenon), deviant cases, most-similar cases, most-different cases, and diverse cases (Gerring, 2007).

If cases are very complex, a within-case analysis helps to untangle complicated relationships. Within-case studies also help to better understand causal linkages. Causal linkages can be difficult to identify because different causal patterns can lead to similar outcomes. This phenomenon is called equifinality. The method to identify causal relations is process tracing. Process tracing is guided by the question “what links causal factors, events, sequences and outcomes together” (Trampusch & Palier, 2016, p. 442). In other words, which step led to the next? However, process tracing as a method has been discussed controversially (Blatter & Haverland, 2012; Collier, 2011; Trampusch & Palier, 2016).

My dissertation combines the within-case study approach with the comparative approach. The comparative approach includes the study of different cases or aspects at the same time. Cross-case puzzles arise when cases score differently on the outcome (Blatter & Haverland, 2012, p. 92). The comparison enables the researcher to identify influential factors and even patterns of causal relations that trigger the puzzling differences. The combination of a comparative and within-case study approach allows me to first identify the interesting aspects that characterize a case in comparison with another case before digging deeper into the case to understand the underlying processes and causal factors that cause the differences. Table 3 gives an overview of the combination of the comparative and within-case study approach in my dissertation.

Table 3: Overview case study approach in the four papers of the dissertation

	Comparative	Within-case study
Papers on short-tracks	Short-tracks in DK, Ger, CH	Process of introduction of short-tracks in CH
Papers on professional training	Collective provision and financing of professional training in four sectors in Switzerland	Institutional change in the provision of professional training in the Swiss banking sector
Advantages of case selection	Identify the differences and filter factors influencing outcome	Understand process and underlying causal factors

Source: Authors' own

Despite great advantages of case studies, some limitations of this research design have to be addressed. As the case selection and definition lies with the researcher, the problem of a case selection bias arises. This undermines the validity of the research. Another limitation that George and Bennett (2005) underline is the limited generalizability of findings of case studies because they produce insights on a very specific type of instance under specific conditions. Furthermore, case studies are limited in assessing the scope of causal relations. "Case studies remain stronger in assessing whether and how a variable mattered to the outcome than at assessing how much it mattered" (George & Bennett, 2005, p. 25). The conclusion of my dissertation will discuss the concrete limitations of the case studies applied in this dissertation.

1.4.2 Data collection

Interviews are an important source of information for my research. Interviews are a means for a researcher to gain insights that are otherwise hidden or not accessible. In particular, the motivation for a decision and causal relations can be understood better with the help of interviews (Martin, 2013). Three types of interview strategies can be distinguished: structured, semi-structured, and unstructured interviews (Leech, 2002). Structured interviews contain precise and narrow questions. The formulation of these

questions can influence the answer and therefore surveys should be carefully designed (Schaeffer & Presser, 2003). If the researcher already knows a lot about the interview topic, structured interviews are a good way to confirm knowledge or to generate quantitative data (Leech, 2002, p. 665). Semi-structured interviews leave more room for answers covering a wider range of issues and thereby allow for hypotheses testing. Unstructured interviews give little guidance with regard to the questions and are similar to conversations (Leech, 2002, p. 665). Expert interviews are an important source of data for my dissertation. In total, I conducted 42 expert interviews. I talked to ten intermediary associations, to nine employers, to nine training providers, to six state representatives, to five union representatives, and to two researchers. In order to allow the interviewees to talk freely, for example, about conflicts and challenges, I guaranteed anonymity. An anonymized list of the interviews is provided in the appendix of this chapter.

For obvious reasons, there are limitations to this method of data collection. The selection of interview partners can be biased which leads to a biased or incomplete pool of information the researcher then analyses. Interviewees might not remember details or might have an interest to present information in a certain way. Thus, it is of high importance to triangulate information from interviews with other data sources. Along with the interviews, I also derived data from primary and secondary literature. These sources include documents and statements published by actors such as intermediary associations, unions, or educational institutions, legal documents, statistics published by national statistical offices, and documentation on political decision making which I was able to access with the help of the Swiss national archive (2400 pages in total).

In summary, based on qualitative research, my dissertation investigates the question of how collective skill formation brings employers to collectively govern training and how structural changes influence vocational training systems. Each of the following four chapters presents one paper of my dissertation before the Conclusion summarizes the contributions and discusses the limitations and subsequent questions.

1.5 References

- Almeida, R. K., & Aterido, R. (2015). Investing in formal on-the-job training: are SMEs lagging much behind? *IZA Journal of Labor & Development*, 4(8), 1-23.
- Baccaro, L., & Howell, C. (2011). A Common Neoliberal Trajectory: The Transformation of Industrial Relations in Advanced Capitalism. *Politics & Society*, 39(4), 523-561.
- Baethge, M., Solga, H., & Wieck, M. (2007). *Berufsbildung im Umbruch: Signale eines überfälligen Aufbruchs*. Berlin: Friedrich-Ebert-Stiftung.
- Baethge, M., & Wolter, A. (2015). The German skill formation model in transition: from dual system of VET to higher education? *Journal for Labour Market Research*, 48, 97-112.
- Baumeler, C., Dannecker, K., & Trede, I. (2014). *Höhere Berufsbildung in der Schweiz*. Bern: Eidgenössisches Hochschulinstitut für Berufsbildung.
- BFS. (2019a). Tertiärstufe - Hochschulen. Retrieved from (4.5.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/tertiaerstufe-hochschulen.html>
- BFS. (2019b). Tertiärstufe - Höhere Berufsbildung. Retrieved from (4.5.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/tertiaerstufe-hoehere-berufsbildung.html>
- BFS. (2020). Erwerbslosenquote gemäss ILO nach Altersgruppen. Retrieved from (19.05.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/arbeits-erwerb/erwerbslosigkeit-unterbeschaeftigung-offene-stellen/erwerbslose-ilo.assetdetail.12647253.html>
- Blatter, J., & Haverland, M. (2012). *Designing Case Studies Explanatory approaches in Small-N Research*. Hampshire: Palgrave Macmillan.
- Bonoli, G., & Emmenegger, P. (2020). The limits of decentralized cooperation: promoting inclusiveness in collective skill formation systems? *Journal of European Public Policy*.
- Bonoli, G., & Wilson, A. (2019). Bringing firms on board: Inclusiveness of the dual apprenticeship systems in Germany, Switzerland and Denmark. *International Journal of Social Welfare*, 28(4), 369-379.
- Bowman, J. R. (2005). Employers and the Politics of Skill Formation in a Coordinated Market Economy: Collective Action and Class Conflict in Norway. *Politics & Society*, 33(4), 567-594.
- Busemeyer, M. R. (2009). Asset Specificity, Institutional Complementarities and the Variety of Skill Regimes in Coordinated Market Economies. *Socio-Economic Review*, 7(3), 375-406.
- Busemeyer, M. R. (2012). Business as a Pivotal Actor in the Politics of Training Reform: Insights from the Case of Germany. *British Journal of Industrial Relations*, 50(4), 690-713.

- Bussemeyer, M. R. (2014). *Skills and Inequality. Partisan Politics and the Political Economy of Educational Reform in Western Welfare States*. Cambridge: Cambridge University Press.
- Bussemeyer, M. R. (2015). *Skills and Inequality. Partisan Politics and the Political Economy of Education Reforms in Western Welfare States*. Cambridge: Cambridge University Press.
- Bussemeyer, M. R., & Iversen, T. (2014). The politics of opting out: explaining educational financing and popular support for public spending. *Socio-Economic Review*(12), 299-328.
- Bussemeyer, M. R., & Trampusch, C. (2012). The Comparative Political Economy of Collective Skill Formation. In M. R. Bussemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 3-38). Oxford: Oxford University Press.
- Carstensen, M. B., & Ibsen, C. L. (2019). Three dimensions of institutional contention: efficiency, equality and governance in Danish vocational and training reform. *Socio-Economic Review*, 0(0), 1-27.
- Cedefop. (2010). *The benefits of vocational education and training* Luxembourg:
- Cognard, E. (2011). Varieties of Capitalism and financial cooperation between employers: The initial and continuous vocational training in comparison. *European Journal of Industrial Relations Journal*, 17(1), 25-40.
- Collier, D. (2011). Understanding Process Tracing. *Political Science and Politics*, 44(4), 823-830.
- Crouch, C. (1994). *Industrial Relations and European State Traditions*: Oxford University Press.
- Crouch, C., Finegold, D., & Sako, M. (1999). *Are Skills the Answer? The Political Economy of Skill Creation in Advanced Industrial Countries*. Oxford: Oxford University Press.
- Culpepper, P. D. (1999). The future of the high-skill equilibrium in Germany. *Oxford Review of Economic Policy*, 15(1), 43-59.
- Culpepper, P. D. (2003). *Creating Cooperation. How States Develop Human Capital in Europe*. Ithaca: Cornell University Press.
- Culpepper, P. D. (2007). Small States and Skill Specificity: Austria, Switzerland, and Interemployer Cleavages in Coordinated Capitalism. *Comparative Political Studies*, 40(6), 611-637.
- Culpepper, P. D., & Thelen, K. (2008). Institutions and Collective Actors in the Provision of Training: Historical and Cross-National Comparisons. In K. U. Mayer & H. Solga (Eds.), *Skill Formation: Interdisciplinary and Cross-National Perspectives*. New York: Cambridge University Press.
- Di Maio, G. (2020a). The Estonian Education Information System (EHIS). In OECD (Ed.), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*. Paris: OECD Publishing.

- Di Maio, G. (2020b). Lifelong Learning in Korea. In OECD (Ed.), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*. Paris: OECD Publishing.
- Di Maio, G., Graf, L., & Wilson, A. (2019). Torn between economic efficiency and social equality? Short-track apprenticeships in Denmark, Germany and Switzerland. *European Educational Research Journal*, 18(6), 699-723.
- Di Maio, G., Graf, L., & Wilson, A. (2020). Embedded flexibilization and polite employer domination: the case of short-track apprenticeships in Switzerland. *Empirical Research in Vocational Education and Training*, 12(2), 1-21.
- Durazzi, N., & Geyer, L. (2019). Social inclusion in the knowledge economy: unions' strategies and institutional change in the Austrian and German training systems. *Socio-Economic Review*, 18(1), 103-124.
- Emmenegger, P., Graf, L., & Strebel, A. (2019). Social versus liberal collective skill formation systems? A comparative-historical analysis of the role of trade unions in German and Swiss VET. *European Journal of Industrial Relations*, 26(3), 263-278.
- Emmenegger, P., Graf, L., & Trampusch, C. (2019). The governance of decentralized cooperation in collective training systems: a review and conceptualization. *Journal of Vocational Education and Training*, 71(1), 21-45.
- Emmenegger, P., Häusermann, S., Palier, B., & Seeleib-Kaiser, M. (2012). *The age of dualization: the changing face of inequality in deindustrializing societies*. New York: Oxford University Press.
- Emmenegger, P., & Seitzl, L. (2019). Collective Action, Business Cleavages and Politics of Control: Segmentalism in the Swiss Skill Formation System. *British Journal of Industrial Relations*, 57(3), 576-598.
- eurostat. (2020). Unemployment statistics. Retrieved from (19.05.2020) https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Unemployment_statistics#Youth_unemployment
- George, A. L., & Bennett, A. (2005). *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.
- Gerring, J. (2007). *Case Study Research. Principles and Practices*. Cambridge: Cambridge University Press.
- Gonon, P. (2005). *Challenges in the Swiss Vocational Education and Training-system*. Berufs- und Wirtschaftspädagogik online.
- Gonon, P. (2013). Herausforderungen für die Berufsbildung in der Schweiz- eine Einleitung. In M. Maurer & P. Gonon (Eds.), *Herausforderungen für die Berufsbildung in der Schweiz Bestandsaufnahme und Perspektiven* (pp. 7-14). Bern: hep.
- Gonon, P. (2016). Zunehmende Steuerungsdiskrepanzen in der Berufsbildung. In P. Gonon, A. Hügli, R. Künzli, K. M. Merki, M. Rosenmund, & K. Weber (Eds.),

- Governance im Spannungsfeld des schweizerischen Bildungsföderalismus* (pp. 39-49). Bern hep Verlag.
- Gonon, P., & Maurer, M. (2012). Educational Policy Actors as Stakeholders in the Development of the Collective Skill System: The Case of Switzerland. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 126-149). Oxford: Oxford University Press.
- Graf, L. (2018). Combined modes of gradual change: the case of academic upgrading and declining collectivism in German skill formation. *Socio-Economic Review*, 16(1), 185-205.
- Hall, P. A., & Gingerich, D. W. (2009). Varieties of Capitalism and Institutional Complementarities in the Political Economy: An Empirical Analysis. *British Journal of Political Science*, 39(3), 449-482.
- Hall, P. A., & Soskice, D. (2001a). An Introduction to Varieties of Capitalism. In P. A. Hall & D. Soskice (Eds.), *Varieties of Capitalism - The Institutional Foundation of Comparative Advantage* (pp. 1-68). New York: Oxford University Press.
- Hall, P. A., & Soskice, D. (Eds.). (2001b). *Varieties of Capitalism – The Institutional Foundation of Comparative Advantage*. New York: Oxford University Press.
- Hassel, A. (1999). The Erosion of the German System of Industrial Relations. *British Journal of Industrial Relations*, 37(3), 484-505.
- Hollingsworth, R., & Boyer, R. (1997). *Contemporary capitalism the embeddedness of institutions*. Cambridge: Cambridge University Press.
- Howell, C. (2006). Varieties of Capitalism And then There was One? *Comparative Politics*, 36(1), 103-124.
- Iversen, T., & Soskice, D. (2009). Distribution and Redistribution: The shadow of the Nineteenth century. *World Politics*, 61(3), 438-486.
- Johansen, I.-H. (1999). *Transferable training and the collective action problem for employers: an analysis of further education and training in four Norwegian industries*. (PhD Thesis), LSE, Oslo. (Fafo Report 335)
- Johansen, I.-H. (2002). Transferable Training as a Collective Good. *European Sociological Review*, 18(3), 301-314.
- Leech, B. (2002). Asking Questions; Techniques for Semistructured Interviews. *Political Science and Politics*, 35(4), 665-668.
- Lüthi, S., & Wolter, S. C. (2020). *Der Einfluss der COVID-19 Krise auf den Schweizer Lehrstellenmarkt*. Aarau & Bern: Leading House Economics of Education.
- Martin, C. J. (2000). *Stuck in Neutral: Business and the Politics of Human Capital Investment Policy*. Princeton, NJ: Princeton University Press.
- Martin, C. J. (2013). Crafting Interviews to Capture Cause and Effect. In L. Mosley (Ed.), *Interview Research in Political Science* (pp. 109-124): Cornell UP.
- Martin, C. J., & Swank, D. (2012). *The Political Construction of Business Interests Coordination, Growth, and Equality*. New York: Cambridge University Press.

- OECD. (2020). *Strengthening the Governance of Skills Systems: Lessons from six OECD countries*. Paris: Organisation for Economic Co-operation and Development.
- Olson, M. (1965). *The Logic of Collective Action. Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.
- Ornston, D., & Schulze-Cleven, T. (2014). Conceptualizing Cooperation: Coordination and Concertation as Two Logics of Collective Action. *Comparative Political Studies*, 48(5), 555-585.
- Pfeffer, F. T. (2008). Persistent Inequality in Educational Attainment and its Institutional Context. *European Sociological Review*, 24(5), 543-565.
- Pfeffer, F. T. (2015). Equality and quality in education. A comparative study of 19 countries. *Social Science Research*, 51, 350-368.
- Pisoni, D. (2018). Between Idealism and Pragmatism: Social Policies and Matthew Effect in Vocational Education and Training for Disadvantaged Youth in Switzerland. *Social Inclusion*, 6(3).
- Protsch, P. (2014). *Segmentierte Ausbildungsmärkte. Berufliche Chancen von Hauptschülerinnen und Hauptschülern im Wandel*. Opladen: Budrich UniPress.
- SBFI. (2019). Bundesbeiträge für Kurse, die auf eidgenössische Prüfungen vorbereiten. Retrieved from (27.09.2019) <https://www.sbf.admin.ch/sbf/de/home/bildung/hbb/finanzierung.html#607546776>
- Schaeffer, N. C., & Presser, S. (2003). The Science of Asking Questions. *Annual Review of Sociology*, 29, 65-88.
- Schärrer, M., Fritschi, T., Dubach, P., & Oesch, T. (2009). *Finanzflüsse in der höheren Berufsbildung- Eine Analyse aus der Sicht der Studierenden*. Bern: Büro für arbeits- und sozialpolitische Studien BASS AG.
- Schmid, E., & Gonon, P. (2013). Die höhere Berufsbildung unter Profilierungsdruck. In M. Maurer & P. Gonon (Eds.), *Herausforderungen für die Berufsbildung in der Schweiz* (Vol. 1). Bern: hep Verlag.
- Schmitter, P. C., & Streeck, W. (1985). *Private Interest Government Beyond Market and State*. London: SAGE Publications.
- Solga, H. (2005). *Ohne Abschluss in die Bildungsgesellschaft*. Opladen: Verlag Barbara Budrich.
- Soskice, D. (1990). Wager determination: The changing role of institutions in advanced industrialized countries. *Oxford Review of Economic Policy*, 6, 36-61.
- Streeck, W. (1992). *Social Institutions and Economic Performance. Studies of Industrial Relations in Advanced Economies*. London: Sage.
- Streeck, W. (1997). Beneficial Constrains: On the Economic Limits of Rational Voluntarism. In J. R. Hollingsworth & R. Boyer (Eds.), *Contemporary*

- Capitalism. The Embeddedness of Institutions* (pp. 197-219). Cambridge: Cambridge University Press.
- Streeck, W. (2009). *Re-Forming Capitalism: Institutional Change in the German Political Economy*. Oxford: Oxford University Press.
- Streeck, W. (2010). Noch ein Sieg, und wir sind verloren: der Nationalstaat nach der Finanzkrise. *Leviathan*, 38(2), 159-173.
- Streeck, W., & Schmitter, P. (Eds.). (1985). *Private Interest Government: Beyond Market and State*. London: Sage.
- Streeck, W., & Yamamura, K. (2001). *The origins of nonliberal capitalism Germany and Japan in comparison*. Ithaca, NY: Cornell University Press.
- Swenson, P. A. (1989). *Fair Shares: Unions, Pay, and Politics in Sweden and West Germany*. Ithaca NY: Cornell University Press.
- Thelen, K. (2007). Contemporary Challenges to the German Vocational Training System. *Regulation & Governance*, 1(3), 247-260.
- Thelen, K. (2012). Varieties of Capitalism: Trajectories of Liberalization and the New Politics of Social Solidarity. *Annual Review of Political Science*, 15, 137-159.
- Thelen, K. (2014). *Varieties of Liberalization and the New Politics of Social Solidarity*. New York: Cambridge University Press.
- Thelen, K., & Busemeyer, M. R. (2011). Institutional Change in German Vocational Training: From Collectivism towards Segmentalism. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press.
- Thelen, K., & Busemeyer, M. R. (2012). Institutional Change in German Vocational Training: From Collectivism toward Segmentalism. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 68-100). Oxford: Oxford University Press.
- Trampusch, C. (2009). *Der erschöpfte Sozialstaat Transformation eines Politikfeldes*. Frankfurt: Campus.
- Trampusch, C. (2010). Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland. *Comparative Politics*, 41(2), 187-206.
- Trampusch, C., & Eichenberger, P. (2012). Skills and Industrial Relations in Coordinated Market Economies- Continuing Vocational Training in Denmark, the Netherlands, Austria and Switzerland. *British Journal of Industrial Relations*, 50(4), 644-666.
- Trampusch, C., & Palier, B. (2016). Between X and Y: how process tracing contributes to opening the black box of causality. *New Political Economy*, 21(5), 437-454.
- Traxler, F. (2010). The long-term development of organised business and its implications for corporatism: A cross-national comparison of membership,

activities and governing capacities of business interest associations, 1980-2003. *European Journal of Political Research*, 49(2), 151-173.

Trouvé, P. (2001). The employment and training practices of SMEs. Examination of research on five EU member states. In P. Descy & M. Tessaring (Eds.), *Training in Europe* (pp. 91-232). Luxembourg: European Communities.

Wettstein, E., Schmid, E., & Gonon, P. (2014). *Berufsbildung in der Schweiz Formen Strukturen Akteure*. Bern: hep Verlag.

1.6 Appendix

Table 4: List of Interviews

Code	Organization	Date
1	Intermediary association	29.11.2016
2	Intermediary association	09.12.2016
3	Intermediary association	12.12.2016
4	Intermediary association	13.12.2016
5	Union	13.12.2016
6	Training provider	15.12.2016
7	Training provider	02.02.2017
8	Employer	06.03.2017
9	State representative	15.03.2017
10	Intermediary association	15.03.2017
11	State representative	15.03.2017
12	Intermediary association	16.03.2017
13	Union	16.03.2017
14	Employer	20.03.2017
15	Employer	21.03.2017
16	Employer	28.03.2017

Code	Organization	Date
17	Training provider	28.03.2017
18	Training provider	31.03.2017
19	Employer	04.04.2017
20	Employer	07.04.2017
21	Employer	19.04.2017
22	Employer	20.04.2017
23	Intermediary association	10.05.2017
24	Training provider	15.06.2017
25	Intermediary association	26.06.2017
26	Union	24.09.2017
27	Researcher	04.10.2017
28	State representative	04.10.2017
29	Employer	10.10.2017
30	State representative	23.10.2017
31	Employer	26.10.2017
32	State representative	26.10.2017
33	Intermediary association	24.11.2017
34	State representative	11.09.2018
35	Training provider	09.12.2019
36	Training provider	23.01.2020
37	Training provider	30.01.2020
38	Training provider	31.01.2020
39	Union	16.03.2020
40	Union	15.04.2020
41	Intermediary association	09.05.2020
42	Researcher	16.06.2020

2 Torn between economic efficiency and social equality?

Short-track apprenticeships in Denmark, Germany and Switzerland

Published in: *European Educational Research Journal*, 2019, Vol. 18, No. 6

With Lukas Graf (Hertie School of Governance, Germany) and Anna Wilson (University of Lausanne, Switzerland)

Abstract

Educational institutions, especially those facilitating vocational education and training (VET), face the challenge of combining social goals, such as the provision of quality education for a large section of the population, with rising economic utility demands. However, we know little about how VET systems institutionalize these different demands and, further, how social and economic goals are actually institutionalized in VET. Our article aims to unpack this puzzle by analysing short-track dual vocational training programmes ('short-tracks') in Denmark, Germany and Switzerland. These short-tracks combine on-the-job and school-based training, targeting candidates who face difficulties entering full-length dual programmes. Thus, short-tracks are prime examples of training programmes located at the nexus of economic and social demands. In our comparative institutional analysis, we bridge the political economy of collective skill formation and sociological institutionalism literatures. We find that the institutionalization of goals in VET not only differs between countries but that there is also considerable variation within national VET systems. Our analysis reveals that VET regulations, regional and sectoral standards, and the legitimization of key actors can differ greatly in their institutionalization of social and economic goals.

Introduction

The governance of educational institutions increasingly faces the challenge of combining social goals with rising economic utility demands (Felouzis et al., 2013; Thelen, 2014). Educational reforms strengthening the marketization and privatization of education (Whitty and Power, 2000), including the European Union's promotion efforts to strengthen the link between education and companies (European Commission, 2014), fuel the debate on the question that asks to what extent market mechanisms and private

actors should be part of educational governance. Traditionally, the governance of dual vocational education and training (VET) is closely aligned with the world of work and economic goals. The satisfaction of employers' skill demands is often linked to a strong involvement of business interests in the development of curricula, the selection of candidates and the provision of training (López-Fogués, 2012). At the same time, VET systems are aligned with social goals such as equal access to quality education, the provision of transferable vocational skills and certificates, and also a smooth school-to-work transition for those young people seen as disadvantaged (Granato and Ulrich, 2013; Hupka-Brunner et al., 2010; Jackson, 2009). Thus, dual VET is a prime example to use for studying the interplay and tension between economic and social goals.

Duality in education and especially in dual vocational training, however, is present at different levels. On the one hand, dual apprenticeships refer to the combination of the two learning locations of the school and the firm. In order to align school-based training with work-based training, public (e.g. ministries, schools) and private actors (e.g. employer associations, firms) need to cooperate. This is why the governance of dual vocational training is referred to as 'collective' governance. The involvement of public as well as private actors, links dual VET to another level of duality, namely the interplay and tension between economic (serving the labour market) and social goals (providing quality education to a large number of young people) in education. In our study, we focus on this latter aspect in the governance of VET, which is, however, rooted in the dual character of the learning sites.

Even though dual vocational training systems are described as being part of the family of 'collective skill formation systems' by the political economy literature (e.g. Bussemeyer and Trampusch, 2012), national VET systems differ. For example, the engagement of firms in the selection process or content definition can vary across countries and, thereby, influence the role and effect of VET. The more the selection process is left to the firms, the harder it might be for students who do not perform so well at school to enter the training system. Furthermore, business influence on curricula might shift the training content towards marketable vocational-specific skills at the expense of general knowledge, which might, in turn, influence the stratification effect of vocational education (see Nylund and Virolainen, 2019). This variation can potentially have an influence on the inclusive character of dual vocational training.

The tension between economic and social goals is especially tangible in short-track dual training programmes (short-tracks). Short-tracks usually last only two years instead of three to four years, but still lead to standardized certificates. They are located within dual VET while targeting candidates who lack a good general education or academic credentials. Short-tracks focus on theory- reduced applied dual training. They address young people who face problems entering ‘regular’ three- or four-year training programmes. Short-tracks are typically allocated to the European Qualification Framework (EQF) levels 2–3.¹ Similar to the regular-length programmes, the employers voluntarily select the apprentices although they do not usually receive specific subsidies. Short-tracks fully qualify their students for entry into the labour market, which distinguishes them from (most) transition measures, and often count towards longer VET programmes. To provide the first systematic comparative institutional mapping of short-tracks, we ask: How are economic and social goal dimensions institutionalized in short-track dual training programmes?

We have identified three VET systems that offer short-tracks: Denmark (Basic Vocational Training (*Erhvervsgrunduddannelse* (EGU))); Germany (two-year training programme (*Zweijährige Ausbildungsberufe*)); and Switzerland (Federal Vocational Certificate (*Eidgenössische Berufsatteste* (EBA))). Due to pressure on the apprenticeship market, all three VET systems strengthened short-tracks in reform processes in the 1990s and early 2000s. From a global perspective, the VET systems in Denmark, Germany and Switzerland can be considered to be very similar (Ebner, 2013; Hall and Soskice, 2001). They are all located in a coordinated market economy cluster with a long and strong tradition of dual apprenticeship training (Graf, 2013). Against this backdrop, we zoom in on the lower level within these VET systems, the level that aims at opening the door for those students who are seen as less qualified for regular apprenticeships. So far, we know little about how different VET systems institutionalize dual VET for these disadvantaged students and what role social and economic considerations play in this context.

In order to operationalize the social and economic goal dimensions, we discuss key concepts in the relevant political economy literature. Historical institutionalism distinguishes between the ‘Williamsonian’ approach in which economic efficiency stands in

¹ The EQF levels stretch from 1 (lowest) to 8 (highest). For example, in the German EQF a bachelor’s degree is level 6, three- to four-year VET certificates correspond to levels 3–4 (short-tracks to level 3) and level 1 is basic skills training (European Commission, 2018) but not always.

focus and the ‘Durkheimian’ perspective that underlines the social equality aspect of institutions (Carstensen and Ibsen, 2019; Höpner, 2007; Streeck, 2009; Thelen, 2014). We argue that the economic goal dimension relates to policies based on market mechanisms and the involvement of employers. We evaluate, for example, to what extent employers are involved in the selection of candidates and the development of curricula. On the other hand, we view the social goal dimension as the perspective that takes into account the needs of young people (especially those seen as disadvantaged). This goal dimension is aimed at enabling a broad spectrum of students to enter dual VET. Most studies on the institutional underpinning of VET focus on the regulative framework of training and how it is continuously (re-)shaped by various stakeholders.

Our research applies a complementary perspective by also incorporating the normative and cultural–cognitive dimensions of the institutionalization of VET. We apply sociological institutionalism (DiMaggio and Powell, 1991; Powell et al., 2012; Scott, 2014), allowing us to offer a fine-grained account of the institutionalization of goals in VET according to the regulative (rules), normative (standards) and cultural–cognitive (ideas) dimensions of short-track dual training. In this context, we concentrate on the legal framework, the degree of standardization and the legitimizing arguments of the key stakeholders. We apply this extended framework because we argue that economic and social goals in training are not only rooted in the regulations but that standards and ideas as applied to training are equally important. This theoretical framework allows us to gain new insights as it focuses on how the three institutional dimensions (regulative, normative and cultural–cognitive) may systematically vary within one case with regard to their respective orientations, that is, economic goal versus social goal. This differentiated approach is particularly relevant in the case of short-tracks, because partly opposing goal dimensions are at play (López-Fogués, 2012). Our research suggests that the important question, that is, to what extent VET and other educational systems meet their social goals, can be answered in greater detail if all three institutional dimensions are considered individually as well as in combination. Our comparative analysis employs document analysis and 20 expert interviews with representatives of employers, employees, the federal state, the regions and national VET institutes in all three countries.

We find significant cross-national variation, but also within-case variation across the three institutional dimensions with regard to the goal orientation of short-track dual training. In Denmark, all three institutional dimensions are mainly oriented towards the

social goal dimension. However, in both Germany and Switzerland, we find a discrepancy between the regulative dimension and the two other dimensions. In Germany, the VET law does not explicitly mention social goals for short-tracks, but social goals enter the scene when it comes to the relevant standards and ideas that relate to short-tracks. In Switzerland, conversely, the VET law clearly also foresees a social role for short-tracks, and, similar to the Danish case, provides individual support measures for the participating young people. However, when it comes to concrete implementation and the application of standards and ideas, economic goals dominate in Switzerland.

Given that all three countries believe in collective skill formation (Busemeyer and Tramusch, 2012), at first sight, this significant cross-case variation may seem rather puzzling. In our concluding discussion, we present reasons why in the German and Swiss cases, economic goals play more of a part in the institutionalized systems of these countries than in Denmark. In this context, our analysis suggests that when studying economic and social goals in educational institutions, making a distinction between the three institutional dimensions is a fruitful endeavour.

The following section elaborates on our theoretical approach, and includes a discussion of the two key goal dimensions in educational governance. We then present our methods and data. The subsequent section focuses on the case studies, namely short-track dual training in Denmark, Germany and Switzerland. The two final sections discuss our key findings from a comparative perspective and conclude.

Analytical framework: Goal dimensions and institutionalization

In this section, we summarize the institutional framing of economic efficiency and social equality in comparative political economy. On this basis, we next outline the key characteristics of social and economic goals in education. In the final part, we present our conceptualization of the social equality and economic efficiency dimensions in the institutionalization of the short-tracks, combining the political economy perspective with sociological institutionalism.

The institutional framing of economic efficiency and social equality in comparative political economy

Comparative institutionalists from different disciplines are interested in institutional differences and their societal and economic implications (Gonon and Maurer, 2012; Iversen and Stephens, 2008; Martin and Swank, 2012; Powell et al., 2012; Thelen, 2014). In this article, we concentrate on two key institutional dimensions of education – economic efficiency and social equality – to investigate central institutional underpinnings of educational systems. Here, we draw on insights from recent institutionalist literature in political economy that discusses the distinction between Williamsonian and Durkheimian institutions (Streeck, 2009; Thelen, 2012). Williamsonian institutions are tailored towards economic efficiency because they focus on providing employers with an adequately skilled labour force (Culpepper, 2007; Hall and Soskice, 2001). On the other hand, Durkheimian institutions aim to provide equality through the inclusion of a broad spectrum of the population in the labour market, including societal groups seen as disadvantaged (Carstensen and Ibsen, 2019; Martin and Thelen, 2007; Nelson, 2012; Thelen, 2004).

This two-dimensional space is broadly reflected in the more general political economy debate about different cooperation patterns and their outcomes, for instance, in collectively governed training systems. Thus, Thelen (2014) distinguishes between an equality dimension on the one hand and a dimension measuring the ‘strategic’ employer coordination on the other. Trampusch (2007) highlights the importance of industrial relations that include collective agreements, which can be seen to represent the degree of social solidarity in a policy field. Höpner (2007: 5) concentrates on the ‘status of firms in society’ and distinguishes between coordination and organization within non-liberal capitalism. Here, coordination is seen as a means of maximizing the rational firm’s individual profit. In contrast, organization ‘obliges firms to act in accordance with collective interests’ (Höpner, 2007: 9).

This short review shows that the political economy literature offers different but related concepts that can help to capture differences in the economic and social institutional underpinnings of socio-economic systems. In the following section, we specify the concepts of economic and social goals in the context of education.

Two goal dimensions of education: Economic efficiency and social equality

The importance of education as a highly political arena is often emphasized. Investments in skills are essential for competitiveness and economic growth (Bussemeyer and Trampusch, 2012; Cedefop, 2017) and one of the most important means of achieving both economic and social welfare. In our article, we are specifically interested in the underlying ‘goals’ of VET. Inspired by the Williamsonian and Durkheimian perspectives outlined above, we distinguish between the *economic goal dimension* and the *social goal dimension*.

In our analysis, the economic goal dimension of education (Williamsonian perspective), refers to education as a means of providing the labour market with the skills that are currently required by employers. We stipulate that employers represent the demand side whereas graduates are seen as the supply side. Employers demand ‘marketable’ skills to sustain their economic success (Ferrier and Anderson, 1998). In our economic goal dimension, education is oriented towards the market and needs of employers (Nylund and Virolainen, 2019) and is aimed at the ‘employability’ of young people (see Brunila et al., 2017) and the production of human capital (see Becker, 1993). From our economic goal perspective, skills serve to boost economic growth and efficiency (of the national economy). In other words, when we identify an educational institution as oriented towards the economic goal dimension, we mean that its key objective is to enhance *economic efficiency*.

In contrast, when we address the social goal dimension (inspired by a Durkheimian perspective), we put the needs of young people and society in focus and expect that education serves to meet encompassing societal goals. This includes the usage of VET as a means of preparing (a broad spectrum of) citizens for political and social participation in society, even those lacking strong academic credentials (Protsch, 2014; Solga, 2005). This implies that this type of education system should not depend on market mechanisms but is every citizen’s right (Bernhard, 2017). Furthermore, in our social goal dimension, education functions as an entrance ticket (for the individual) to the labour market and, importantly, decent living wages (e.g. Bussemeyer, 2015), ideally promoting individual social and economic welfare. Another important aspect is that being allowed into VET increases social justice because the students’ sense of belonging not only within education but also in society more generally plays a key role (Li and Dervin, 2019). In sum, in our analysis, an institution is seen to be oriented towards the social goal dimension if

it meets the needs of the individuals and society as a whole by promoting greater social equality.

It is important to note that the Durkheimian literature on education also discusses the hierarchical relationship between vocational/practical ('lower') skills and general/academic ('higher') skills (Canning, 2012; Walford, 1998). In our case of short-tracks, vocational skills (attained through on-the job training) are combined with general skills (attained through theory-focused school-based training). Even though we argue that short-tracks enable those young people who are perceived as disadvantaged to enter the training system and later the labour market, we want to emphasise that short-tracks do not provide the same level of general skills as academic and mainly school-based training would do. Thus, short-tracks are limited in their capacity to provide full and equal access to social and political participation (see Canning, 2012; Nylund and Virolainen, 2019; Walford, 1998; Young, 2009). However, we focus on a group of young people who are at risk of not accessing any adequate training were it not for the short-track programmes. Therefore, our use of the Durkheimian perspective relies on the assumption that access to the short-tracks enhances their chance to achieve equal social and political participation compared to the alternative of collective skill formation without such an offer.

It should be emphasized that social and economic goals can go hand in hand; thus, a system can score high on both aspects. For example, apprentices with skills that are in demand by the labour market will find it easier to enter a well-paid job after training. However, in other cases, the social and economic perspectives contradict each other. For example, the more selective the access to education is, the lower it scores on social equality. At a very basic level, our argument is that educational governance has to find a way of combining economic and social goals at the same time.

Conceptualizing the institutionalization of economic efficiency and social equality in short-track dual training

In this section, we conceptualize more concretely the institutionalization of the short-track programmes. Short-tracks in Denmark, Germany and Switzerland have not yet been systematically compared from an institutionalist perspective. This also implies that we lack a systematic account of the social versus economic orientation of these

programmes. Literature on the institutionalization of dual VET has mainly focused on ‘regular’ three- and four-year apprenticeships. Thus, this study contributes to two main puzzles. On the one hand, it adds to a better understanding of the variety within dual vocational training programmes and, specifically, of the differences in dual VET programmes targeted at disadvantaged candidates. On the other hand, we develop a framework that helps to capture the institutionalization of two central goal dimensions in education: economic efficiency and social equality. In this context, we aim to contribute to the abovementioned political economy literature.

To uncover and map in detail how short-tracks straddle the boundary between economic efficiency and social equality, we consider the important regulative institutional dimension, but complement this view with the normative and cultural–cognitive dimensions. We propose this extended view as we expect that in the complex case of short-tracks there is a high likelihood of observing multiple and partly divergent institutionalizations in terms of how short-tracks are framed by laws, standards and legitimizing arguments. Thus, in the following conceptualization, we link the regulative, normative and cultural–cognitive institutional dimensions typically associated with organizational sociology and sociological institutionalism (DiMaggio and Powell, 1991; Scott, 2014) with key concepts in the political economy of collective skill formation, for instance, with decentralized cooperation (e.g. Busemeyer and Trampusch, 2012; Culpepper, 2003) and Williamsonian and Durkheimian institutions (Streeck, 2009; Thelen, 2012).

That is, our point of departure is the regulative (rules), normative (standards) and cultural–cognitive (legitimation arguments and ideas) institutional dimensions (Scott, 2014) that we combine with the economic and social goal dimensions discussed in the previous section. This framework, summarized in Table 1, then guides our qualitative cases studies of Denmark, Germany and Switzerland, enabling us to explore relevant within- and cross-case variation in relation to short-tracks.

First, we view the *regulative dimension* as referring to the legal definition of short-tracks. In other words, we focus on the relevant law(s) and regulations with regard to short-tracks training programmes and whether they are oriented more towards economic efficiency or social equality (or balance both perspectives equally). We follow Emmenegger et al. (2019) in arguing that six areas reflect the core governance functions that a collective VET system needs to perform to enable successful cooperation with regard to vocational training both in economic and societal terms (see also Busemeyer

and Trampusch, 2012; Streeck et al., 1987; Wegge and Weber, 1999). The six task areas (Emmenegger et al., 2019, adapted for short-tracks) are given below.

1. System development: strategic development of the short-track system, including its steering at the macro level.
2. Content definition: concrete formulation of the contents of learning in short-tracks (e.g. syllabi, vocational profiles and curricula).
3. Organization of training provision: implementation and administration of short-tracks and of the concrete means and processes needed to put training to work (e.g. instructor training, teaching materials and learning site cooperation) and, crucially, any supporting measures for students who risk leaving school with poor academic credentials.
4. Matching of supply and demand: organization of processes that link individual educational aspirations and employers' needs for skilled labour in the domain of short-tracks. This refers especially to the options through which students (including those seen as disadvantaged) may gain access to short-tracks.
5. Financing: distribution of resources and costs and regulation of apprentices' wages. Given the potential 'social policy' nature of short-tracks, we also look at possible state subsidies for short-tracks.
6. Monitoring, examination and certification: quality control as well as maintenance of transparency of short-track qualifications. Given the role of short-tracks as a potential stepping stone for advancing educational opportunities for disadvantaged students, here we focus especially on how short-track certificates allow a transition to further educational programmes (such as the 'regular' apprenticeship programmes).

Whereas core task areas 1 and 2 reflect the stages of cooperation that define the structure for short-tracks, areas 3 and 4 are mainly concerned with the actual operation of the short-track system. Area 5 is about the financing of the different elements of the system, whereas area 6 represents the 'final' stage of system and quality control.

Second, with regard to the *normative dimension*, we investigate the key organizational standards. In collective VET systems, national legal frameworks provide significant scope for multi-layered cooperation and related standards at the decentralized levels of

the occupation, sector or region (see Culpepper, 2003; Emmenegger et al., 2019). In other words, countries with dual training systems differ with regard to the implementation of national-level regulations at the subnational level (see Rauner, 2009). This opens up the possibility of significant differentiation with regard to the goal orientation of standards at the key subnational level. Therefore, we suggest analysing each of these levels individually. More specifically, ‘below’ the national level, we expect that relevant standards for short-tracks can be systematically structured by three key decentralized governance levels, namely, occupations, sectors (e.g. related to industries dominated by large firms vs. crafts sectors dominated by small firms) and regions (e.g. related to states, municipalities, industrial regions, etc.). This conceptualization allows us to evaluate whether a specific short-track system displays variation between these governance levels.

Finally, we conceptualize the *cultural–cognitive dimension* as the ideas and cultural concepts behind the short-tracks. We ask, how are the short-tracks culturally framed? To which ideals are they connected? Here, we focus on the key actors’ ideas, values and legitimation arguments. Given the corporatist nature of apprenticeship training, the three key actors we focus on core state agencies (federal and subnational level), employer associations and unions.

Thus, in each of the country cases, we explore short-track laws, short-track standards and short-track Legitimation arguments in relation to economic efficiency and social equality in a systematic way (Table 1). Ultimately, we visualize aggregate values for each institutional dimension for each country in a two-dimensional table (see Figures 1, 2 and 3) and compare and interpret our findings in the discussion section.

Table 1: Institutional dimensions and their conceptualization

	Regulative dimension	Normative dimension	Cultural-cognitive dimension
Key institution	Laws	Standards	Legitimizing arguments and ideas
Guiding question	How does the law define the key governance tasks?	To what extent do we observe differentiation in the standards along the key governance levels in dual VET?	How do key actors legitimize short-tracks? What ideas and values do they have?
Key units of analysis	Laws referring to: System development Content definition Organisation of training provision Matching of demand and supply Financing Certification	Standards at the: National level Occupational level Sectoral level Regional level	Legitimation arguments and ideas by: State agencies Employers and their associations Unions

Source: Authors' own, based on a review of relevant institutionalist and VET literatures

Methodology

Our comparative institutional study applies a case study design. This allows us to delve into the case of short-tracks and, thereby, reveal the complex interplay of social and economic aspects therein (George and Bennett, 2005: 20). Our empirical analysis is based on desk research, utilizing official documents, transcripts from parliamentary sessions and the available secondary literature. Additionally, we complement our research with the help of 20 semi-structured expert interviews (Leech, 2002) (see list of interviews in Table 2 in the appendix). This strategy allows us to compare and cross-check information gained from the different sources (Martin, 2013). For each country, we selected interview partners representing key actor groups in the governance of the short-track programmes. We talked to representatives from the umbrella organizations of unions and employer associations, from the relevant national ministries and from the

national/federal VET institutes. Furthermore, we interviewed national representatives from the countries' regional organizations for VET governance, as well as academic experts in the field. In Denmark, we also interviewed representatives from youth centres and production schools, which are key local actors for the implementation of the short-track programmes. (Production schools in Denmark target people under 25 years who have not completed a youth education and offer preparatory (non-certifying) vocational training (Produktionsskoler, 2019)).

We structured and formulated our interview questions according to the different key dimensions in our theoretical framework. The first group of questions addressed the regulation of the short-tracks and the second group targeted the actual standards (variation) in place to control them. Finally, we asked questions aimed at capturing the actors' perception of the ideas, ideals and goals of the short-tracks, thus, capturing the cultural–cognitive institutional pillar. The interviews lasted on average about one hour and were conducted between October and December 2017.

After the data collection, we analysed the data according to the different theoretical aspects we described in the previous section. In order to systematically compare short-tracks in the three countries, we applied the three main theoretical dimensions (regulative, normative and cultural–cognitive) and their specific sub aspects to each country. We used the data generated through the interviews and the document analysis to develop a thick description of each dimension and for each case. We present the results of our analysis in the following sections. The case studies are organized by country in order to get a better understanding of the country-specific institutionalization of the short-tracks. Subsequently, we offer a cross-national comparative perspective.

Case studies

Denmark

The Danish short-tracks are the EGU. Although other two-year precursors date back to 1956 (Sigurjonsson, 2002: 17, 40–42; Sørensen and Jensen, 1988: 54), the EGU was initiated by the government in 1993 (Jørgensen, 2014; Retsinformation, 2018a). It was the Social–Liberal minister of education, a member of a broad coalition led by the Social Democratic Party, who was the main architect of this law and its adjacent school reform entitled Education for All (Uddannelse til Alle). Presently, the participation rate in the

short-tracks relative to the total number of students in VET is around 2% (Undervisningsministeriet, 2017).

Laws (regulative dimension). The EGU law and, thus, the system development, is overseen and reformed by the Ministry of Education together with the National Council for Vocational Training (DK2, 5 (see Table 2 in Appendix for list of interviews); Retsinformation, 2018a). The law gives quite a lot of freedom to the actors involved, because it delegates the responsibility of implementation of the short-tracks to the municipalities (DK1, 2, 4). In addition, the programme was conceived at the national state level as a response both to the high level of dropouts from the regular programmes and the increase in young people not in education or training (Blaksteen, 1994).

The short-track training is highly individualized, given that the curriculum is adapted to the apprentice's social, personal and vocational capacity (Retsinformation, 2018a). As opposed to the regular length programmes, the social partners are not part of the curriculum development (Martin and Knudsen, 2010; Undervisningsministeriet, 2017). Every short-track contract is uniquely adapted to the young people and their agreement with the training firm, regardless of occupation or sector. Thus, content definition is not primarily oriented to labour market needs but, rather, to social equality.

The responsibility for organizing the short-track training provision and instigating contact with other actors lies at the municipal level as clearly defined in the law. The youth education centres and the production schools are the ones with knowledge both about the young person in question, his/her profile and capacity, and the local labour market (DK1, 2, 4, 6). It is also the schools who engage with the local firms through outreach and, therefore, match the supply of the labour market with the demand from the target group (Rambøll, 2016).

The financing structure of the short-tracks is similar to the regular system, with the Employers' Reimbursement Fund, which all employers contribute to, financing the apprentices' wages (Cedefop, 2014). The state has, however, initiated subsidies for firms participating in these short-track programmes (Retsinformation, 2018b) in order to incentivize their participation in such a measure (DK5, 6, 7).

The Danish short-track certificates are largely used as stepping stones to further training (Wiborg and Cort, 2009), but they do not automatically qualify the graduates for this (DK2). However, the short-track training agreement can be individually adapted to help

prepare the young people as much as possible for the transition (DK5, 6). The transferability of the short-track certificates is, therefore, a multifaceted issue, and regardless of the region, occupation or sector, they are crafted to suit the individual. From a regulative point of view, the short-track programmes clearly have a social organizational logic. Their very intention is to cater for those who are not ready for a regular training programme, but who will be prepared for the transition into regular programmes or jobs through participation in the short-tracks. In this sense, the economic aspects on a sectoral level, for instance, are not in focus.

Standards (normative dimension). The emphasis on the local level with regard to national short-track regulation in Denmark implies great regional (municipal) variation (Wiborg and Cort, 2009). One drawback with this, mentioned in the interviews, is that there are very few individuals enrolled in short-tracks in some municipalities, despite the overall approval of the short-tracks and the programme's mission to reintegrate disadvantaged young people. Another interviewee states that when the local economy struggles, then it is more difficult to make employers agree to take on short-track apprentices (DK5). The local variations in effort and orientation of the short-tracks are, therefore, large.

The target group for the two-year programmes do not have the necessary grades to be considered for a regular-track programme (DK1, 2, 3, 4, 5) and this is how the law defines the target group. Most firm-provided short-track training entails more narrow and specific tasks and takes place, for example, in the retail and maintenance sectors and the social welfare and healthcare fields, or can involve simpler automechanic work (DK4, 5; Nielsen and Cort, 1997: 68).

The issue with the short-track certificates and their low standardization is that the employers' recognition of their value seems limited. The training is seen as work experience or probation time in the firm rather than an indicator of portable skills (DK6, 7). On the other hand, the short-track contracts initiated between the young people and the firm reflect both a demand for specific types of skill from the employers' side and their adaptation to the capacity of the young people. The outcome on an aggregate level is a small number of firms providing short-tracks and relatively few contracts, but a high level of 'matching' between the young people and the training (DK2, 3). We conclude

that the standards for the short-tracks reflect a mix of economic efficiency and social equality orientation among the firms but that, overall, the sectoral and occupational perspectives have little relevance in the Danish case.

In sum, however, the standardization of the short-tracks at the subnational level follows the social equality orientation stipulated in the regulative dimension quite closely, although with the caveat that the possibility of training at a firm is limited due to the high specialization of the training required to meet the apprentices' needs.

Legitimizing arguments and ideas (cultural–cognitive dimension). For state actors at the national level, the idea seems to be that although municipal rule is good in order to secure the social aim of the short-tracks, the quality varies across the country (DK1, 2). Other than that, the satisfaction with the short-tracks is currently high, and so is the consensus surrounding the legitimacy of their social orientation (DK2; Wiborg and Cort, 2009: 93).

However, the employers' camp is critical of the pressure to produce more short-track apprenticeship positions (DK1, 3; Nergaard-Holm, 2008), because they cost as much as training regular apprentices but involve more effort. From the employers' perspective, participation in short-track programmes is largely based on individual firms' willingness to take on social responsibility (DK1, 2, 3, 6). That the work tasks suit the capacity of the young people is a necessary condition for participation, but then a sense of social responsibility is a key condition for the firms to take on a short-track apprentice (Rambøll, 2016: 23). The social responsibility argument is often used by the youth centre counsellor in his/her approach to cajole the firm to provide short-tracks (DK6). Short-track training is still a quite limited programme and not all employers are aware of it (DK3).

Taken together with the firms' demand for apprentices who can carry out the more mundane tasks compared to the regular-track apprentices, we see that although the social equality norms are strong, there is a degree of economic logic in play for Danish training firms (DK1, 4, 5). This indicates a certain limitation to the social equality perspective to the benefit of more economic thinking among the employers' camp.

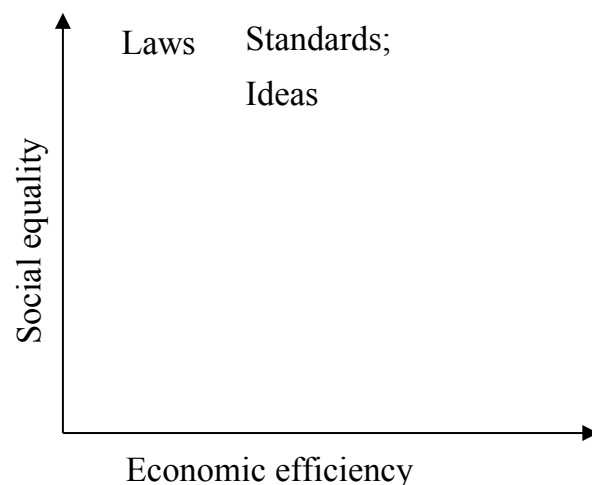
The unions' interest in the two-year programmes, compared to the employers', is high and has increased over time, as they are seen more and more as a measure that provides

skills and good working and salary conditions for those in society who lack academic credentials. In particular, the Danish Confederation of Trade Unions (LO) is of this opinion (DK1). Furthermore, the LO was the architect behind the collective wage agreements for the short-tracks (covering all EGU apprentices) and access to unemployment insurance for short-track graduates (Rambøll, 2016: 23).

With regard to the cultural–cognitive dimension, the idea of the short-tracks as a social equality tool prevails among the different actor groups involved. What differs is the ways in which the actors are trying to reconcile this idea with their own interests: employer associations by leaving it up to the sense of social responsibility of the individual firms, and the unions by trying to ameliorate the labour agreements for those that enter the short-tracks.

Summary. Social equality is decidedly the key dimension for the Danish short-tracks, illustrated in Figure 1, and this orientation is firmly established through the law (regulative dimension), which is free from substantial elements of economic efficiency. In the normative dimension, the short-tracks’ standards are based on a slightly mixed logic of strong regional variation with regard to implementation strategies, social responsibility aspects and appropriate provision of low-skilled tasks, because the training content is highly individualized. This is, however, mostly in line with what the short-track regulations stipulate. As a result, we place ‘standards’ at the highest point on the social equality axis, but one step closer to economic efficiency compared to the regulative dimension. From a cultural–cognitive perspective, the support for the short-tracks and their social orientation is broad, but the rather limited social partner interest and engagement bears witness to difficulties reconciling a high level of social equality focus with an economic goal orientation. The placement of ‘ideas’ is, therefore, in the same box as the standards.

Figure 1: The institutionalization of short-tracks in Denmark between economic efficiency and social equality



Source: Authors' own, based on a synthesis of a qualitative institutional analysis.

Note: 'Laws' refer to the regulative institutional dimension, 'standards' to the normative dimension and 'ideas' to the cultural–cognitive dimension. X-axis: economic efficiency; y-axis: social equality.

Germany

Two-year programmes have a long tradition in Germany. Although the number of short-track programmes has been dropping since the 1950s, at the beginning of the 21st century the number has risen again (Uhly et al., 2011: 11). In 2011, there were 40 two-year programmes (Uhly et al., 2011: 10), and in 2015, 8.6% of all new training contracts consisted of two-year programmes (BIBB, 2016: 39).²

Laws (regulative dimension). The two-year programmes are governed, as are the regular dual training programmes, by the Vocational Training Act and the crafts code, and the corresponding social partnership mechanisms (system development). The German VET law does not distinguish between the two year and the three- or three-and-a-half-year apprenticeships. Even on the final certificate and during the graduation ceremony, the shorter duration is not made explicit. The situation today, in which short-tracks, in terms of their content definition, are often framed as theory reduced, has evolved in the

² On the recent historical evolution of short-tracks (as a case of 'segmentalism') in Germany, see Thelen and Busemeyer (2012), Busemeyer (2009) and Kath (2005).

normative and cultural–cognitive dimensions, not in the regulative dimension (DE4, 6 (see Table 2 in appendix for list of interviews)).

With regard to the organization of the training provision (e.g. supporting measures), the law makes no special provision for short-tracks. As with a ‘regular’ apprenticeship, when it comes to the matching of supply and demand, employers’ skills demands are clearly emphasized (DE2, 3, 5) and two-year programmes are only implemented if there is a demand from the employers. In terms of access, there are no formal entry requirements except that candidates must have completed compulsory school education.³ The law offers no special provision for short-tracks in terms of financing (or state subsidies). At the formal level, two-year apprenticeship certificates are recognized at the national level just like the traditional apprenticeships. However, whether this certification allows holders to make the transition to a ‘regular’ length apprenticeship is not stipulated by the law and represents one of the major sources of variation.

In sum, considering the content of the law, two-year apprenticeships are located at the nexus of economic cooperation and social policy in the same way as traditional apprenticeships. In both cases, the economic efficiency perspective, rather than the social equality perspective, is the key organizing logic.

Standards (normative dimension). Although the VET law institutionalizes short-tracks at the national level, we observe significant variation in the occupational, sectoral and regional dimensions. With regard to the occupational level, there are just a few occupational training programmes that account for the vast majority of all apprentices in two-year programmes.⁴ Although the two-year programmes are recognized by the state, the understanding of what these are is sometimes vague, for example, whether they are intended for candidates perceived as disadvantaged or offer similarly complex curricula as three-year programmes, just in a shorter time (Esser, 2009). Furthermore, the situation is rather fuzzy when it comes to the distinction between two-year programmes that ‘stand on their own’ and those that are supposed to be part of a step-by-step ‘modular’ dual training approach (both leading to an official certificate) (Protsch, 2014: 34–37). In

³ However, some two-year apprenticeships are state funded and in these cases the specific application procedure can differ.

⁴ In 2004, three-quarters of all two-year training contracts were concentrated in just four occupations: sales clerk (almost half of all such contracts); hotel and restaurant specialist; parts finisher; and specialist packer (Kath, 2005: 6–7).

these ‘staged apprenticeships’ (*Stufenausbildung*), there is first a less demanding stage and then a decision, by the employer rather than the apprentice, as to whether the apprentice can continue with the second stage (see Thelen and Busemeyer, 2012). Out of the 40 two-year programmes, 23 foresee a transition into a regular dual training programme with prior learning being recognized (Uhly et al., 2011: 10).

Similarly, there are specific sectors in which two-year programmes are most relevant given the demand by the employers. Today, around 78% of the short-track programmes are located in industry and commerce and 12% in the crafts sector.⁵ Interestingly, the employers’ camp is to some extent split on the issue of two-year apprenticeships. The chambers of commerce and industry are in favour, whereas the chambers of crafts and trades are usually opposed. Given the respective skill requirements, in certain industries such as retail the two-year programmes are attractive to employers, whereas employers in the crafts sector often favour traditional apprenticeships (DE5, 6; see also Thelen and Busemeyer, 2008). In this context, it should be noted that the chambers of commerce and industry are purely employer based, whereas the chambers of crafts and trades also represent employees to some extent.

Regional variation, then, also occurs depending on where such a sector is located in Germany. Generally, the proportion of short-tracks compared to the regular length programmes is higher in labour market regions in which the offering of regular dual study programmes is rather low (Uhly et al., 2011: 34). There are stark differences between western and eastern Germany (DE5). For instance, in the economically more powerful western part, there are (a) fewer two year programmes and (b) these are less often or less heavily subsidized by the state. Interestingly, although the number of training contracts in the two-year format expanded in the 1990s until around 2010 (see Ebner, 2013), it has stagnated or slightly decreased since 2010 (BIBB, 2016: 145). One reason for this decline is that in eastern Germany, two-year programmes expanded in the 1990s when most of them were publicly financed in this region (Uhly et al., 2011), but then declined again when state subsidies were reduced (BIBB, 2016: 145).

In sum, the degree of standardization of two-year programmes is limited, with varying quality of programmes and significant differentiation along occupational, sectoral and regional lines (several interviews). The occupational level is essential in structuring

⁵ Source: www.bibb.de/de/berufeinfo.php (accessed 27 January 2017). This data refers to programmes regulated by the Vocational Training Act and the crafts code.

variety with regard to the standardization of two-year programmes, with most short-tracks being offered in occupations in which they serve employers to reduce their investment in training (economic efficiency). Similarly, we find significant sectoral differences if we consider which sectors are more involved in expanding two-year programmes. Furthermore, in the implementation of these programmes, there are important regional differences, for example, considering the differences between western Germany (focus: economic efficiency) and eastern Germany (focus: social equality). Overall, in the normative dimension, the economic efficiency perspective is more prevalent than the social equality one.

Legitimizing arguments and ideas (cultural–cognitive dimension). Broadly speaking, (large) employers are pro two-year apprenticeships, unions against. At the request of the employers, the federal state, in the person of the minister of economics, can decide in favour of the introduction of short-tracks against the will of the unions, and has occasionally done so in the past (e.g. Busemeyer, 2009: 195). However, traditionally, the state has left it mainly to the social partners to decide about the introduction and implementation of short-tracks.

Although unions acknowledge that two-year apprenticeships can also serve as a stepping stone to traditional programmes, they are aware of the risk that employers will use them as a way of exploiting apprentices (especially disadvantaged students) as cheap labour and tailor the programmes more to their specific skills demands (DE1, 4). In this sense, unions tend to favour alternatives such as assisted apprenticeships or even full-time vocational schooling (DE3, 4). More generally, even if short-tracks are more accessible for disadvantaged young people, from a trade union's perspective, the shorter and less encompassing the training, the less empowered the workers are in relation to capital (see Solga, 2009).

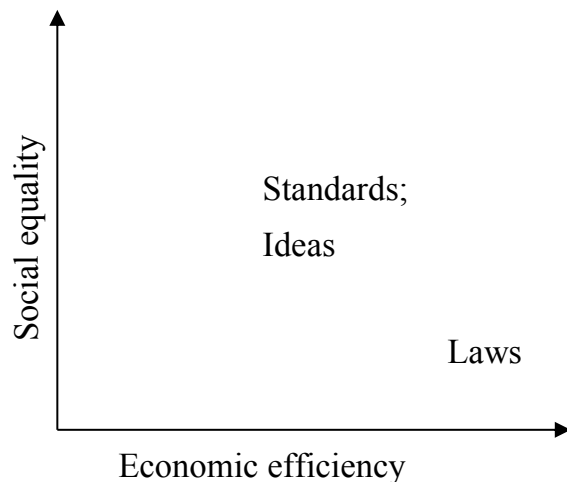
The employers' side argues that two-year apprenticeships should not be about integrating young people who lack academic credentials (social policy) per se. In other words, it is not so much the target group that is in the minds of the employers who push for two-year programmes but, rather, their own (i.e. the firms') skills demands (DE1, 5). In addition, some employers see two-year programmes as an extended probation time (DE4). However, on both the employer and employee sides, there seems to be a general

preference not to frame two-year apprenticeships as special programmes that carry less value. These programmes are supposed to either prepare people for an occupation or serve as a stepping stone to a traditional apprenticeship. For both purposes, it would not be helpful to culturally frame them as a social inclusiveness measure that might weaken their attractiveness both for employers and potential apprentices (DE6).

In short, we observe that social equality arguments, which are largely absent in the regulative dimension in the German case, come to the fore in the cultural–cognitive dimension. Yet, in the cultural–cognitive dimension too, the economic efficiency dimension is more prevalent overall. As it might be expected for differently positioned actor groups within a given socio-economic system, the relevant groups often draw on the social equality dimension in different ways. In the case of Germany, the (large) employers and the state refer to it to legitimize short-tracks, and unions and small firms rather to discredit them.

Summary. As Figure 2 illustrates, in the German case we find a discrepancy between the regulative dimension and the two other dimensions (normative and cultural–cognitive). The VET law does not explicitly mention social goals for the short-tracks (hence the location in the bottom right corner), but social goals partly enter the scene when it comes to the relevant standards and ideas that are applied to the short-tracks (hence, these are located in the centre between economic efficiency and social inequality).

Figure 2: The institutionalization of short-tracks in Germany between economic efficiency and social equality



Source: Authors' own, based on a synthesis of a qualitative institutional analysis

Switzerland

Since the 1970s, informal and individual training plans (*Anlehre*) have enabled students who are struggling to access regular training programmes to receive short-track vocational training in Switzerland. The VET reform in 2004 introduced a standardized two-year VET level that replaces the informal training plans (Wettstein and Gonon, 2009: 98). Graduates from the two-year programmes receive nationally recognized federal VET Certificates (EBAs). About 6% of apprentices in Switzerland are enrolled in a short-track programme (SBFI, 2016).

Laws (regulative dimension). The short-tracks are part of the national Swiss VET system because they are anchored in the national VET law and lead to nationally standardized certificates. The State Secretariat for Education, Research and Innovation (SBFI) issued a non-binding guideline (2005, updated 2014) on the implementation of the short-tracks. The governance and system development of the Swiss VET system is characterized by the strong involvement of the so-called organizations of the working world (*Organisationen der Arbeitswelt* (OdAs)). Most of the OdAs represent employers' interests, which are organized along sectoral lines, and they are the key drivers of the development of

the short-tracks. They initiate new occupations and are responsible for content definition. Thus, the development of the short-tracks is driven mainly by the market perspective.

However, the VET law emphasizes that the short-tracks should take account of an apprentice's individual competences (Berufsbildungsgesetz 2002, Art. 17). In addition, the VET law establishes the means of individual support (*fachkundige individuelle Betreuung*) to help apprentices in short-tracks to complete the training successfully. These measures are the main distinguishing feature of the organization of the training provision of Swiss short-tracks in contrast to three- and four-year training programmes. Even though the federation 'may support' these measures (Berufsbildungsgesetz 2002, Art. 18), the responsibility for implementing them is delegated to the cantons (SBFI, 2014). This emphasis strengthens the social goal dimension of the short-tracks.

Short-tracks are, as stated by the VET law, targeted at 'practically talented' young people (*praktisch Begabte*). Even though the VET law leaves the definition of 'practically talented' open, one of the state-orchestrated evaluations argues that short-tracks are important in offering certified vocational training to those students who do not perform well at school (Bundesrat, 2019: 4). In the public debate, short-tracks are also often referred to as a tool to enable 'as many youths and adults as possible' to enter vocational training (Bundesrat, 2019).

Although the term 'practically talented' is not clearly defined, in reality, we find a very heterogeneous population in the short-tracks with a high proportion (about 30%) of migrants (SBFI, 2016: 31; CH3 [see Table 2 in appendix for list of interviews]). All interview partners agreed that it is not those students perceived as the weakest who make it into short-tracks and this might be related to the selective access to short-tracks that still remains. Employers are the key gatekeepers, just as in the three- and four-year programmes. Thus, the matching of supply and demand is largely driven by economic efficiency.

In addition, when it comes to financing, the legislative documents do not distinguish between short-tracks and three- and four-year training programmes. We do not find specific structural short-track subsidies. The interview partners emphasized that short-tracks 'stand on their own'. The certification represents an independent occupation that is demanded by the labour market. However, the SBFI guideline in particular

emphasizes the fact that short-tracks should also enable the transition to further educational programmes. Yet, the responsibility for guaranteeing permeability lies with the employer-dominated OdAs who develop the short-tracks.

In a nutshell, the regulative dimension is strongly influenced by the interests of the labour market. However, the regulations emphasize the fact that short-tracks are a means of allowing ‘practically talented’ young people to enter the VET system and, therefore, also introduce individual support measures to enhance inclusiveness. These features strengthen the social goal of short-tracks in Switzerland.

Standards (normative dimension). Short-track graduates receive certificates that are standardized at the national level. However, the implementation is characterized by great variation at the sectoral level. Traditionally, sectoral organizations, such as the OdAs, have a strong influence on the Swiss collective training system (Gonon and Maurer, 2012). Although some OdAs welcome the possibility of implementing short-tracks, others see no use in it (CH3), pointing to a dominance of the economic efficiency logic. This leads to great variation at the occupational level with 53 short-track programmes as opposed to 181 three- and four-year tracks as of April 2018 (SBFI, 2018). The interview partners agreed that the main motivation an OdA has for developing a short-track is the demand by the employers for specific (lower-level) skills (CH3, 4). The state actors do not want to interfere too much in the development process because, traditionally, the governance of VET in Switzerland is mainly shared between business and the state. Therefore, all actors seem to accept this sectoral variation.

When it comes to the participation of employers in short-tracks (offering training places), we find not only sectoral variation, but also great variation at the regional level. After the reform in 2004 that introduced short-tracks, some cantonal actors directly approached local employers to offer these. One interview partner described this as ‘selling from door to door’ (*Klinkenputzen*) (CH4). However, especially along the language borders, the share of short-tracks (in all apprenticeships) differs greatly. In the French and Italian speaking parts, short-tracks play only a minor role with a participation rate of 1% (SBFI, 2016). In contrast, the canton of Basel-Stadt has one of the highest participation rates (5.3%) due to very active cantonal actors who cooperate with the local employers (CH4).

In addition, when it comes to the implementation of the individual support measures, we find great regional and even local variation (Stern and Von Dach, 2018). The initial idea of the SBFI's national guideline was to streamline cantonal support measures and guarantee a minimum of support (CH5). However, the cantons 'interpret very freely' how to implement the measures (CH5). One interview partner argued that this variation undermines the inclusiveness function of the short-tracks because the support depends on the canton the apprentice lives in (CH3). To what extent cantons invest in individual support measures depends on their social policy agenda (CH3). In addition, although the national VET law states that the cantons are responsible for support measures, it is often the local schools that get involved in providing these (CH5).

In sum, we find significant sectoral, occupational and regional variation when it comes to the standards applying to short-tracks in Switzerland.

Legitimizing arguments and ideas (cultural–cognitive dimension). For state actors, the delegation of the central tasks of short-track governance to business actors is important (CH1, 4). The state wants short-tracks to be tailored towards the needs of the labour market. At the same time, the initial motivation to introduce a standardized option for disadvantaged students in the VET system came from state actors (CH1, 2, 6). The state actors wanted to strengthen the social equality aspect, which is why the national VET office developed the abovementioned guideline for the support measures (CH3). The guideline was aimed at strengthening the social and inclusiveness character of the short-tracks and, in fact, the state actors initially hoped to establish a binding guideline (CH3). However, the state was not aiming to create a safety net for a large number of young people (CH5). Several interview partners emphasized that there are 'other ways' for those seen as being the most disadvantaged young people (CH4, CH5). For the cantons, short-tracks also have a social function, which is why they try to prevent businesses from dropping them (CH4). In addition, the state actors pay close attention to the short-tracks' function as a stepping stone to further training options (CH4). One interview partner admitted that the short-tracks carry a 'contradiction in terms' (CH5) – a 'split between standardization and individualization' (CH3).

Employers view short-tracks as means of providing (lower-level) skills that are needed in the labour market. The aim of the development (of the content) of the short-tracks is

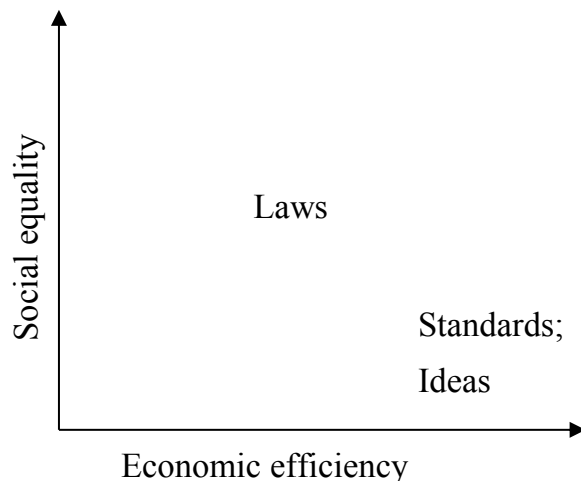
to create an independent occupation that the labour market needs (CH7). Similarly, the decision to offer short-track training places, and the selection process for apprentices are driven by the idea of creating a (bespoke) trained labour force rather than the idea of providing training for vulnerable groups (CH5). For the unions, the possibility of progression to further training options is an essential feature because they view the short-tracks as a social tool for integrating young people who may lack academic credentials into the system (CH2). However, the support from the unions also focuses on the employability of the apprentices.

All interview partners agreed that the implementation of the short-tracks is very successful. They referred to the evaluations that show a high proportion of the graduates continue in further training (40%) (SBFI, 2016).⁶ Overall, all actors (state, employers and unions) support the key role of employers and the orientation towards the labour market. However, focusing on the motives, we find that the state and the unions also try to support short-tracks as a means of bringing students with lower grades into training but without interrupting the close private–public cooperation.

Summary. In a nutshell, the Swiss national VET law provides the frame for a social interpretation and implementation of short-tracks through individual support measures. However, the cantons vary greatly in their efforts to enhance the inclusiveness character of short-tracks. This is why we situate the regulative dimension of Swiss short-tracks in the middle of the social equality axis (see Figure 3). The further institutionalization of the Swiss short-tracks is mainly guided by the economic goal of producing skilled labour that is demanded by the labour market. In particular, the standards according to which short-tracks are implemented and the ideas behind institutionalization are dominated by market forces and a strong dependency on employers. This leads us to characterize institutionalization according to standards and ideas as very much driven by economic efficiency and it scores low with regard to social equality (Figure 3).

⁶ Also, studies show that 80% of the graduates are in employment two and a half years after graduation (Kammermann et al., 2011: 84).

Figure 3: The institutionalization of short-tracks in Switzerland between economic efficiency and social equality



Source: Authors' own, based on a synthesis of a qualitative institutional analysis

Comparison and discussion

Our analysis allows us to compare the institutionalization of short-tracks according to three aspects: (a) the overall goal orientation between the three countries (cross-case); (b) the three institutional dimensions (across the three countries); and (c) within one country (within-case). The following section concentrates on the comparison according to the three institutional dimensions across the three countries. After this, we will turn to the cross-case and within-case variation.

Short-tracks and the law (regulative dimension)

The comparison of the regulative frameworks mirrors the different social and economic ambitions in the three countries. The Danish regulative framework places social orientation at the centre. The curricula orientation towards the apprentices' abilities, and state subsidies for firms largely decouples the short-tracks from market forces. The targeting of young people who are seen as disadvantaged moves the Danish regulative dimension clearly towards the social goal dimension. In contrast, the German and Swiss regulative dimensions grant a great deal of power to the business actors. Employers have a large say in the content definition of short-tracks and function as gatekeepers for them.

Technically, the German VET law does not even refer to short-tracks as a specific programme for students who do not meet certain thresholds. This is different in the Swiss case. The Swiss national VET law emphasizes the social ambitions of short-tracks and establishes a frame for individual support measures. A non-binding guideline is supposed to strengthen this social dimension. Overall, we see that the Danish regulative dimension clearly targets the social goal dimension, whereas the Swiss regulative dimension touches upon both social equality and economic efficiency. Seen from the regulative dimension, the German case is least oriented towards social equality.

Short-tracks and standardization (normative dimension)

With regard to the normative dimension, we find that the Danish case is the one most oriented towards social equality and that this is the scenario most consistently across the three decentralized governance levels (sector, occupation and region). In Germany and Switzerland, the economic efficiency dimension is more dominant than in Denmark. In the German and the Swiss cases, standardization across the various governance levels is more limited. Thus, for instance, in eastern Germany, short-tracks lean more towards the social dimension (as opposed to western Germany). In Switzerland, cantonal and school actors in certain regions are key players in pushing the social dimension of short-tracks. Interestingly, in both these examples, state actors play a crucial role in driving institutional variation when intervening in the regional economy within decentralized systems. However, crucially, the limited standardization across governance levels of short-tracks in Germany and Switzerland, which to some extent limits their overall social equality orientation, seems to raise employers' participation in the short-track programmes.

Short-tracks and legitimizing argument (cultural–cognitive dimension)

One interesting finding is the difference in how the social partners legitimize the short-tracks in the cultural–cognitive dimension. As the German and Swiss employers have a big stake in the short-tracks due to their demand-driven configuration, they are quite active in the process of keeping them oriented towards economic efficiency. In the German case, initially, this even led to a break with the consensus principle adopted between the social partners. In Denmark, on the other hand, the employers have more or less given up trying to shape the programmes to their advantage and, thereby, 'allow them'

to be socially oriented. Conversely, however, the employers are participating less in the programmes and this contributes to the modest coverage of the short-tracks. The social equality idea of the Danish short-tracks also permeates the employers' side but the decision as to whether to participate is left up to each firm to decide according to its sense of social responsibility. As far as the case of Switzerland is concerned, in which the unions are playing a more marginal role, the employers' side has more leeway to set the terms for the training without 'risking' conflict with the unions or the state. With regard to the state actors, we observe that in all three countries the state emphasizes the role of short-tracks as a means of enacting social policy. In Denmark in particular, this is the case. In Switzerland, however, the policy orientation according to market forces is far more present among the state actors, who view economic efficiency as a precondition for a social policy tool to be successful.

Conclusion

The aim of this article was to understand how economic and social goal dimensions are institutionalized in short-track dual training programmes in Denmark, Germany and Switzerland. Therefore, we drew on the institutionalist literature and combined sociological institutionalism and political economy perspectives. So, are short-tracks torn between economic efficiency and social equality? We find that both goals are relevant for the institutionalization of short-tracks and that each institutional dimension and each country has developed its own way of speaking to both goals. The systematic comparative institutional analysis of our three cases revealed interesting variations between the countries and between the three institutional dimensions, but also within the countries.

In Denmark, the employers have relatively little influence over the content definition of the training programmes, which is highly individualized to adjust for the specific needs of apprentices. The support structure around the apprentices is strong and there are youth counsellors who help with matching the young people with firms. The state and the unions, but also the employers, understand short-tracks as a means whereby academically and socially disadvantaged young people are offered the opportunity to receive vocational training. In Switzerland and in Germany, on the contrary, the definition of the training curricula is, rather, oriented towards market needs. The economic goal dimension of the Swiss short-tracks overall is relatively strong, especially in the normative and cultural–cognitive dimensions. In Germany, the normative and cultural–cognitive

dimensions have a slightly stronger social equality orientation than the regulative framework prescribes. However, the view of the short-tracks as an economically oriented and quite similar programme to the regular-length programmes is more pertinent in Germany than in both Switzerland and Denmark.

It follows that the goal orientation of the short-tracks shows clear traits of Williamsonian (more in Germany and Switzerland) and Durkheimian (more in Denmark) institutions. Whereas in Switzerland the state was the main driver of the short-track reform, in Germany it was the employers' camp, which adopted an employer-oriented focus albeit mixed with a social equality orientation. In the three-country comparison, Switzerland provides the example in which the balance between the two dimensions is most pronounced. Despite the three countries' belief in collective skill formation, our findings suggest that there are elements of welfare system types, industrial relations and social policy tradition in general (Esping-Andersen, 1990; Iversen and Stephens, 2008) that might – at least partly – explain the observed variation and offer a promising starting point for further research.

Our analysis also reveals that the countries not only differ in their overall goal orientation, but that different institutional dimensions vary in their orientation towards a more social or more economic understanding of training programmes. In Denmark, the three institutional dimensions seem to be the most homogenous, with a clear focus on the social function of short-tracks in all three institutional dimensions. In Germany, we see that the regulative dimension clearly differs from the other two dimensions. Whereas the regulative framework focuses on the economic efficiency of training, the standards and ideas related to short-tracks reveal that German short-tracks have a social goal orientation. Compared to Germany, the institutionalization of short-tracks in Switzerland is inverted. Here, the regulative dimension highlights the social aspect of short-tracks, although this impression fades away when looking at the strong economic orientation in the normative and cultural–cognitive dimensions.

Overall, our analytical strategy of combining sociological institutionalism with comparative political economy concepts and, more specifically, the economic efficiency and social equality perspectives, has allowed us to move beyond written rules and accentuate variation between the three key institutional dimensions: regulative, normative and cultural–cognitive. This provides an important basis for a better understanding of how complex institutional configurations are put into practice in strongly decentralized

governance systems and for uncovering the specific normative and cultural underpinnings of collectively organized work-based educational programmes. Indeed, our findings suggest that normative and cultural elements seem to be tightly connected (in all three countries), although decoupling can occur between the goal orientation of these two dimensions, and that of the regulative dimension (as found in Germany and Switzerland).

Even though collective skill formation systems and especially short-tracks are limited in the extent to which they provide general skills (often seen as key to social and political participation), we find that these systems differ in their approach with regard to how to combine social and economic demands. Whereas some countries mainly rely on the voluntary engagement of business – the backbone of dual vocational training – other countries stretch these boundaries further and focus more on the apprenticeship perspective. The extent to which one or the other way is more successful in enhancing social inclusion is a question for further empirical research. Also, further analyses are needed to explore the extent to which these findings go beyond the case of short-track training in collective skill formation. The remaining puzzle is how the institutionalization of the short-tracks has come about and developed over time into what they are today. Our study could only touch upon the question as to why we observe the current emphasis on economic versus social goals in short-track vocational training. Further research could focus on the historical development of short-tracks, exploring in greater detail the intricate and dynamic interplay between actors and institutions at the intersection of social and economic policies associated with short-track apprenticeships.

References

- Becker GS (1993) *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, 3rd ed. Chicago: University of Chicago Press.
- Bernhard N (2017) *Durch Europäisierung zu mehr Durchlässigkeit? Veränderungsdynamiken des Verhältnisses von beruflicher Bildung zur Hochschulbildung in Deutschland und Frankreich*. Opladen: Budrich UniPress.
- Berufsbildungsgesetz 2002. Bern: Bundesversammlung der Schweizerischen Eidgenossenschaft.
- BIBB (2016) *Datenreport zum Berufsbildungsbericht 2016*. Bonn: Bundesinstitut für Berufsbildung.
- Blaksteen M (1994) Skolen i årets løb (1993–1994). In: Haue H and Skovgaard-Petersen V (eds) *Uddannelses historie 1994*. Odense: Odense Universitetsforlag.
- Brunila K, et al. (2017) Transitions, justice, and equity in Finland. In: *Oxford Research Encyclopedia of Education*. Oxford: Oxford University Press. Available at: <https://doi.org/10.1093/acrefore/9780190264093.013.130>
- Bundesrat (2019) *Einführung des Eidgenössischen Berufsattests – eine Bilanz*. Bern: Schweizerische Eidgenossenschaft.
- Bussemeyer MR (2009) *Wandel trotz Reformstau: Die Politik der beruflichen Bildung seit 1970*. Frankfurt am Main: Campus.
- Bussemeyer MR (2015) *Skills and Inequality. Partisan Politics and the Political Economy of Education Reforms in Western Welfare States*. Cambridge: Cambridge University Press.
- Bussemeyer MR and Trampusch C (2012) The comparative political economy of collective skill formation. In: Bussemeyer MR and Trampusch C (eds) *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp.3–38.
- Canning R (2012) Re-conceptualising vocational education: The transition from powerful to useful knowledge. In: Pilz M (ed.) *The Future of Vocational Education and Training in a Changing World*. Wiesbaden: Springer VS, pp.43–61.
- Carstensen MB and Ibsen CL (2019) Three dimensions of institutional contention: Efficiency, equality and governance in Danish vocational education and training reform. *Socio-Economic Review*. Epub ahead of print 30 March 2019. DOI: 10.1093/ser/mwz012.
- Cedefop (2014) *Denmark. VET in Europe: Country Report*. Available at: www.cedefop.europa.eu/en/publications-and-resources/country-reports/vet-in-europe-country-reports (accessed 28 October 2015).
- Cedefop (2017) *Investing in Skills Pays Off: The Economic and Social Cost of Low-skilled Adults in the EU*. Research Papers No. 60. Luxembourg: Publications Office of the European Union.
- Culpepper PD (2003) *Creating Cooperation. How States Develop Human Capital in Europe*. Ithaca: Cornell University Press.

- Culpepper PD (2007) Small states and skill specificity: Austria, Switzerland and inter-employer cleavages in coordinated capitalism. *Comparative Political Studies* 40(6): 611–637.
- DiMaggio PJ and Powell WW (eds) (1991) *The New Institutionalism in Organizational Analysis*. Chicago: University of Chicago Press.
- Ebner C (2013) *Erfolgreich auf dem Arbeitsmarkt? Die duale Berufsausbildung im internationalen Vergleich*. Frankfurt am Main: Campus.
- Emmenegger P, Graf L and Trampusch C (2019) The governance of decentralized co-operation in collective training systems. *Journal of Vocational Education and Training* 71(1): 21–45.
- Esaiasson P, Gilljam M, Oscarsson H and Wängrud L (2007) *Metodpraktikan. Konsten att studera samhälle, individ och marknad*, 3rd ed. Stockholm: Norstedts Juridik.
- Esping-Andersen G (1990) *The Three Worlds of Welfare Capitalism*. Cambridge, UK: Polity Press.
- Esser FH (2009) Schwerpunkt: Zweijährige Ausbildungsberufe. *Lernen und lehren: Elektrotechnik-Informatik und Metalltechnik* 24(96): 160–161.
- European Commission (2014) *Research and Innovation as Sources of Renewed Growth*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels: European Commission.
- European Commission (2018) Find and compare qualifications frameworks. Available at: https://ec.europa.eu/ploteus/en/compare?field_location_selection_tid%5B%5D=444&field_location_selection_tid%5B%5D=448 (accessed 17 April 2018).
- Felouzis G, Maroy C and Van Zanten A (eds) (2013) *Les marchés scolaires: Sociologie d'une politique publique d'éducation*. Paris: Presses Universitaires de France.
- Ferrier F and Anderson D (1998) *Different Drums, One Beat? Economic and Social Goals in Education and Training*. Monash, Melbourne: NCVER.
- George AL and Bennett A (2005) *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.
- Gonon P and Maurer M (2012) Educational policy actors as stakeholders in the development of the collective skill system: The case of Switzerland. In: Busemeyer MR and Trampusch C (eds) *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp.126–149.
- Graf L (2013) *The Hybridization of Vocational Training and Higher Education in Austria, Germany, and Switzerland*. Opladen: Budrich UniPress.
- Granato M and Ulrich JG (2013) Die Reformierbarkeit des Zugangs in duale Berufsausbildung im Spannungsfeld institutioneller Widersprüche. *Schweizerische Zeitschrift für Soziologie* 39(2): 315–339.

- Hall PA and Soskice D (2001) An introduction to varieties of capitalism. In: Hall PA and Soskice D (eds) *Varieties of Capitalism: The Institutional Foundation of Comparative Advantage*. New York: Oxford University Press, pp.1–68.
- Hupka-Brunner S, Sacchi S and Stalder BE (2010) Social origin and access to upper secondary education in Switzerland: A comparison of company-based apprenticeship and exclusively school-based programmes. *Swiss Journal of Sociology* 36(1): 11–31.
- Höpner M (2007) *Coordination and Organization*. The Two Dimensions of Nonliberal Capitalism. MPIfG Discussion Paper 07/12. Cologne: Max Planck Institute for the Study of Societies.
- Iversen T and Stephens JD (2008) Partisan politics, the welfare state, and three worlds of human capital formation. *Comparative Political Studies* 41(4–5): 600–637.
- Jackson M (2009) Disadvantaged through discrimination: The role of employers in social stratification. *British Journal of Sociology* 60(4): 669–692.
- Jørgensen CH (2014) *The Current State of the Challenges for VET in Denmark*. Roskilde: Roskilde University, Department of Psychology and Educational Studies.
- Kammermann M, Stalder BE and Hättich A (2011) Two-year apprenticeships: A successful model of training? *Journal of Vocational Education and Training* 63(3): 377–396.
- Kath F (2005) Mehr Ausbildung durch verkürzte oder gestufte Ausbildungsberufe? *Berufsbildung in Wissenschaft und Praxis* 34(3): 5–8.
- Leech B (2002) Asking questions: Techniques for semistructured interviews. *Political Science and Politics* 35(4): 665–668.
- Li Y and Dervin F (2019) Constructions of social justice, marginalization, and belonging. In: *Oxford Research Encyclopedia of Education*. Available at: <https://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-132?rskey=daESMj&result=19> (accessed 5 August 2019).
- López-Fogués A (2012) The discourses of vocational education and training: A developmental response from a European perspective. *European Educational Research Journal* (11)4: 558–569.
- Martin CJ (2013) Crafting interviews to capture cause and effect. In: Mosley L (ed.) *Interview Research in Political Science*. Ithaca: Cornell University Press, pp.109–124.
- Martin CJ and Knudsen JS (2010) Scenes from a mall: Retail training and the social exclusion of low-skilled workers. *Regulation and Governance* 4(3): 345–364.
- Martin CJ and Swank D (2012) *The Political Construction of Business Interests. Coordination, Growth, and Equality*. Cambridge: Cambridge University Press.
- Martin CJ and Thelen K (2007) Varieties of coordination and trajectories of change: Social policy and economic adjustment in coordinated market economies. *World Politics* 60(October): 1–36.

- Nelson M (2012) Continued collectivism: The role of trade self-management and the Social Democratic Party in Danish vocational education and training. In: Busemeyer MR and Trampusch C (eds) *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp.179–204.
- Nergaard-Holm S (2008) Frit optag skaber frafald på erhvervsuddannelserne. *Erhvervsbladet*, 29 January 2008. Available at: www.da.dk (accessed 10 July 2017).
- Nielsen SP and Cort P (1997) *Vocational Education and Training in Denmark*, 2nd ed. Thessaloniki: Cedefop.
- Nylund M and Virolainen M (2019) Balancing ‘flexibility’ and ‘employability’: The changing role of general studies in the Finnish and Swedish VET curricula of the 1990s and 2010s. *European Educational Research Journal* 18(3): 314–334.
- Powell JJW, Bernhard N and Graf L (2012) The emerging European model in skill formation: Comparing higher education and vocational training in the Bologna and Copenhagen processes. *Sociology of Education* 85(3): 240–258.
- Produktionsskoler (2019) Hvad er en produktionsskole? Available at: <http://produktionsskoler.dk/index.php?page=hvad-er-en-produktionsskole> (accessed 11 August 2019).
- Protsch P (2014) *Segmentierte Ausbildungsmärkte. Berufliche Chancen von Hauptschülerinnen und Hauptschülern im Wandel*. Opladen: Budrich UniPress.
- Rambøll (2016). *Analyse af erhvervsgrunduddannelsen EGU*. Report. Copenhagen: Council for Youth Education.
- Rauner F (ed.) (2009) *Steuerung der beruflichen Bildung im internationalen Vergleich*. Gütersloh: Verlag Bertelsmann Stiftung.
- Retsinformation (2018a) Lov om erhvervsgrunduddannelse m.v. (EGU-loven). LOV nr 506 af 30/06/1993. Available at: www.retsinformation.dk/Forms/R0710.aspx?id=74938 (accessed 14 March 2018).
- Retsinformation (2018b) Bekendtgørelse om udbetaling af bonus til private arbejdsgivere, der ansætter elever i erhvervsgrunduddannelse (egu-bonusordningen). Available at: www.retsinformation.dk/Forms/R0710.aspx?id=184040 (accessed 14 March 2018).
- SBFI (2014) Zweijährige berufliche Grundbildung mit eidgenössischem Berufsattest Leitfaden. Available at: https://www.sbf.admin.ch/dam/sbf/de/dokumente/leitfaden_zweijaehrigeberuflichegrundbildungmiteidgenoessischemb.pdf.download.pdf/leitfaden_zweijaehrigeberuflichegrundbildungmiteidgenoessischemb.pdf (accessed 12 August 2019).
- SBFI (2016) Evaluation EBA II Evaluation der Arbeitsmarktsituation und Weiterbildungsperspektive von Absolventen und Absolventinnen mit eidgenössischem Berufsattest. Available at: https://www.sbf.admin.ch/dam/sbf/de/dokumente/2016/05/eva-eba.pdf.download.pdf/eba2-schlussbericht_d.pdf (accessed 12 August 2019).

- SBFI (2018) Berufsverzeichnis berufliche Grundbildung. Available at: www.becc.admin.ch/becc/public/bvz/beruf/grundbildungen (accessed 27 April 2018).
- Scott WR (2014) *Institutions and Organizations: Ideas, Interests, and Identities*, 4th ed. Thousand Oaks: SAGE Publications.
- Sigurjonsson G (2002) *Dansk Vekseluddannelse I Støbeskeen: Fra Lavstidens Mesterlære Til Moderne Dansk Vekseluddannelse*. Aalborg: Aalborg Universitet.
- Solga H (2005) *Ohne Abschluss in die Bildungsgesellschaft*. Opladen: Verlag Barbara Budrich.
- Solga H (2009) *Der Blick nach vorn: Herausforderungen an das deutsche Ausbildungssystem*. WZB Discussion Paper SP I 2009–507. Berlin: WZB Berlin Social Science Centre.
- Sørensen JH and Jensen G (1988) *The Role of the Social Partners in Youth and Adult Vocational Education and Training in Denmark*. Berlin: European Centre for the Development of Vocational Training.
- Stern S and Von Dach A (2018) *Evaluation der fachkundigen individuellen Begleitung (fiB) in zweijährigen beruflichen Grundbildungen mit EBA*. Final Report. Bern: SBFI.
- Streeck W, et al. (1987) *Die Rolle der Sozialpartner in der Berufsausbildung und beruflichen Weiterbildung: Bundesrepublik Deutschland*. Berlin: Cedefop.
- Streeck W (2009) *Re-forming Capitalism: Institutional Change in the German Political Economy*. Oxford: Oxford University Press.
- Thelen K (2004) *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*. New York: Cambridge University Press.
- Thelen K (2012) Varieties of capitalism: Trajectories of liberalization and the new politics of social solidarity. *Annual Review of Political Science* 15(June): 137–159.
- Thelen K (2014) *Varieties of Liberalization and the New Politics of Social Solidarity*. New York: Cambridge University Press.
- Thelen K and Busemeyer MR (2008) *From Collectivism to Segmentalism: Skill Regimes and Trends in German Vocational Training*. MPIfG Discussion Paper 08/13. Cologne: Max-Planck-Institute for the Study of Societies.
- Thelen K and Busemeyer MR (2012) Institutional change in German vocational training: From collectivism to segmentalism. In: Busemeyer MR and Trampusch C (eds) *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press, pp.68–100.
- Trampusch C (2007) Industrial relations as a source of solidarity in times of welfare state retrenchment. *Journal of Social Policy* 36(2): 197–215.
- Uhly A, Kroll S and Krekel EM (2011) *Strukturen der Entwicklungen der zweijährigen Ausbildungsberufe des dualen Systems*. Bonn: BIBB.

- Undervisningsministeriet (2017) Nøgletal for aktivitet på erhvervsgrunduddannelsen (egu). Available at: <http://statweb.uni-c.dk/databanken/uvmDataWeb/Show-Report.aspx?report=EAK-egu-tid> (accessed 14 March 2018).
- Walford G (1998) Durkheim, democracy and diversity. In: Walford G and Pickering WSF (eds) *Durkheim and Modern Education*. New York: Routledge, pp.112–127.
- Wegge M and Weber H (1999) Steuerung in der Berufsausbildung: Zwischen Regulation und Deregulation *Zeitschrift für Pädagogik* Special Issue 40: 137–156.
- Wettstein E and Gonon P (2009) *Berufsbildung in der Schweiz*. Bern: hep Verlag.
- Whitty G and Power S (2000) Marketization and privatization in mass education systems. *International Journal of Educational Development* 20(2): 93–107.
- Wiborg S and Cort P (2009) *The vocational education and training system in Denmark: Continuity and change*. In: Bosch G and Charest J (eds) *Vocational Training: International Perspectives*. London: Routledge, pp.84–109.
- Young M (2009) Education, globalisation and the ‘voice of knowledge’. *Journal of Education and Work* 22(3): 193–204.

Appendix

Table 2: Overview interviews (chronologically sorted for each country case)

Code	Actor Type	Date	Place
DK1	Trade union	19.09.2017	Copenhagen
DK2	National State Actor	21.09.2017	Copenhagen
DK3	Education think-tank	29.09.2017	Copenhagen (telephone interview)
DK4	Youth guidance centre	02.10.2017	Copenhagen (video interview)
DK5	Production School Association / Production school	26.10.2017	Korsør (video interview)
DK6	Youth guidance centre	31.10.2017	Copenhagen (video interview)
DK7	Youth guidance centre	31.10.2017	Copenhagen (video interview)

Code	Actor Type	Date	Place
DE1	National research institute	03.10.2017	Berlin
DE2	Employer representative	13.10.2017	Berlin
DE3	Federal VET institute	17.10.2017	Bonn (written answers to interview questions)
DE4	Trade union	23.10.2017	Frankfurt (telephone interview)
DE5	National economic chamber	27.10.2017	Berlin
DE6	National state actor	03.11.2017	Bonn (telephone interview)
CH1	National state actor	15.3.2017	Bern
CH2	Trade union	24.09.2017	Bern (written email statement)
CH3	National research institute	04.10.2017	Zollikofen
CH4	Regional State Actors organised on the national level	04.10.2017	Bern
CH5	National state actor	23.10.2017	Bern
CH6	National state actor	26.10.2017	Münsingen (telephone interview)
CH7	National employer association	24.11.2017	Zurich

3 Embedded flexibilization and polite employer domination

The case of short-track apprenticeships in Switzerland

Published in: *Empirical Research in Vocational Education and Training*, 2020, Vol. 12, No. 2

With Lukas Graf (Hertie School of Governance, Germany) and Anna Wilson (University of Lausanne, Switzerland)

Abstract

Liberalization pressures challenge countries to adapt their training systems. This is particularly relevant for coordinated market economies with firm-driven but collectively governed apprenticeship systems. Recent literature has identified different liberalization trajectories for these countries. For instance, segmentalism describes the increasing influence of large employers in Germany. In Denmark, manage increased flexibility in training through embedded flexibilization. In this paper, we identify a new form of embedded flexibilization, characterized by polite employer domination. We find this trajectory of liberalization in Switzerland, which represents another training system heavily based on firm involvement. We illustrate our argument with the example of short-track apprenticeship training, which has been expanded in all three mentioned countries in response to ongoing liberalization and deindustrialization pressures. In Switzerland, the relevant reform was initiated by the state while business adopted a rather passive role initially. Yet, state actors eventually stepped back and delegated key competences to employers, which implies that the employers' camp asserted their interests in the end while tolerating some concessions for the benefit of disadvantaged groups. Our process tracing reveals that policy makers used layering to implement short-tracks that enhance social inclusion, while simultaneously increasing the scope of employer cooperation.

Introduction

National political economies and their skill formation systems face increasing liberalization and deindustrialization pressures, related to factors such as growing global competition, the rise of the service sector, and rapid technological developments (Streeck 2009; Mayer and Solga 2008). The literature on institutional change discusses different reactions to such increasing pressures. While some authors identify a process of policy conversion along the lines of liberalization (Albo 2005; Baccaro and Howell 2011), others highlight the variation in how systems liberalize (Thelen 2012, 2014). For example, Thelen (2012) finds that political economies differ in the extent to which they maintain strategic employer coordination to achieve joint economic gains, on the one hand, and equality, on the other hand. It is crucial to understand the effects on equality and employer coordination because both aspects represent central features of political economies and their welfare systems (Estevez-Abe et al. 2001; Martin and Swank 2008).

In order to understand different trajectories of liberalization, studying collective skill formation systems, which are located at the intersection of education and labour market policies, can generate insightful answers. Collective skill formation systems build on the cooperation among state actors, employers, and unions for the purpose of providing vocational education and training (VET) for a broad share of the population (Culpepper and Finegold 1999; Bussemeyer and Trampusch 2012; Emmenegger et al. 2019). However, pressures on firms to cost-minimize along with global competition and swift changes in skill demands in the post-industrial era may reduce the number of apprenticeship positions. This risks leaving many young people, specifically those with a weaker profile, without training contracts and, in the longer term, unemployed (Koudahl 2010). Policy actors must therefore pay attention to the fragile balance between broader societal interests and firms' voluntary, but market-driven, willingness to participate as training-providers (Martin and Knudsen 2010; Carstensen and Ibsen 2019; Durazzi and Geyer 2019).

Collective skill formation systems are under pressure to adapt. However, institutional change is “eminently political” (Hall and Thelen 2009, p. 27) and change in collective skill formation systems is influenced by the way the governance of VET incorporates the (often competing) interests of the different stakeholders, which can be linked to specific trajectories of liberalization. Thelen and Bussemeyer (2012) show that the German VET system moves from collectivism to segmentalism, due to the increasing influence

of large firms at the expense of cross-sectoral interests and collectivist solutions. Such dualization tendencies are argued to most likely occur in countries with sector or industry coordination (Thelen 2012): more specifically where export-oriented manufacturing sectors are dominant in the political economy. Drawing on the Danish VET system, Thelen (2014) identifies a trend towards embedded flexibilization and modularization. In this case, new forms of flexibility enable vulnerable groups to get and keep good jobs (ibid., p. 14). At the same time, these policies are embedded in encompassing frameworks that collectivize social risks such as unemployment or skill shortages. In contrast to Germany, the Danish economy is characterized by a pluralist business community where the manufacturing sectors are not dominant (Ibsen and Thelen 2017). This is seen as a key factor to how Denmark has managed to maintain its high level of solidarity and equality through high-level state capacity. The literature argues that this type of liberalization is typical for Scandinavian, social democratic welfare states (Korpi and Palme 1998; Nelson 2012; Carstensen and Ibsen 2019).

We argue that political economies can also find a way to react to liberalization pressures in which equality is kept on a high level in combination with employer coordination even increasing, for instance, in the form of joint activities through employer associations. In the case of Switzerland, we identify embedded flexibilization that is characterized by what we call ‘polite employer domination’ (inspired by Pepper Culpepper’s seminal work *Quiet Politics and Business Power* from 2010). We refer to ‘polite employer domination’ as the strong but not very ‘loud’ role and influence of employers in policy reform processes which can eventually lead to the delegation of key competences to employers. Switzerland—a coordinated market economy (Hall and Soskice 2001), albeit a more liberal variant (Iversen and Stephens 2008; Becker 2009; Mach and Trampusch 2011)—is a core collective skill formation system in which employer coordination through associations and apprenticeship training is even more significant than in Denmark or Germany (Ryan 2012). In particular, the “strong tradition of self-regulation by economic associations” (Mach and Trampusch 2011, p. 15) makes Switzerland an interesting case to study how institutions react and adapt to global competition and liberalization processes. Thus, by adding Switzerland to the debate, we generate general insights into the role of business in collective governance structures.

We illustrate our argument by zooming in on a relatively new policy domain to which the literature on institutional change in VET systems refers, namely the introduction of

short-track dual training ('short-tracks') (Thelen and Busemeyer 2012; Thelen 2014). These short-tracks target young people that have difficulties accessing regular-length apprenticeship programmes. We argue that short-tracks make good examples of the mentioned 'fragile balance' between broader social interests (providing access to training for disadvantaged groups) and firms' willingness to provide apprenticeships. Short-tracks entail theory-reduced, applied training and typically last 2 years (in contrast to 3- and 4-year regular training). They build on the same collective skill formation logic as the regular programmes and are an integral part of dual VET, leading to standardized and recognized certificates, but are easier to access and to complete compared to the regular programmes. Three dual VET systems went through reform processes implementing standardized dual short-tracks, namely Denmark, Germany, and Switzerland.

As an empirical case, we concentrate on the VET reform process in Switzerland in the late 1990s and 2000s. This reform introduced standardized short-track training programmes as an additional training path with a distinctive new VET certificate targeting disadvantaged candidates. The highly collective nature of the Swiss VET governance coupled with relatively little state intervention in VET policy (Trampusch 2010; Armingeon 2011; Gonon and Maurer 2012) makes it an interesting case in the family of collective skill formation systems. In as much as Switzerland combines the elements of lesser state influence and highly collectively organized business interest, we see the potential to add key insights to the puzzle of trajectories of liberalization. Therefore, analysing how short-tracks were introduced, our study asks what trajectory of liberalization, if any, the Swiss VET system displays in view of the newly introduced short-track training programmes?

We find that the introduction of short-track training programmes in Switzerland represents a case of embedded flexibilization characterized by 'polite employer domination'. The state was the key initiator of the reform and used layering to introduce new training programmes for disadvantaged—before retreating again to allow business to regain control over their implementation in a collective governance set-up. Our research uncovers how the strong position of employers influenced the reform process, even though business did not take a very proactive stance on the issue. This polite domination refers to the passive but salient way in which the employers' camp asserted its interest. Nevertheless, the state was able to enhance access to vocational training for disadvantaged students. Our findings help to better understand the capacity of collective skill

formation systems to adapt to liberalization pressures. We present a case that shows that embedded flexibilization can also come in a variation in which both social equality and employer coordination maintain high levels—which is an unexpected finding in the view of established trajectories of liberalization. Thus, this is a case where the VET system implements embedded flexibilization but circumvents substantial liberalization.

The following section explains our research design and describes our method and data. The subsequent section analyses the hitherto underexplored Swiss case in detail. In the final section, we interpret and discuss our findings.

Analysing change through trajectories of liberalization

Our research draws on contemporary literature on the trajectories of liberalization (Thelen and Bussemeyer 2012; Thelen 2014; Carstensen and Ibsen 2019). This section introduces three trajectories of liberalization against which our Swiss case can then be discussed. Ultimately we find that embedded flexibilization is the key trajectory in our case, so it is given special attention in this section. Furthermore, we briefly draw on the literature on modes of institutional change in vocational education and training (e.g. Thelen 2004, 2014; Trampusch 2010; Martin 2017) which further sharpens our analytical perspective on the actor constellations as well as the characteristics of the political context.

Thelen (2012, 2014) has criticized the prevalent one-dimensional understanding of liberalization as a (declining) degree of coordination. She argues that liberalization can be analytically captured within a two-dimensional field in which strategic employer coordination (‘x-axis’) and equality (‘y-axis’) play the central role. In relation to skill formation, Thelen (2014, p. 109ff) refers to three key aspects of training which she uses to characterize institutional change. Firstly, is the access to training narrow (selective) or broad, thus does it support equality or not? Secondly, does the content underline specific or general skills and to which extent do employers cooperate to develop the training content? Thirdly, what (different) paths does the training system offer? Furthermore, the relative power of the organized interest, especially the influence of business actors, shapes the trajectories of change (Thelen 2014, pp. 30–31). Where the manufacturing sector is export-oriented and predominantly composed of large firms, its influence is high and the state is more likely to shape (VET) policies that align with employers’ interests (ibid, pp. 30–31). In contrast, where the business camp is diverse, neither

dominated by large or small firms nor export-oriented per se and not dominated by the manufacturing sector, employers' influence is lower and the state has more leeway to pursue policies that are more oriented to social solidarity (in the VET policy context). Based on these factors, the literature distinguishes between three ideal typical models of liberalization.

Firstly, 'deregulatory liberalization' is characterized by declining coverage rates and the "active dismantling of coordinating capacities" of the employers (Thelen 2014, p. 13). This trajectory might, for instance, imply that rules and regulations in place to protect collective interests are dismantled in favour of more business- and market-friendly policies (see e.g. Streeck 2009, p. 13). With regard to vocational training, this trajectory translates into low standardization and low levels of cooperation. The state plays a minor role while market players are relatively free to design content and access regulations. Deregulatory liberalization is often considered to take place through institutional displacement.

The second ideal type is 'dualization' (or 'segmentalism') (Emmenegger et al. 2012; Häusermann and Schwander 2012). It is characterized by a "distinct narrowing in the number of firms and workers covered" by traditional corporatist regulations (Thelen 2014, p. 14). Institutions that facilitate collective action do not disappear, but institutional 'drift' makes them less encompassing because coordination happens more on the sector- and firm-levels—rather than covering the employers and the work force as a whole. For example, some core firms and industries are coordinating and can therefore exert influence over state policies (such as VET), whereas others cannot. Large business players especially strengthen their influence in training and adapt training to their needs and internal labour markets. Furthermore, the state is assumed to be more compliant to pressure from this business interest group, due to its relative economic importance.

Thirdly, there is the 'embedded flexibilization' type of liberalization, which "involves the introduction of new forms of flexibility within the context of continued strong and encompassing framework that collectivizes risk" (Thelen 2014, p. 14). Training systems are made more flexible by introducing new training paths and training schemes that can be tailored to individual needs. This trajectory of institutional change implies that a high level of solidarity and inclusiveness can be maintained even in the face of the flexibilization of labour market institutions. This is achieved by empowering vulnerable (worker) groups to thrive in a changing labour market while simultaneously

maintaining the participation and support of the employers' side. Broad access to training, including disadvantaged groups, plays an important role and is actively supported by the state. However, the encompassingness of employers' cooperation is reduced especially due to state intervention. This is potentially linked to a partial disengagement of employers from apprenticeship training, as their influence in this form of training is reduced (Jørgensen 2015; Carstensen and Ibsen 2019). In contrast to the dualization trajectory, manufacturing interests are typically less pronounced and dominant within organized business (Thelen 2014, p. 31). This leads to a more pluralist balanced power relation between different interests (e.g. manufacturing and service sectors) and opens up space for state agents to strengthen the position of vulnerable groups (Huber and Stephens 2000; Martin and Swank 2012). In their study of institutional change in the Danish VET system, Carstensen and Ibsen (2019) show how the state—under conditions of a left-wing government—is able to broker policy reforms in a coalition with trade unions that may both benefit employers and retain a degree of equality for the disadvantaged.

In instances where trade unions play an important role in the collective skill formation setting, this actor group may be a vehicle for inclusive policy change. In a comparison of VET reforms in Germany and Austria, Durazzi and Geyer (2019) show that while the Austrian unions together with the state were able to promote inclusive vocational training options for disadvantaged candidates, the German unions' opposition to a similar training programme disabled the possibility for such a policy.

We analyse the Swiss VET reform process involving the short-track programmes against the backdrop of these different trajectories of liberalization. Employer coordination and employer domination play a key role in identifying the different trajectories. We understand 'employer coordination' as joint activities between different employers, for example, when employer associations enable the coordination of training content. We understand 'employer domination' as the influence the business camp exercises on policy making. In our case study, this influence surfaces in the decision-making process but it is especially the policy-outcome that reflects employer power: employers hold key competences after the reform. We find that the influence of employers is rooted in the state's anticipation of business' gatekeeper role but also the ability of the associations to coordinate, bundle and then voice their common interests. Thus, in our case, employer domination and employer coordination are closely related.

To support our endeavour to discern to which trajectory (if any) the development of short-tracks in Switzerland adheres, we further draw on the theory of gradual institutional change, which complements our toolbox to capture change processes in collective skill formation. More specifically, Streeck and Thelen (2005) describe four specific modes of gradual change: (a) displacement, referring to the introduction of new rules, (b) layering, implying that new rules are added on top of old ones (see also Schickler 2001), (c) drift, linked to a changed impact of a given rule (see also Hacker 2005) and (d) conversion, referring to a new interpretation of a rule. Mahoney and Thelen (2010) argue that layering and drift are more likely to occur than displacement or conversion in a context in which defenders of the status quo hold strong veto possibilities.⁷ However, changes through drift as well as conversion are less likely if the level of discretion in interpreting or enforcing an institution is low.⁸

Methods and data

Our research relies on secondary literature as well as primary sources. We interviewed ten Swiss VET experts. These experts were selected based on their professional knowledge about short-tracks and to cover all three main actor groups: employers, unions and state actors (see Appendix for the list of interviews). The interviews were semi-structured including open-ended questions. Due to the relatively long time period that has passed since the initial phase of the policy reform process, our expert interviews mostly informed the latter phases of our analysis. In addition, this paper builds on several expert interviews carried out in Denmark and Germany—as our shadow comparative cases (Hancké 2009, pp. 75–77)—within the framework of our previous comparative research on collective skill formation. That is, in some instances we allude to these two cases for illustrative purposes. In addition to the expert interviews, we analysed transcripts from parliamentary VET commission debates, documents of the consultation process between the state, employers and other private stakeholders, as well as other written policy material. To get access to this large corpus of documents (2400 pages in

⁷ This is because—unlike layering and drift—conversion and displacement require direct changes to the targeted institution.

⁸ The reason is that—unlike layering or displacement—both these modes rely on significant leeway in how the institutions are implemented.

total) through the Swiss national archive, we had to guarantee to treat them confidentially. To the best extent, our two main data sources (i.e. the expert interviews and the document analysis) were used to mutually validate the respective evidence (triangulation by validation, see Peters 1998, p. 97–99). However, interviewees were not confronted with confidential government documents.

Furthermore, we rely on within-case analysis to untangle complicated relationships and causal linkages related to the development of short-tracks. An important method to identify such causal relations is process tracing, which is guided by the question “what links causal factors, events, sequences and outcomes together” (Trampusch and Palier 2016, p. 442). In other words, which step leads to the next, and what factor(s) ultimately lead to the outcome we observe? This way of doing process tracing is what Collier (2011, p. 823) describes as the “systematic examination of diagnostic evidence selected and analysed in the light of the research question”. With the help of process tracing, in the next section we start shedding light on the power relations, the role of the state and the socio-political context surrounding the reforms introducing the 2-year programmes in the Swiss case.

Results: the Swiss case of embedded flexibilization and polite employer domination

The major Swiss VET reform of 2002 brought flexibilization of training, especially with regard to the length and certification of VET, while strengthening the attractiveness of dual VET for disadvantaged persons and maintaining high levels of employer coordination. The following two subsections elaborate on the trajectory along the lines of embedded flexibilization and the inclusiveness character of short-tracks as well as the related employer influence, respectively. This leads to our argument that short-tracks are a case of employer-dominated embedded flexibilization. The third subsection offers an in-depth process tracing and further establishes that this initially contested change was enabled through layering.

Inclusiveness enhancing short-track apprenticeships: a case of embedded flexibilization

Dual vocational training is deeply rooted in Switzerland. About two-thirds of graduates from compulsory education (usually at the age of 16) enter dual vocational training (SERI 2017, p. 3). As any collective skill formation system, Swiss VET is based on the voluntary engagement of firms offering training positions. VET governance is highly influenced by business associations. However, the business camp is neither dominated by export-oriented or manufacturing sectors (Gonon and Maurer 2012). In contrast to other educational policy fields in Switzerland (e.g. general education), VET governance is rather centralized and coordinated at the national level (Gonon and Maurer 2012). VET training enjoys a high reputation among students as well as employers (Graf 2013). The share of pupils attending VET is substantive and the finding that, in the case of German-speaking Switzerland, better grades in mathematics actually increase the probability that a student will choose to pursue VET (instead of general education), is a strong indicator for its standing amongst pupils with high educational attainment (Glauser and Becker 2016). However, in the 1990s, the economic downturn led to a retreat of many firms from the apprenticeship system. The number of available apprenticeship positions declined which excluded many candidates from dual VET. Pressures caused by the economic downturn threatened to lead to a further decline in apprenticeship training. As a reaction, in a process initiated by the state, in the late 1990s and early 2000s, the national VET law was revised and entered into force in 2004.

Prior to this reform, there was only one standardized initial VET qualification on the national level. All initial vocational training programmes (*berufliche Grundbildung*) in Switzerland were certified with a Federal Vocational Diploma (*Eidgenössisches Fähigkeitszeugnis*). Some training programmes, depending on the occupation, took 2 years and others 3 years. However, there was no differentiation along educational levels or certification. Furthermore, the VET law of 1978 had introduced ‘pre-training’ (*Anlehre*) targeting “mainly practically talented” candidates (BBG 1978, p. 1127). Yet, the pre-training did not contain a final examination nor a standardized VET certificate.

The reform of 2002 added an additional layer to initial vocational training by introducing a new formal educational level, next to the traditional one. These two levels are distinguished by their different duration and the certification. The new VET law defines that 3- and 4-year training programmes lead to a ‘diploma’ (*Fähigkeitszeugnis*) while 2-

year training programmes are awarded with a ‘certificate’ (Attest). The law specifies that the 2-year training programmes should be “adjusted to the specific requirements of the apprentices” (BBG 2002 Art. 17). For the first time, the national VET system offers two different VET certificates that are both standardized and recognized on the national level. In other words, the reform added an additional training track to the system that by law targets disadvantaged candidates. The law even establishes a legal claim for individual support measures for apprentices in 2-year training programmes who are at risk of failing their examinations (BBG 2002 Art.18). These individual support measures include, for example, an adjustment of the training duration, individual counselling sessions in school or case management (Stern and von Dach 2018).

We find that the short-tracks represent a trend towards inclusiveness enhancing flexibilization with the help of layering. Thus far, the State Secretariat for Education, Research and Innovation (SBFI) has conducted three large-scale evaluations (in 2010, 2016 and 2017) that show that the short-tracks are a successful training option for disadvantaged: Since 2004, candidates as well as firms have an additional option to receive and offer vocational training. The access to the traditionally selective vocational training system is broadened as it is made easier for disadvantaged candidates to find and complete an apprenticeship. Additionally, the individual support measures (anchored in the law and applied when needed) also represent increasing flexibility in training provision (on the micro/individual level). These social support measures supplement a standardized core, as training content and certification are standardized.

The individual support measures are organized and financed by the state (the cantons) (Stern and von Dach 2018). In addition, (some of) the cantonal training offices get involved in motivating firms to offer short-track apprenticeships (INT7, INT10). In fact, the cost–benefit ratio on the side of employers offering short-track was shown to be slightly positive on average (Fuhrer and Schweri 2010). In total, short-tracks make up about one tenth of all apprenticeships (SBFI 2016, p. i).

In short-tracks, about one-third of the apprentices come from a bridging measure such as an additional year at school or preparatory courses (SBFI 2016, p. 27). On average, 2-year apprentices are older than their counterparts in 3- or 4-year training programmes are. About half of the apprentices are older than 20 years (ibid., p. 29) and about one-third has a migration background (non-Swiss passport) (ibid., p. 31). The dropout rate (25%) is higher than in the 3- and 4-year training programmes (ibid., p. 23) but 94% of

those who try, pass the final examination (ibid., p. 23). About 85% of the graduates enter the labour market or continue training (about 40% of the graduates enter a 3- or 4-year training) after graduation—in contrast to 94% of graduates from the longer training programmes (ibid., p. 24). The share of short-track apprentices (of all apprentices) varies greatly by region (between 1 and 5%) (ibid., p. 22). In the French speaking part (Imdorf et al. 2016), the share is much lower compared to the German speaking part. This difference is rooted in lower reputation of VET in this region, in general, but of short-tracks, in particular. In the French speaking part, short-tracks are seen as an emergency solution and local public VET offices check why a candidate signs up ‘only’ for a short-track instead of a regular programme. Whenever possible, they try to arrange ‘regular’ training instead of a short-track (INT3, INT4).

Despite the lower acceptance in the French speaking part, and sectoral differences in participation rates (details below), short-tracks successfully became an integral part of the vocational training system. Short-tracks offer an attractive training option for a specific target group. Indeed, the socio-economic characteristics of the apprentices in short-tracks indicate that short-tracks do increase inclusiveness of the traditionally selective VET system. From this point of view, the state was very successful in introducing an inclusiveness enhancing training option. However, we argue that a closer look reveals that it is the employers who are in the driving seat when it comes to the governance and implementation of short-tracks.

Employer domination of short-tracks

Even though the state has a great interest in the successful implementation of short-tracks, these programmes build on the voluntary engagement of employers (for instance, there are no direct public financial subsidies for training firms) and key competencies are in the hands of the employers.

Short-tracks build on the voluntary participation of employers in two ways. Firstly, in Switzerland, so-called ‘Organizations of the Working World’ (*Organisationen der Arbeitswelt*), i.e. private multi-actor intermediary associations, are responsible for key governance tasks, such as content definition, and they decide if a short-track apprenticeship programme is developed in their respective occupational field in the first place. These organizations mainly represent occupational and employers’ interests and, thus, are

driven by the market (INT9). In 2019, the number of short-track apprenticeship programmes reached 60 (compared to 180 3- and 4-year apprenticeship programmes) (SDBB 2019).

However, there is variation in the implementation and demand for short-tracks among different sectors. By far, the highest number of short-tracks can be found in retail (*Detailhandelassistent/in EBA*). Its share stood at 23% in 2018 (BFS 2019). Short-tracks in the field of health and social services represent 14% of all short-tracks, followed by short-tracks in construction (11%), hospitality and catering (7%) and metal construction (7%) (BFS 2019, Tab 2b). In comparison, 20% of the 3- and 4-year trainings are located in the field of administration and economics, 10% in retail, 7% in construction and 6% in nursing (BFS 2019, Tab 1b).

The outcome of the reform clearly matches the interests of employers. Employers asserted their position in a ‘quiet’ way. In other words, they did not have to push their position very proactively because policy-makers anticipated employers’ power. The arguments brought forward, for example, in the parliamentary debate and discussions in the reform committee — “We do not want to make a new VET law that reduces the willingness of companies to train” (WKB meeting March 1, 2001) — reflect that the policy makers strongly anticipated the preferences of business (INT6).

At the same time, the strong employer involvement underlines the collective character of the short-tracks. Collective governance structures are not undermined—instead, short-tracks are embedded into the traditional vocational governance system. However, this dependency on the market can to some extent limit the state’s direct influence on the inclusiveness character of the short-tracks.

Against this backdrop, it is interesting to note that the Swiss case of embedded flexibilization is different from the Danish version. While in Denmark, the state weakens some of the collective structures (Jørgensen 2015), the Swiss short-tracks are part of the traditional collective governance structure while at the same time increasing accessibility for disadvantaged students. The Swiss example shows that embedded flexibilization does not have to come with a decline in collective governance and is not restricted to Scandinavian social democratic market economies. However, critics fear that the competitive selection process (firms choosing the candidates) leads to a creaming effect, meaning that the most disadvantaged candidates may not make it into short-tracks

(Kammermann et al. 2018; INT5). Thus, it needs to be recognized that Swiss short-tracks might not always reach and include the most disadvantaged candidates.

In sum, we find that the reform in the late 1990s/early 2000s flexibilised the training system in favour of disadvantaged candidates while remaining clearly in the hands of the employers. We next apply process tracing to understand the origins and evolution of short-track training in the Swiss case.

Tracing the policy process

We identify three critical historical phases in the reform process: (I) the apprenticeship crisis in the 1990s and first policy proposals; (II) the complex multi-actor legislative process by consultation in the late 1990s; and (III) the institutionalization of short-tracks in the early 2000s and the new VET law of 2004.

Phase I: apprenticeship crisis in the 1990s and first policy proposals

In this section, we show that in Switzerland the flexibilization of VET was driven by state actors who were facing rising youth unemployment in the 1990s. Despite the business camp initially expressing its opposition to use vocational training to integrate disadvantaged students, the Swiss state actors started to develop additional vocational training programmes that would focus on practical training.

In the 1990s, due to economic downturn, the number of applicants exceeded the number of available training positions by far and youth unemployment rose steeply (Theiss 1996; Müller and Schweri 2012, p. 25). This crisis ignited a general societal and political debate on the VET system. Pressured by the Swiss parliament, the Swiss government (Bundesrat) published a report on the ‘state of the art’ of the Swiss vocational system in 1996 (Bundesrat 1996; CH5). This report stressed that ‘practically talented’ (*praktisch Begabte*) candidates should not be automatically “guided into school-based training” (Bundesrat 1996, p. 5). Instead, the report suggested to flexibilise apprenticeships, thus to allow adjustments with regard to the duration and requirement levels (*ibid.*, p. 9). However, the government did not want to change the legal basis but suggested minor adjustments such as the development of a tool to assess supply and demand on the

apprenticeship market or to increase its support for the cantons to integrate foreign youth into the labour market. It offered to use a 10 Mio CHF budget (ibid., p. 14).

However, the parliament and the unions harshly criticized the suggested measurements for not tackling the structural problems in VET (Strahm 2008; Polito 2014). The political debate intensified and the Science, Education and Culture Committee of the parliament (Kommissionen für Wissenschaft, Bildung und Kultur (SECC)) played a central role in it. For this commission, the questions about how to increase the number of apprenticeship positions in firms and how to integrate more (disadvantaged) candidates into dual VET were the driving force (see the SECC mandate “incentive scheme” from January 10, 1997). As the situation on the apprenticeship market did not improve and political pressure grew, the government launched two immediate support packages (Lehrstellenbeschluss I and II) in 1997 and 1999 worth 160 Mio CHF (WBK 1999). The first package focused on measures and projects to increase the number of apprenticeship positions, for example, through stronger engagement of the cantonal VET offices or subsidies for advertisement campaigns. Furthermore, the first package supported pilot projects that developed training opportunities for those with difficulties to find an apprenticeship training. These included, for example, bridging educational offers such as an additional year at school and preparatory courses. It is the second package that specifically proposes to develop “new occupations” that “require mainly applied tasks” to create new training options (Bundesversammlung 1999, p. 2).

Before the second package was granted, it was important to the parliament to hear the opinion of employers. For this purpose, Herrmann (1997) conducted a survey among employers, commissioned by the parliament. This effort underlines the importance of the preferences of employers to the policy makers. The results of the survey showed that employers were very reluctant to open more vocational training for disadvantaged students. They emphasized that apprenticeship training should not be a means to integrate weaker students. Rising skill demands would not allow them to accept weak candidates (Herrmann 1997).

The employers made clear that they consider solely the state to be responsible for supporting disadvantaged students, for example, through state-funded preparatory courses (Herrmann 1997). However, even though the business camp expressed its opposition to facilitate access for disadvantaged persons to VET, the second support package granted 40 Mio CHF to explore occupational training fields with “mainly applied tasks”

(Bundesversammlung 1999, p. 3). In the parliament, the package received “wide support” from all parties without discussions on the content (Schlumpf 1999). However, the support package did not include any binding regulations, which essentially left the employers’ autonomy with regards to training provision for the disadvantaged intact. Instead, the package offered funding for pilot projects that would test and evaluate new training approaches.

The development and preparation of the support packages (and later the new VET law) was mainly driven forward by public actors, namely the Science, Education and Culture Committee of the parliament and the parliament itself (INT8). However, it has to be pointed out that this committee regularly invited representatives from various stakeholders including unions, the trade sector (Gewerbe) and representatives from the VET teachers (Berufsbildung Schweiz) (minutes SECC meeting January 14/15, 2002, INT8). With regard to the idea to introduce short-tracks, however, there was very little proactive involvement of business actors in this phase (INT7, INT9). Business was not very ‘loud’ in the policy process around the establishment of the short-tracks. Rather, the state—which in the Swiss case has been found to be strongly interested in a well-functioning and stable training system (Seitzl and Emmenegger 2019, p. 153)—was under pressure to react to declining numbers of apprenticeship positions and a growing number of unemployed youths.

Finally, in 1998, the government appointed an expert group to start the revision process of the VET law. Even though the support packages technically were mainly financial means, the second package especially functioned as a key point of orientation for the revision (Strahm 2008). Representatives of the trade association (Gewerbeverband), unions, employer associations and politicians were members of the expert group (Strahm 2008). The new VET law proposal and an explanatory report were presented in May 1999. The expert group report addresses the need to create more training opportunities for those facing difficulties entering dual training—an agreement that indicates the common understanding among policy makers as well as union and employer representatives of the seriousness of the issue of entry barriers to training for disadvantaged youth. The group’s report refers to the negative image of the pre-training (‘second-order’ training) and argues that the pre-training was not able to reach enough candidates in need (EVD 1999, p. 11). Furthermore, the expert group report highlights that growing differentiation

in the world of employment requires “more flexible” levels of qualification (EVD 1999, p. 12, 22).

The report also suggested that the law defines the duration of a regular apprenticeship to take at least 3 years (EVD 1999, p. 22). Additionally, the VET law proposal should introduce ‘applied vocational training’ (*berufspraktische Bildung*) (EVD 1999, pp. 26–27), a training opportunity that can be adjusted to “individual competences” but that can also be used to establish demanding training programmes that take less than 3 years. Applied vocational training focuses on work-based training (EVD 1999, p. 36) and apprentices with learning difficulties should be supported by individual support measures (EVD 1999, p. 27). This new training level would be linked to a new VET degree. The policy proposal suggested granting graduates from the applied vocational training usually a 2-year ‘federal VET certificate’ (*Berufsattest*), while the regular ‘federal VET diploma’ (*Fähigkeitszeugnis*) would last 3 or 4 years (EVD 1999, p. 36).

Overall, these statements reflect the strong interest of the state to strengthen the social dimension of vocational training. However, it is also important to note that the state refers to the changing demands on the labour market as the primary driving forces for change. It argues that training has to adapt to the changes that “the labour market dictates” (EVD 1999, p. 11). The needs of the disadvantaged students come second (see EVD 1999, p. 22), which underscores the considerations and standpoint of the employers with regards to the 2-year programmes. The policy proposal by the expert group, thus, reflects a compromise of two camps. On the one hand, the proposal introduces a new training option to enhance the integration of disadvantaged candidates. On the other hand, the proposal highlights that economic demand is the driving force for the introduction of new training tracks. The proposal strengthens the traditional apprenticeships but introduces an additional option for disadvantaged students.

Phase II: the complex multi-actor legislative process by consultation in the late 1990s

The new VET law proposal was on the table by 1999 and suggested the introduction of an additional VET level and certification. In this section, we argue that the reactions by key players to this proposal can be divided into three main lines of argument. Firstly, the cantons and the unions welcomed short-tracks as a social measure to increase inclusiveness of VET. Secondly, occupational and employer associations were not in favour

of the idea of lower level training because they saw the danger of devaluation of traditional VET and additional costs due to more intense supervision of short-track apprentices. These two insights demarcate a clear difference to the German case, where the employers' camp was the key driver of short-track training. Thirdly, these same associations demanded more influence with regard to programme development and content definition.

The compromise reflected in the new VET law proposal are, in part, the result of the negotiation process within the expert group that partly brought together the interests of the state, business and the unions. Nevertheless, the different positions of these actor groups become very clear in the reactions to the policy proposal. In Switzerland, policies of high relevance undergo a legislative process by consultation (*Vernehmlassung*). In this process, the state invites cantons, parties, umbrella associations representing employers, occupational and employee's interests and other interested actors to comment on policy proposals before they enter the parliamentary debate (Bundesrat 2017). In May 1999, the federal economic department opened the consultation on the new VET law proposal. The department received 218 answers (EVD 2000). Our analysis of the responses, presented below, illustrates the above mentioned three main lines of arguments.⁹

Short-tracks as a social measure

On the one hand, we observe strong support for applied vocational training as a means to include disadvantaged candidates into the training system. The cantons particularly highlighted the social role of the applied vocational training. For the cantons, it was of high importance to guarantee permeability from the applied vocational training to further training options such as other levels vocational training (e.g. cantons Schaffhausen, Luzern, Zurich, Basel-Landschaft). In addition, the provision of support measures to prevent discrimination was very relevant (e.g. canton Nidwalden).

⁹ This section is based on the statements of the actors in the consultation process. However, these statements are not public. Only an anonymized summary of the consultation results was published by the EDV in 2000. The authors of this paper received access to the individual responses through the federal Swiss archive in Bern under the condition not to publish the documents. Thus, we chose to refer to the actors but do not make their statements explicit in the reference list.

Unions took a similar stance. Initially, they had opposed the introduction of a new and lower training level as they had been afraid of a downgrading of VET (INT1, INT3, INT4). Instead, they had suggested that short-tracks prepare candidates for a regular training programme (INT4) and emphasised (and still do) that 3- and 4-year training should be the norm (INT3). However, after intense discussions within the union camp (INT3) their opposition weakened when the possibility of individual support measures was added (INT4). This changed the union's view on short-tracks, which unions now saw as an opportunity to increase the number of youth in apprenticeships, especially those lacking academic credentials (INT3). This position was taken up by the expert group that developed the policy proposal. Beyond this, the unions also strongly demanded to guarantee the permeability from short-tracks into further training. At the same time, the Swiss Union Confederation (SGB) as well as the Christian National Union Confederation pointed out that occupational associations should be responsible for the development of applied training but also wanted more binding rules for the participation of business in training.

Interestingly, some cantons feared that the new standardization would not allow the training to adjust to the individual needs of the apprentice (e.g. cantons Graubünden, Uri, Zug). Also, some cantons argued that short-tracks would be a 'second class' training, discriminating graduates and excluding the graduates from further training options (e.g. the cantons Uri, Obwalden). Even though the cantons very much underlined the social aspect of an additional VET level, some cantons also expressed their fear that additional costs would keep firms from participating (e.g. canton Schaffhausen). This reflects the anticipation of business interests by the cantons.

Short-tracks as a devaluation of traditional VET

The second line of argumentation views the introduction of a lower VET level as a devaluation of training and thus, rejects this idea (INT2). This argument was often brought forward by employer and occupational associations (e.g. Association of the Master Butchers, Swiss Textiles Association). In particular, those occupational fields that already had regular 2-year training programmes not specifically targeting disadvantaged candidates (such as the retail or dairy business) were afraid of a downgrading their training programmes (e.g. Swiss Association of Household Arts). One of the main arguments against applied vocational training was the fear of additional costs that would come with

more intense supervision of weaker candidates. In the 1990s, the employers were in the convenient position to handpick apprentices as more applicants were on the market than training places. From this perspective, there was no need for employers to demand an additional training level.

At the same time, some associations (especially occupational associations) argued that training for disadvantaged should not be limited to 2 years but instead more time should be allowed for slower learners to acquire the skills to suffice the occupational demands (e.g. Association of Swiss Printing Industry, Association of ICT Training). This reflects a measure of compassion for the disadvantaged youth on behalf of the employers, but also an understanding of the seriousness of the problem and the role of business as part of the solution.

Short-tracks and the role of the Organizations of the Working World

Another line of argument centred on the involvement of the Organizations of the Working World. Initially, the state's proposition delegated the development of short-tracks to the cantons. This would imply a loss of influence for the employers and occupational associations that traditionally develop the training content in VET. Therefore, the employers and occupational associations demanded to regulate short-tracks on the national level and to anchor their responsibilities for short-tracks in the law, like in the case of regular apprenticeships (e.g. Viscom, Association of Farmwomen, Swiss Insurance Association). They argued that cantonal variation of short-tracks would reduce their reputation. Some associations expressed that the law should mention the needs of the training firm next to mentioning the needs of the apprentice (e.g. Gastro Suisse, Association of Agronomist). Others underlined that graduates from applied vocational training should not be considered to be part of the occupational field but that a clear distinction, especially with regard to the certificate between the two levels of training and graduates, was needed (e.g. Association of the Automotive Sector). In this context, it is also important to note that we do not observe a significant divide of preferences along firm size—which speaks against the presence of significant segmentalist trends in the Swiss case. After the consultation process, the policy proposal was slightly revised along the lines of the employers' camp's wishes. One year after the consultation process, the government published an explanatory report on the new policy proposal. In the next section, we focus

on the specific institutionalization of short-tracks in the VET law of 2004 that builds on the consultation process and actors' respective positions.

Phase III: institutionalization in the early 2000s and the VET law of 2004

In this phase, even though large parts of the business camp were initially sceptical about an additional layer in VET, the new VET law introduced an additional VET track by specifying that 2-year trainings are rewarded with a new VET certificate.

As a result of the legislative process by consultation, in 2000 the government published its “message on the new VET law” (Bundesrat 2000) and in 2002 the two chambers of the parliament passed the bill. In 2004, the new VET law entered into force. The original policy proposal had been revised after the consultation process. For example, the term ‘applied vocational training’ (*berufspraktische Bildung*) disappeared. Yet, with the new short-track training, an additional training option for disadvantaged formally entered the law without directly altering the existing character of the 3- and 4-year programmes—a form of ‘layering’ (see theory section).

The law defined that initial vocational training can take “two to four years” (BBG 2002). The additional training option then entered through the specification of the certification in relation to the duration of training. The law specifies that 3- and 4-year training programmes are awarded with a ‘Federal VET diploma’ (*Eidgenössisches Fähigkeitszeugnis*) while the 2-year training programmes led to a ‘Federal VET certificate’ (*Eidgenössisches Berufsattest*). Additionally, the law grants individual assistance and support measures to those apprentices who might otherwise fail their training.

From the legal perspective, this design of the short-tracks underlines the social dimension of training. It was important for the unions and the cantons to create a training option for disadvantaged candidates. However, the unions had to surrender on their demand to include binding regulations for employers and a training guarantee.

With the short-tracks, the state received a new means to integrate disadvantaged students into dual vocational training. Short-tracks are a cheaper option than school-based bridging classes. At the same time, the government found a way to keep businesses on board by not including binding regulations and by not changing the ‘core’ of VET, the 3- and 4-year training programmes, but instead to ‘layer’ the 2-year programmes onto the

existing system. The business side, not least due to its rather united position on the policy in question, eventually gained control over the implementation of the short-tracks.

However, even though the design of the short-tracks did integrate the interests of business, the state actors were worried whether the short-tracks would fall on fertile soil and take off (INT7, INT10). This is one of the main reasons why the state invests in continuous close monitoring of the development of short-tracks. At the same time, the risk that the state pushes equality-enhancing measures too far, thus disengaging business, is limited as it faces a business camp that is relatively coherent in its position that it should play a pivotal role in apprenticeship training, whether in the regular or the short-track version.

Discussion and conclusion

Globalization and liberalization pressure the institutional configuration of political economies with collective governance structures. Thelen (2012, 2014) argues that liberalization takes place in a two-dimensional space composed of equality and strategic employer coordination. In our study, we show that the Swiss trajectory is ultimately not connected to a decline of equality or strategic employer coordination. The new training programmes increase equality by making it easier for disadvantaged to enter the system and to complete a certified training. At the same time, employer cooperation expands because they collectively govern the new training programmes.

In the face of the apprenticeship crisis of 1990s, employers were not willing and could not be forced to train more apprentices, especially with regard to weaker students. Thus, regular training programmes could not solve the crisis. A conversion or displacement of regular training programmes was not possible due to the strong influence of the business camp in the Swiss VET system. In addition, large-scale institutional drift did not take place due to the strong institutionalization of regular apprenticeships in Switzerland. In this political context, the most feasible choice for the state actors in the frame of dual VET was layering. This refers to the introduction of short-tracks as an additional new training level, through creating the voluntary option for employers to participate and investing in social support measures. Nevertheless, it was a risky decision to add a new training level and not everyone believed that it would work (INT10). Yet, our empirical findings suggest that layering in the form of short-tracks does — at least until now —

not fundamentally undermine the traditional core of the apprenticeship training but rather serves to accommodate pressures for institutional change related to a changing environment and liberalization pressures.

Given that Switzerland is considered to be the most liberal collective skill formation system (Emmenegger et al. 2019), both the state's capacity and the influence of the unions proved stronger than expected. Under pressure to bring more young people into dual vocational training, the state initiated the introduction of short-tracks and a corresponding collective governance infrastructure, although both unions and employers initially opposed a lower level within VET. They were afraid of a devaluation of vocational training as well as additional costs that might be attached to more intense one-to-one supervision of apprentices in the firm. This is one of the most important differences to the dualization trajectory in the German case where the demand for flexibilization is mainly driven by the employers' camp, primarily dominated by large firms in the manufacturing sectors (Thelen and Busemeyer 2012). Furthermore, the position of the Swiss unions also differs from that shown in other countries where unions instead have marshalled inclusive measures in opposition to the employers (see Durazzi and Geyer 2019; Carstensen and Ibsen 2019). Likewise, the Swiss employers were initially sceptical of more flexible training.

For the state's initiation of short-tracks, the composition of the employer's camp played an important part. Switzerland is not dominated by a strong manufacturing nor export-oriented sector per se but a rather pluralistic group of business actors (Gonon and Maurer 2012; Mach and Trampusch 2011). However, we found that business was able to speak with a relatively coherent voice when it came to short-track training. Traditionally, business in Switzerland is well coordinated and organized in sectoral and occupational associations which can bundle the interests of their members (Trampusch 2010). These associations are key players in the governance of vocational training and influential, for instance, as they decide on the introduction of training programmes and define the content of training. The related high level of employer coordination in combination with their gatekeeper position enabled business to exercise power over the reform process around short-tracks. Employers were aware of their strong position from the very start, which is why they could afford to stay rather passive during the reform process.

The state took the preferences of business very seriously and delegated key competences in the governance of short-tracks to the employers. For instance, employer and

occupational associations decide autonomously if they want to introduce a short-track training programme in their respective sector or occupational field. In sum, the Swiss short-tracks can be described as politely employer-dominated, meaning that the employers' camp asserted their interests in the end despite their rather passive role in the reform process.

Furthermore, the state did also listen to the unions and to get their support, the new VET law includes the possibility of state-funded individual social support measures. At the same time, the employers tolerated some concessions to the benefit of disadvantaged groups by accepting the need for (potentially) more intense supervision on a case-by-case basis as well as a re-organization of pre-existing 2-year programmes related to new national level training certificates and standards.

The influential role of business distinguishes the Swiss from the Danish type of embedded flexibilization. In Denmark, the strong aim to adapt the training to the most disadvantaged youth dictated the configuration of short-tracks rather than the perspective of employers. In Switzerland, even if business was not very 'loud', its influence on the design of short-tracks eventually was very strong. Their rather passive stance during the initial phase of the reform most likely reflects an assuredness within the business camp that the state would ultimately not coerce them into an arrangement they would strongly disagree with.

Furthermore, we did not find a strong left–right divide in the parliamentary debate, related to the deeply-rooted idea on both ends of the political spectrum that successful VET needs to be steered by the needs of the labour market actors. The 'strategic employer coordination' capacities of organized interest were therefore not threatened by state intervention, as identified by Thelen (2014) and Carstensen and Ibsen (2019) for the Danish case. In the Swiss case, employer cooperation (reflected in the important role of employers' associations) remained dominant due to the retreat of the state from the policy issue once the initial reform steps were taken. Thus, the Swiss short-track reform is indicative of a new variant of embedded flexibilization linked to a continued high level of equality and a maintained high level of strategic employer coordination.

Our findings contribute to the understanding of institutional change in the Swiss skill formation system. Trampusch (2010) has described change in the Swiss VET system as self-preserving and transformative. We add to this that the Swiss VET reform made the

training system more flexible and accessible for disadvantaged persons while maintaining a high level of employer coordination. In contrast to previous research on the fate of collective systems in the post-industrial era, this finding is a rather optimistic testimony to the promises of a collectively governed training system that at the same time manages to provide options for weaker learners but without deterring involvement of firms even in a challenging economic environment.

In this context, we also contribute to the literature on liberalization trajectories that has mainly referred to countries with a strong social democratic history (such as the Scandinavian countries) to be the typical cases of embedded flexibilization. We broaden this view by adding the Swiss case to the family of cases of embedded flexibilization—but suggest that it is of a more employer-dominated type than in Scandinavia. Further research can build on these findings to measure the individual social mobility patterns associated with each of these institutional configurations around short-track training.

The insights that our study generates can also inform future policy-making that aims at enhancing inclusiveness. Crucially, the combination of layering with continued voluntary engagement of employers seems to be a promising strategy to introduce inclusion-enhancing measures. However, delegating key competences to business and thus having employers as gatekeepers has some limiting effects on inclusiveness. Therefore, in collective skill formation, as elsewhere, finding a balance between economic efficiency and social equality remains a complex policy challenge.

References

- Albo, G (2005) 'Contesting the 'New Capitalism'.' In Coates, David (ed.) *Varieties of Capitalism, Varieties of Approaches*, Basingstoke, Palgrave Macmillan, pp. 63–82.
- Armingeon, K (2011) 'A Prematurely Announced Death?' In Trampusch, Christine and André Mach (eds.) *Switzerland in Europe*, London, Routledge, pp. 165-185.
- Baccaro, L and C Howell (2011) 'A Common Neoliberal Trajectory', *Politics & Society*, 39, 521-563.
- BBG (1978) *Bundesgesetz über die Berufsbildung*, Bern, Bundesversammlung der Schweizerischen Eidgenossenschaft.
- BBG (2002) *Berufsbildungsgesetz (BBG)*, Bern, Bundesversammlung der Schweizerischen Eidgenossenschaft.
- Becker, U (2009) *Open Varieties of Capitalism*, Houndsmill, Palgrave Macmillan.
- Beicht, U and G Walden (2016) 'Transitions into vocational education and training by lower and intermediate secondary school leavers.' *Empirical Research in Vocational Education and Training*, 8, DOI 10.1186/s40461-016-0037-9
- BFS (2018) *Berufliche Grundbildung – Lehrverhältnisse*. Available at: <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/personen-ausbildung/sekundarstufe-II/berufliche-grundbildung-lehrverhaelt-nisse.html>. Accessed 2 April 2019.
- BFS (2019) *Berufliche Grundbildung: Basistabellen*. Available at: <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/sekundarstufe-II/berufliche-grundbildung.assetdetail.8186155.html>. Accessed 28 November 2019.
- Bundesrat (1996) *Bericht über die Berufsbildung*, Bern, Schweizerische Eidgenossenschaft.
- Bundesrat (2017) *Vernehmlassung*. <https://www.admin.ch/gov/de/start/bundesrecht/vernehmlassungen.html>. Accessed 3 Nov 2018.
- Bundesversammlung (1999) *Bundesbeschluss über Massnahmen zur Verbesserung des Lehrstellenangebotes und zur Entwicklung der Berufsbildung (Lehrstellenbeschluss II)*. Bern, Bundesversammlung der Schweizerischen Eidgenossenschaft.
- Busemeyer, MR and C Trampusch (Eds.) (2012) *The Political Economy of Collective Skill Formation*, Oxford, Oxford University Press.
- Carstensen, MB and CL. Ibsen (2019) 'Three dimensions of institutional contention', *Socio-Economic Review*, advanced access: <https://doi.org/10.1093/ser/mwz012>.
- Collier, D (2011) 'Understanding Process Tracing', *Political Science & Politics*, 44, 823–30.
- Culpepper, PD (2010) *Quiet Politics and Business Power*, Cambridge, Cambridge University Press.

- Culpepper, PD (2015) 'Structural power and political science in the post-crisis era', *Business and Politics*, 17, pp. 391-409.
- Culpepper, PD. and D Finegold (eds.) (1999) *The German Skills Machine*, New York, Berghahn Books.
- Durazzi, N and L Geyer (2019) 'Social inclusion in the knowledge economy', *Socio-economic Review*, advanced access: <https://doi.org/10.1093/soceco/mwz010>.
- Emmenegger, P, L Graf and C Trampusch (2019) 'The governance of decentralised co-operation in collective training systems', *Journal of Vocational Education & Training*, 71, pp. 21-45.
- Emmenegger, P, S Häusermann, B Palier, and M Seeleib-Kaiser (eds.) (2012) *The Age of Dualization*, Oxford, Oxford University Press.
- Estevez-Abe, M, T Iversen and D Soskice (2001) 'Social Protection and the Formation of Skills.' In Hall, PA. and D Soskice (eds) *Varieties of Capitalism*, Oxford, Oxford University Press, pp. 145-183.
- EVD (1999) *Revision des Berufsbildungsgesetzes Erläuternder Bericht für die Vernehmlassung*, Bern, Eidgenössische Volkswirtschaftsdepartement.
- EVD (2000) *Bundesgesetz über die Berufsbildung Ergebnis der Vernehmlassung*, Bern, Eidgenössische Volkswirtschaftsdepartement.
- Fuhrer, M and J Schweri (2010) 'Two-year apprenticeships for young people with learning difficulties: a cost-benefit analysis for training firms', *Empirical Research in Vocational Education and Training*, 2, pp. 107-125
- Glauser, D and R Becker (2016) 'VET or general education? Effects of regional opportunity structures on educational attainment in German-speaking Switzerland.' *Empirical Research in Vocational Education and Training*, 8, DOI 10.1186/s40461-016-0033-0.
- Gonon, P and M Maurer (2012) 'Educational Policy Actors as Stakeholders in the Development of the Collective Skill System.' In Busemeyer, MR. and C Trampusch (eds.) *The Political Economy of Collective Skill Formation*, Oxford, Oxford University Press, pp. 126-149.
- Hacker, J (2005) 'Policy Drift.' In Streeck, W and K Thelen (eds.) *Beyond Continuity*, Oxford, Oxford University Press, pp. 40-82.
- Hall, PA. and D Soskice (eds.) (2001) *Varieties of Capitalism*, New York, Oxford University Press.
- Hall, PA. and K Thelen (2009) 'Institutional Change in Varieties of Capitalism', *Socio-Economic Review*, 7, 7-34.
- Hancké, B (2009) *Intelligent Research Design*, Oxford, Oxford University Press.
- Häusermann, S and H Schwander (2012) 'Varieties of Dualization?'. In Emmenegger, P, S Häusermann, B Palier and M Seeleib-Kaiser (eds.), *The Age of Dualization*, Oxford: Oxford University Press, pp. 27-51.
- Herrmann, V (1997) *Lenkungsmaßnahmen für den Lehrstellenmarkt*, Zürich, GfS-Forschungsinstitut.

- Huber, E and JD Stephens (2000) Partisan Governance, Women's Employment, and the Social Democratic Service State, *American Sociological Review*, 65, 323-342.
- Ibsen, CL and K Thelen (2017) 'Diverging Solidarity', *World Politics*, 69, 409-47.
- Imdorf, C, E Berner, and P Gonon (2016) 'Duale versus vollzeitschulische Berufsausbildung in der Schweiz'. In Leemann, RJ., C Imdorf, JW Powell and M Sertl (eds.) *Die Organisation von Bildung*, Weinheim, Beltz, pp. 186-207.
- Iversen, T and J Stephens (2008) 'Partisan Politics, the Welfare State, and Three Worlds of Human Capital Formation', *Comparative Political Studies*, 41, 600-637.
- Jørgensen, CH (2015) '*Recent innovations in VET in Denmark*', Roskilde, Denmark, Department of Psychology & Educational Studies, Roskilde University.
- Kammermann, M, L Balzer and A Hättich (2018) 'Arbeitsmarktintegration und Berufsverläufe von Personen mit einem Eidgenössischen Berufsattest.' In Becker, M, M Kammermann, G Spöttl and L Balzer (eds) *Ausbildung zum Beruf*, Frankfurt am Main, Peter Lang GmbH, pp. 185-202.
- Korpi, W and J Palme (1998) 'Paradox of Redistribution and Strategies of Equality', *American Sociological Review*, 63, 661-687.
- Koudahl, PD (2010) 'Vocational education and training: Dual education and Economic Crisis', *Procedia - Social and Behavioral Sciences*, 9, 1900-1905.
- Mach, A and C Trampusch (2011) 'The Swiss Political Economy in Comparative Perspective.' In: Trampusch, C and A Mach (eds) *Switzerland in Europe*, London, Routledge, pp. 11-23.
- Mahoney, J and K Thelen (eds.) (2010) *Explaining Institutional Change*, New York, Cambridge University Press.
- Martin, CJ (2017) 'Skill Builders and the Evolution of National Vocational Training Systems.' In Buchanan, J, D Finegold, K Mayhew and C Warhurst (eds) *The Oxford Handbook of Skills and Training*, Oxford, Oxford University Press, pp. 36-53.
- Martin, CJ and JS Knudsen (2010) 'Scenes from a mall', *Regulation & Governance*, 4, 345-364.
- Martin, CJ and D Swank (2008) 'The Political Origins of Coordinated Capitalism', *American Political Science Review*, 102, 181-198.
- Mayer, KU and H Solga (2008) *Skill Formation*, New York, Cambridge University Press.
- Müller, B and J Schweri (2012) 'Analyse zur Betriebszählung 2008 Die Betriebe in der dualen Berufsbildung.' In B. f. Statistik (Ed.), *Statistik der Schweiz*, Neuchâtel, Schweizerische Eidgenossenschaft.
- Nelson, M (2012) 'Continued Collectivism'. In Busemeyer, MR and Christine Trampusch (eds.). *The Political Economy of Collective Skill Formation*, Oxford, Oxford University Press, pp. 179-202.
- Peters, BG (1998) *Comparative Politics: Theory and Method*, London, Macmillan Press.
- Polito V (2014) *Zehn Jahre Berufsbildungsgesetz*, SGB Positionspapier, Bern, Schweizerische Gewerkschaftsbund.

- Ryan, P (2012) ‘Review of ‘The Political Economy of Collective Skill Formation’ and ‘Switzerland in Europe’’, *Journal of Vocational Education and Training*, 64, 381–385.
- SBFI (2016) *Evaluation EBA II Evaluation der Arbeitsmarktsituation und Weiterbildungsperspektive von Absolventen und Absolventinnen mit eidgenössischem Berufsattest*. In: SBFI (ed). Zürich, LINK Institut.
- Schickler, E (2001) *Disjointed Pluralism*, Princeton, NJ, Princeton University Press.
- Schlumpf, R (1999, March 19) ‘Breite Unterstützung für den Lehrstellenbeschluss’, *Neue Zürcher Zeitung*, Zürich, Switzerland, p. 13.
- SDBB (2019) *Eidgenössisches Berufsattest EBA*. <https://www.berufsberatung.ch/dyn/show/2101>. Accessed 2 Apr 2019.
- Seitzl, L and P Emmenegger (2019) ‘How agents change institutions’, *Business and Politics*, 21, 145–171.
- SERI (2017) *Vocational and Professional Education and Training in Switzerland Facts and Figures 2017*. State Secretariat for Education, Research and Innovation.
- Stern, S and A von Dach (2018) ‘Evaluation der fachkundigen individuellen Begleitung (fiB) in zweijährigen beruflichen Grundbildungen mit EBA Schlussbericht’. INFRAS. Staatssekretariat für Bildung, Forschung und Innovation SBFI in «Schriftenreihe SBFI».
- Strahm, RH (2008) ‘Die entscheidenden Neunzigerjahre.’ In Bauder, T and F Osterwalder (eds.) *75 Jahre eidgenössisches Berufsbildungsgesetz*, Bern, hep verlag ag, pp. 311–350.
- Streeck, W (1997). ‘Beneficial Constrains.’ In Hollingsworth, J. Rogers and Robert Boyer (eds.), *Contemporary Capitalism*, Cambridge, Cambridge University Press, pp. 197–219.
- Streeck, W (2009). *Re-Forming Capitalism*, Oxford, Oxford University Press.
- Streeck, W and K Thelen (2005) *Beyond Continuity*, New York, Oxford University Press.
- Thelen, K (2004) *How Institutions Evolve*, New York, Cambridge University Press.
- Thelen, K (2012) ‘Varieties of Capitalism’, *Annual Revue of Political Science*, 15, 137–159.
- Thelen, K (2014) *Varieties of Liberalization and New Politics of Social Solidarity*, Cambridge, Cambridge University Press.
- Thelen, K and MR Busemeyer (2008) ‘From Collectivism towards Segmentalism’, *MPIfG Discussion Paper* 08/13.
- Thelen, K and MR Busemeyer (2012) ‘Institutional Change in German Vocational Training.’ In Busemeyer, MR and C Trampusch (eds.) *The Political Economy of Collective Skill Formation*, Oxford, Oxford University Press, pp. 68–100.
- Theiss, R (1996) ‘Jugendarbeitslosigkeit in der Schweiz’, *PANORAMA*, 6, 10–11.
- Trampusch, C (2010) ‘Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland’, *Comparative Politics*, 41, 187–206.

Trampusch, C and B Palier (2016) ‘Between X and Y’, *New Political Economy*, 21, 437-454.

WBK (1999) *Lehrstellenbeschluss II*, Kommission für Wirtschaft, Bildung und Kultur.

Appendix

Table 1: Overview Interviews

Code	Actor Type	Date	Location
INT1	Trade union	13.12.2016	Bern
INT2	National state actor	15.03.2017	Bern
INT3	Trade union	16.03.2017	Bern
INT4	Trade union	24.09.2017	Bern (written email statement)
INT5	National research institute	04.10.2017	Zollikofen
INT6	Regional state actors organised on the national level	04.10.2017	Bern
INT7	National state actor	23.10.2017	Bern
INT8	National state actor	26.10.2017	Münsingen (telephone interview)
INT9	National employer association	24.11.2017	Zurich
INT10	Regional state actors organised on the national level	11.09.2018	Bern

4 Employers' cooperation in the knowledge economy

Continuing vocational training in Switzerland

Accepted for publication in the book *Collective skill formation in the knowledge economy* (Editors: Patrick Emmenegger and Giuliano Bonoli)

With Professor Christine Trampusch (University of Cologne, Germany)

Abstract

The question of what leads employers to co-finance and collectively provide transferable skills, which have certification, is still puzzling. Based on the analysis of employer cooperation in four sectors with varying levels of employer cooperation in the provision and financing of transferable (general) skills in post-secondary vocational training, this study addresses that gap. We identify two different clusters of four interdependent conditions which help to understand the conditions under which employers cooperate in order to provide skills that are of benefit also to other employers. We find that the level of collective action is high when: (1) large firms are committed to collective training because they fill their leadership positions with HVT graduates, (2) competitiveness between employers is perceived as low, (3) employers' associations' logic of organization building includes training policies as an important means to attract members, and (4) institutional spill-over effects between employers' cooperation in initial vocational training (IVT), collective bargaining and CVT. These findings contribute not only to the literature of employers' collective action in vocational and further training but also to studies of business associations. Furthermore, our findings deepen our understanding of the conditions and mechanisms how the knowledge economy challenges the collective provision of vocational skills.

Introduction

When do employers' associations co-provide and co-finance transferable skills? The analysis of collective action and cooperation¹⁰ between employers (capitalist firms) is one of the most pertinent aspects with which a variety of comparative political economic studies deal. If employers cooperate, they pursue a common interest such as the provision of a collective good (e.g. Bowman 1982; Johansen 2002). The knowledge economy requires investments and cooperation between employers in training and education more than ever. In this context, not only initial educational qualification is important but especially further training and continuing education throughout the working life plays an important role to keep skills up to date. Not only in collective skill formation system, continuing vocational training (CVT)¹¹ is an important means to deepen and update occupational skills while expanding managerial competences. In collective skill formation systems, standardized and collectively governed vocational training on the upper level plays an important role in meeting the rising skill demands of the knowledge economy. However, the questions of what gets employers to cooperate in the provision of general (thus, transferable), vocational, and certified skills through continuing vocational training and which patterns of employers' cooperation evolve still need further examination. The reason for this is that most studies on employers' cooperation in vocational training exhibit three major flaws.

Firstly, most studies focus on initial vocational training (IVT), especially on the German dual apprenticeship system (e.g. Busemeyer & Trampusch 2012; Johansen 2002, 302). These studies often overlook the politics and the institutional context of continuing vocational training even though there may be substantial differences between CVT and IVT (Bowman, 2005, p. 572ff.; Cognard, 2011, 2015; Crouch, Sako, & Finegold, 1999, p. 21; Johansen, 2002). Secondly, the research on CVT tends to be biased towards firm-based training or national training policies (on which see Trampusch & Eichenberger, 2012). Thirdly, previous studies have mostly referred to Becker's (1962) human capital theory to explain individual firms' investments in transferable skills. We find only little research on the role and sectoral (industry-level) differences of employers' associations

¹⁰ Following Bowman (Bowman, 1982, p. 575) we view cooperation as the "joint pursuit of a common interest" which in substantive terms is collective action. The literature on problems of collective action analyses the achievement with regard to the provision of collective goods.

¹¹ We provide a list of the main abbreviations in the appendix.

training activities even though these associations play an important role in collective skill formation systems (similar: Johansen, 1999, pp. 27, 80-81).

Our study focuses on sectoral differences of employers' cooperation through associations in CVT in Switzerland to address these remaining questions. Within the big pool of CVT, we focus on a specific type of CVT: post-secondary, tertiary, vocational training that leads to standardized and nationally recognized certificates. In Switzerland, this training is referred to as Higher Vocational Training (HVT, *Höhere Berufsbildung (HBB)*) and it makes up 44% of all tertiary certificates that are awarded on the level of a Bachelor degree (SKBF, 2018, p. 272). Higher Vocational Training is deeply rooted in the Swiss vocational training system and about every fourth employee who completed initial vocational training, holds a HVT degree (BFS, 2009, p. 4). Despite this high relevance of HVT, we know rather little about sectoral differences in the governance and the underlying conditions for cooperation. Our study concentrates on the provision and financing of HVT, key tasks in the governance of vocational training. For three reasons looking at employers' cooperation in HVT in Switzerland is an interesting way to address the remaining questions.

Firstly, we chose Switzerland because “in terms of economic governance” the Swiss political economy “relies extensively on collective or associational self-regulation in various economic and social spheres” (Mach & Trampusch, 2011, p. 16), accompanied by a weak central state and weak and fragmented unions (ibid., see also: Eichenberger & Mach, 2011; Kriesi & Farago, 1989; Trampusch, 2020). However, in contrast to German chambers, the role of Swiss business in training is not “licensed” by compulsory membership to their associations. Therefore, Switzerland allows to gain deeper insights in the underlying reasons for employers' cooperation. Furthermore, the Swiss collective skill formation system is characterized by employers' dominance at the industry-level (Rohrer & Trampusch, 2011, p. 148) which allows to conduct an in-depth study of sectoral differences.

Secondly, HVT is mainly based on theory instruction by private and public providers and equips employees with an occupation and work experience with a tertiary upgrade of their vocational certificate. HVT increases employees' professional knowledge while providing entrepreneurship and leadership skills (Fazekas & Field, 2013, p. 27). Thus, these skills are transferable between firms and so there is a danger of poaching and the

free rider problem. This raises the question why employers are willing to cooperate in order to collectively provide and finance HVT.

The third reason is that the variety of employers' cooperation in HVT allows for the application of a sound cross-case research design. The Swiss HVT system is characterized by very pronounced decentralized governance structures so that employers' cooperation in providing and financing HVT differs greatly among sectors. In the construction sector, as well as in the metal and mechanical engineering (MEM), employers' associations are actively engaged in the provision and financing of HVT. Employers use collective training funds and their associations run their own schools. In contrast, employers in the pharmaceutical and chemical (PC), and banking sectors lack this intensive collective engagement via their associations. In the banking as well as in the PC sector, business delegates the provision of HVT to private providers and leaves the financial responsibility to the individual employees and the firms.

For these reasons, we consider Swiss HVT as suitable for studying cooperation by employers in the provision of transferable skills. This study not only describes different *intensities* of sectoral employers' cooperation but also explains how the combination of different factors can foster or hinder cooperation. Following, earlier literature on collective skill formation in IVT, we especially focus on the willingness and capacities (Johansen, 2002, p. 305) of employers' associations to support employers' cooperation.

Our analysis contributes to the literature about employers' collective action in vocational and further training (Bowman, 2005; Cognard, 2011, 2015; Culpepper, 2007; Trampusch & Eichenberger, 2012) and to studies of business associations (Kriesi & Farago, 1989; Schmitter & Streeck, 1999; Streeck, 1989). Our study identifies two different clusters of interrelated conditions that help to explain the different levels of collective action in the provision and financing of portable vocational skills through CVT. The combination of the following cluster of conditions fosters collective action in the provision and financing of CVT:

- Large firms are committed to collective higher VET because they view it as an important source to fill leadership positions
- Low competitiveness on the product market

- Employers' associations view CVT as an important means with regard to their *logic of organization building* (e.g. to attract members and mediate internal interests)
- Close cooperation of employers in initial vocational training that is anchored in the collective labour agreements *spills-over* to higher VET

In contrast, the cluster of conditions hindering collective action can be characterized as follows:

- Large firms are not committed to collective higher VET because they rely on other sources to recruit skilled labour such as higher education
- High competitiveness on the product market
- Collective labour agreements do not include collective action policies in initial vocational training
- Higher VET does not play an important role for employer associations with regard to their logic of organization building (e.g. attract members and mediate internal interests)

The period under investigation runs from the mid-1990s until 2017. Data were collected from primary documents and secondary literature. In addition, we conducted 26 expert interviews. For all four sectors, we covered representative firms, key HVT providers, employees' as well as employers' associations, trade and occupational associations.¹² Our study distills hypotheses on potential causal factors determining employers' collective action in HVT from the above-mentioned strands of literature and tests for their plausibility by a four-sector comparison.

This paper is structured as follows. The second section presents the main characteristics of the Swiss HVT system. We also explain our concept of employers' cooperation. In section three, we map our theoretical framework and discuss the method. Section four displays our empirical findings by mapping our four case histories. The last section

¹² At the request of our interviewees, we treat all information in strict confidence. Therefore, the list of the interviews which contains information about the affiliated institution and position of the interviewee is kept anonymous and in the main text we indicate only the respective sector.

presents the two clusters of conditions that help to understand the differences in the degree of collective action and draws conclusions.

The Swiss HVT System and Conceptualizing Employers' Cooperation

HVT aims at preparing students for vocational leadership positions (*fachspezifische Kaderpositionen*). The training is based mainly on theory instruction with classes taking place on one or two days a week. Participants work 70-90% in a related area but this is not counted as part of the training. HVT is a crucial factor in keeping the VET system attractive for good students because it is an important means to climb the career ladder (INT10). In Switzerland, about two thirds of a cohort opts for dual vocational training after compulsory schooling (SBFI 2016). In 2016, more than 26,300 HVT diplomas¹³ were awarded in Switzerland (BFS, 2017c).

Higher vocational training has a long tradition in Switzerland but two major reforms have restructured it. Firstly, with the introduction of universities of applied sciences (UoAs) in the 1990s more than half of the HVT tracks were turned into bachelor and master degrees (Baumeler, Dannecker, & Trede, 2014, p. 21; Graf, 2013). At the same time, the Federal Vocational Baccalaureate (FVB; *Berufsmaturität*) was introduced. The vocational baccalaureate can be obtained in parallel or after dual apprenticeship training and enables the graduate to enter a bachelor's degree program at a university of applied sciences. Even though HVT is by law equal to higher education, it is challenged because young people and employers may prefer academic tertiary education, which reduces the attractiveness of vocational (tertiary) education. The introduction of the vocational baccalaureate established a path for holders of a vocational certificate to enter universities of applied sciences. Thus, it opens an attractive alternative to HVT because graduates of universities of applied sciences receive an internationally recognized bachelor's degree and tuition fees are quite low in comparison to HVT (Graf, 2013, INT16).

The second major reform came with the new VET law of 2004. The law defines HVT as the "tertiary B" level in the Swiss educational system which lifts it to the same level as universities and universities of applied sciences ("tertiary A" sector). Furthermore,

¹³ Swiss HVT offers three different diplomas; (1) the Federal PET Diploma (*eidgenössischer Fachausweis*) (2) the Advanced Federal PET Diploma (*Eidgenössisches Diplom*), (3) professional colleges, (*Höhere Fachschulen* (HF) that offer study programs that lead to HF diplomas.

the 2004 reform enhanced the possibility of establishing binding sector-specific training funds. The government can turn sector-specific voluntary funds into “binding” funds, which means that all employers of a certain sector are obliged to contribute. This strengthening of collective training funds was strongly supported by the Swiss Union of Small Businesses and Trade (SGV, 2004; Trampusch, 2010b, INT2) which plays a major role in the Swiss VET system and is dominated by the small and medium-sized firms of the *Gewerbe* (crafts) (INT2). These sector specific funds complement a complex system of cantonal funds and those anchored in the collective labor agreements of which some were already established in the 1960s and 1970s (Fluder, 1991, pp. 339, 355; Wicki, 1991, pp. 449, 451).

Only few authors discuss employers’ activities in HVT (e.g. Baumeler et al., 2014; BFS, 2017c; Fazekas & Field, 2013; Schmid & Gonon, 2013; Wettstein & Gonon, 2009). Baumeler et. al. (2014) offer a detailed overview of the complex Swiss HVT system. They highlight that HVT is characterized by great regional differences, with 80% of it occurring in the German speaking part (ibid.,32). Companies, especially SMEs and those operating at the nexus of theoretical development and its practical application, seem to benefit from HVT. As with IVT, the content and examinations are organized along occupational lines which means that the associations develop the training content. However, as there is no regulation how to provide and finance higher VET, there is great variation of the investment by employers in collective training activities. No study systematically maps and explains this.

In our study, we are interested in what makes employers cooperate in order to collectively provide and finance HVT. Cooperation is the “pursuit of a common interest” (Bowman, 1982, p. 575). When it comes to the provision of portable skills there is a danger of free rider firms poaching the skilled labour force and so firms may be less willing to encourage candidates to upgrade their skills (Culpepper, 2003; Marsden, 1999). This also may reduce employer’s willingness to invest in collective training activities. Employers’ associations are seen as a way to overcome this problem (Streeck, 1989). Employers’ associations bundle competences and act on behalf of their members. They can be regarded as institutionalized cooperation among employers and may solve collective action problems by providing selective incentives (Crouch et al., 1999, pp. 18, 28; Johansen, 1999, p. 103). For this reason, we take into account the activities of the key employers’ associations in the four sectors to describe the different *intensities*

of employers' cooperation. Our theory section lists probable factors affecting employers' associations' willingness and capacities to set incentives for collective action.

In our study, we concentrate on two key tasks of the governance of training, namely the *provision* and *financing* of HVT courses because we observe different patterns of employers' cooperation in the implementation of these tasks. "Provision" relates to courses where there is a great variety of providers (Baumeler et al., 2014). Cantonal schools, private profit-oriented schools, unions, employers' associations and others offer training. We have singled out the role of employers' associations. "Financing" refers to support for the providers as well as the students who bear a high share of the costs. Public subsidies cover about 10% to 25% of these (Baumeler et al., 2014, pp. 57, 60). Thus, compared with university-based education, HVT depends very much on private contributions. This imbalance is heavily criticized (INTs10,16,22, Fazekas & Field, 2013).

Employers and HVT: Theory and Method

Although disentangling specific and general skills is not easy (Busemeyer, 2009a, 2009b; Culpepper & Finegold, 1999, p. 3; e.g. Streeck, 2012), it is most often argued that one major factor affecting employers' investment decisions is skill specificity. Following Becker's classic human capital account, one major finding is that the more the skills are marketable and portable among firms, so they increase productivity in the non-training firm as well, and the less likely it becomes that firms will invest in such training (Becker, 1962). As the Swiss HVT schemes aim at providing employees (who in most cases already have a job) with transferable skills which are certified, it is reasonable to assume that potential employers' investments in institutions providing this type of training are particularly prone to the collective good dilemma.

The literature on collective skill formation systems highlights that persuading individual firms to cooperate in providing and financing transferable skills requires cost effective incentives or sanctions (Streeck, 1989, Crouch et al. 1999, Culpepper & Finegold 1999, Johansen 2002, Bowman 2005, Busemeyer and Trampusch 2012). However, in particular with regard to CVT, explaining variation of employers' cooperation at the industry-level has been neglected so far. In order to understand employers' collective action in Swiss HVT properly, our study brings together the literature on employers' collective action in IVT and CVT (Bowman, 2005; Crouch et al., 1999; Johansen, 2002;

Trampusch & Eichenberger, 2012) with studies of employers' associations (Kriesi & Farago, 1989; Streeck, 1989; Traxler, 2010). The first strand of literature highlights the impact of institutions linked to labour or product markets on employers' associations' willingness and capacity to provide and finance training (Marsden, 1999). The second one shows that employers' associations may use employers' cooperation in HVT as a means of increasing their own membership, and use collective CVT as an instrument for their internal interest.

Employers' collective action in initial and continuing vocational training

Research on IVT, in particular on the German dual system which provides a mixture of transferable and non-marketable skills (Streeck, 1989), has identified the following major conditions prompting employers to invest in transferable skills: the *skill requirements of production regimes* (e.g. high-quality goods and services); the *certification* of skills; *state intervention and public policies* sponsoring employers' activities (e.g. state subsidies, tax reductions); the impossibility of hiring the required general skills on the external labour market, with respect to the *existence of internal labour markets* (e.g. as firms believe that employment security and good working conditions help to retain workers (Soskice, 1994, p. 32)); and, finally, the *tradition of CLAs* leading to wage compression and to collectively negotiated measures sponsoring training (Bowman, 2005; Bussemeyer & Trampusch, 2012; Culpepper, 2007; Soskice, 1994; Streeck, Hilbert, Kevelaer, Maier, & Weber, 1987; Thelen, 2004).

Even though studies of IVT identified these factors as crucial, we expect them to be a big influence in encouraging employers to invest in CVT. However, we should also acknowledge that the politics as well as the institutional context of CVT may substantially differ from that of IVT (Bowman, 2005, p. 574 ff.; Cognard, 2011; Crouch et al., 1999, p. 21).

First, as in IVT so in CVT the problem of the collective good depends very much on the existence of internal labour markets (Streeck et al., 1987, p. 99). However, training already employed workers may further reduce the poaching problem as there may exist strong ties between the firm and the trainee (Bowman, 2005, p. 589), which can further be strengthened by specific agreements between the employees and the firms on HVT training ("*Goldene Fesseln*" ("golden chains"); INT10). Secondly, we may expect that the heterogeneity of employers' preferences for investing in transferable skills is even

greater in CVT than in IVT (Trampusch & Eichenberger, 2012). In contrast to large firms, SMEs are against any measures which enhance the general skill profile of their employees (Culpepper, 2007, p. 616) because they are less able to bear the generally higher costs as well as the administrative load of CVT (Cognard, 2011, p. 31). Large firms can usually rely on internal labour markets (Soskice, 1994, p. 31/32), and are more likely to have production strategies which require general skills and can therefore maintain and protect their managerial prerogative (Bowman, 2005, p. 579). Collective action in CVT may depend much more on large firms' commitment than for IVT. However, Johansen (2002, 309) also found that when the major large firms view themselves as competitors in the product market they may refuse to cooperate in the provision of transferable skills because CVT may become a "strategic asset". Thirdly, the institutional set-up of IVT may create spill-over effects on employers' investments in CVT (Aventur, Campo, & Möbus, 1999, p. 2) because the institutional infrastructure which supports employers cooperation in IVT may also enhance employers' collective action in further training. Such spill-over effects can be affected by the educational or cultural background of managers, HR authorities, and the headquarters' corporate identity. Studies of multinational firms have shown that the personal experience of the managers and HR authority have an impact as they tend to support those skills with which they are familiar (Ballauf, 2011, p. 15; Beck, Kabst, & Walgenbach, 2009, p. 1374; Muehlemann, 2014). For the provision of CVT, this means that we would expect that the more the HR authorities are familiar with the dual vocational training system the more the firm is engaged in HVT. Fourthly, those forms of CVT which provide transferable and certified skills are subject to intensified competition with higher education programs. Employers may view the tertiary academic schemes of universities (of applied sciences) as alternative tracks to enhance the general skills of their employees but the competition with higher education institutions may likewise prompt employers to bring academic options together with the vocational principle in order to maintain the dual training system as an instrument in career advancement (Gonon, 2013). In Switzerland this competitive relationship between HVT and the university track has further intensified with the introduction of the vocational baccalaureate (Graf, 2013, INT16) .

A second source which may help us to understand and explain employers' collective action in CVT is studies of business associations.

Employers' associations

Collective good provision by *business associations* refers to two main “task environments” (Streeck, 1990, p. 27). While *employers' associations* organize collective interests and contribute to collective goods in the labour market and the industrial relation system, *trade associations* coordinate collective action among firms in the product market (e.g. Coleman & Jacek, 1989; Eichenberger & Ginalska, 2017, p. 620; Streeck, 1990, p. 27). The provision and financing of continuing vocational training concerns foremost businesses' labour market related interests, thus refers to firms' interests as buyer of labour. However, as already mentioned above, Johansen (2002, 309) has shown that this task may also concern firms' producer interest, in particular, when large firms view each other as competitors in the product market.¹⁴

While previous empirical studies on business associations have mainly focused on explaining employers' cooperation across nations, regions or time (e.g. Coleman & Jacek, 1989; Eichenberger & Ginalska, 2017; Martin & Swank, 2008; Traxler, 2010), in this strand of literature, we find only little empirical research on industry-level differences in employers' associations training activities (exceptions are: Johansen, 1999; Streeck et al., 1987). However, Schmitter & Streeck (1999) develop a theoretical framework for analysing cross-national variation in the structure and tasks of business associations. These authors suggest that two bundles of factors (Schmitter & Streeck, 1999, p. 21), namely the logic of membership (which refers to their members' interests), and, the logic of influence (which refers to how employers' associations interact with the state and unions), affect employers' associations' collective economic and political activities.

With regard to our problem at hand, namely the explanation of employers' associations' inclination to co-provide and co-finance collective goods, such as transferable skills, Schmitter & Streeck (1999, 14-15) highlight the major influence of business associability, thus the heterogeneity in business interests and how this heterogeneity is reflected in employers' associations organizing capacities (similar: Johansen, 1999; Streeck, 1990, ch. 3). This leads us to assume that employers' associations use CVT as an organizational device to recruit members and to mediate internal interest heterogeneity. In other words, we assume that industry-level differences in employers' cooperation in the

¹⁴ Referring to Streeck's (1990) notion of stronger interest heterogeneity of firms in the product market than in the labor market, Johansen (1999, p. 98-99) even claims that “if training is regarded as labor market issue, the possibility for co-operative solutions is higher than it is regarded as a product market issue”.

provision and financing of CVT is strongly linked to the *logic of organization building* in which the “management of diversity” (Schmitter & Streeck, 1999, p. 15) plays a crucial role.

Also, Johansen (1999, 2002) and Cognard (2011, 2015) argue that employers’ cooperation in CVT depends on the institutional support provided by their associations. Johansen highlights the ability of “powerful bodies” to “use negative or positive sanctions to encourage employers to contribute to the collective good” (Johansen, 2002, p. 309). Cognard (2011) emphasizes that the institutional framework might allow for the exchange of information and thereby facilitate collective action. Recent studies show that the involvement of associations in training policies increases the likelihood that employers will become members in order to influence training systems (Brandl & Lehr, 2019). In France, the main SMEs’ employers’ association uses collective CVT funds to increase its “visibility” and “legitimacy” (Cognard, 2015, p. 17). In addition, cooperating in CVT may have a “political function” by allowing associations to mediate or “arbitrate internal conflicts among members” (Cognard, 2011, p. 37). In particular, this is the case among large firms and SMEs. Likewise, it seems reasonable to assume that large firms may benefit from links between employers’ associations and their coordination in CVT. With “superior resources” they can “sponsor” the membership of small firms which in exchange may support services of the association from which they do not directly benefit (Traxler, 2010, pp. 154-155). In other words, employers’ cooperation in CVT may be used as a selective incentive for membership for firms which otherwise would not enter the association (Trampusch & Eichenberger, 2012, p. 662) as well as being useful in internal mediation.

To sum up, according to the literature we would expect the following aspects to influence the degree of collective action among employers. Firstly, *product markets with high-quality* goods and services, the *certification* of skills and *state support* (via tax treatment or extension practices) make employers’ cooperation more likely. Secondly, we expect that employers’ collective action will vary with their capacity and willingness to recruit skilled labour from *internal labour* markets or whether they (have to or prefer to) rely on external markets where they may recruit employees trained by universities (of applied sciences). Thirdly, the *tradition of cooperation in CLAs and IVT* plays a role in employers’ commitment. Fourthly, the *higher education track offered by universities* may also be a substitute for employers in meeting their tertiary skill needs but university

education may also put pressure on employers to offer HVT programs in order to keep the vocational training track attractive to young people. Fifthly, we expect *large firms to be the main promoters* of collectively organized further training of certified and general skills. Finally, employers' associations' *logic of organization building* affects their cooperation in HVT.

Method

Our study aims to better understand the driving forces and conditions for employer's cooperation in collective skill formation systems. We understand "sectors" as parts of the economy that are characterized by "firms producing a similar range of products for the same product market using similar inputs of raw materials, technology and labour" (Streeck, 1990, p. 16). We look at four sectors that range among the biggest high-employment sectors (BFS, 2017b): (1) the construction, (2) the metal and mechanical engineering, (3) the pharmaceutical and chemical, (4) the banking sector. Our case selection is based on our dependent variable: the degree of employers' cooperation. We selected two sectors with high and two with low employers' collective action in HVT. The construction and the MEM sector are characterized by high employers' collective action in HVT. In contrast, the PC and banking sectors are characterized by low collective action. Methodologically, our study combines Mill's methods of agreement and difference. Firstly, we apply the method of agreement. We compare the construction sector with the MEM and the banking with the PC sector. Secondly, we apply the method of difference by comparing these two groups. In our analysis we respect the historical integrity and pathways of our four cases. This allows us to identify combinations of conditions ("clusters") fostering/hindering employers' collective action in HVT.

Based on our analysis, we conclude that the skill requirements of product markets, the certification of HVT skills and state support cannot explain the variation in employers' cooperation because these conditions are equal in our cases. In all four sectors, training and certificates in higher vocational training are available (SBFI, 2017). The educational statistics show that in all four sectors employees make use of HVT and that the numbers of HVT certificates are rising (BFS, 2017a). Furthermore, the interviewees all pointed out that they serve markets for high-quality goods and services (INTs 1, 4, 15, 18). In addition, we did not find cross-sectoral differences in state support for HVT. Our comparison indicates that the cross-sectoral differences can be explained by the interaction of four conditions; (1) large firms' commitment, (2) competitiveness of the product

market, (3) employers' associations' logic of organization building, and (4) institutional spill-over effects.

Employers' cooperation in HVT in Switzerland

In the following, we present our four cases: the construction sector, the metal and machinery sector, the pharmaceutical sector, and the banking sector. Each case is presented in the following way. We first describe the extent to which funding and the provision of HVT is organized collectively (our dependent variable). Then, we elaborate on the case-specific characteristic in the four dimensions of (1) large firms' commitment, (2) the competitiveness of the respective product market, (3) employers' associations' logic of organization building, (4) institutional spill-over effects. Based on our analysis, we identify two clusters of criteria that help to understand why the extent of collective action in our four cases varies greatly.

Construction sector

High level of employer cooperation

The provision and financing of HVT in the construction sector¹⁵ is characterized by a high level of employer cooperation facilitated by the employer association *Schweizerischer Baumeisterverband* (SBV). The association stands at the centre of the sector's training policies and negotiates the collective labour agreements (SBV, 2017a; Swissmem, 2007; Trampusch, 2020). The SBV was founded in 1897 and represents the occupational, employers' and product market related interests of the construction sector (SBV, 2017b).

In the construction sector, the training centre called "*Campus Sursee*" is the most important HVT provider, known as the central place for elite training ("*Kaderschmiede*") (Schilliger, 2014, INTs8,12) and for developing new technologies (INTs 10, 12). This school was founded in 1972 by the SBV. Even though the school is an independent foundation now, the SBV and the construction industry are strongly involved in funding and steering it (INTs 1, 6). Campus Sursee is subsidized by a large number of cheap

¹⁵ We focus on the main construction industry (*Bauhauptgewerbe*) which excludes peripheral industries (*Baunebengewerbe*).

loans from the SBV for constructing and renovating the buildings (Diana, 2012, INT6; SBV, 2005, p. 3; Zofinger Tagblatt, 2006). The cooperative HG Commerciale (HGC), a construction material provider with a market share of 50% (Richenberger, 1997), also has close connections with the SBV and Campus Sursee. It donates materials as well as investing part of its profits in Sursee, which strengthens the ties between the school and the employers (Diana, 2012, INT6). For the IVT and HVT training at *Sursee* the Swiss construction machine industry provides its newest machines, which are leased to the school (INTs 6,10). The SBV is responsible for the four most important HVT programs in the construction sector. Unions are also partly involved but effectively they have little or no say (INTs 4,5). Within the SBV, specialized commissions (with occupational experts) define the content and procedures of the HVT examinations (INT 4).

Funding is also collectively organized in the construction sector. The collective training fund *Parifonds* was founded in 1970 (Wicki, 1991, p. 451). It is the most striking element of collective action in the construction sector. The fund is anchored in the collective labour agreements and all employers and employees of the construction sector are obliged to pay into it (SVK, 2016). In return, the fund covers tuition fees, travels costs and compensation for the reduced wage during the training (Parifonds Bau, 2017b). In 2016, the Parifonds Bau collected 40.6 Mio CHF out of which 26.9 Mio CHF are dedicated to financing educational tasks (Parifonds Bau, 2017a). Thereby, the fund indirectly finances the HVT school (INTs 1, 6, 8, 12, 13). The SBV runs a second collective fund, the employer-based *Berufsbildungsfonds Bau* (BBF Bau) which finances the SBV's activities in IVT and HVT. It was declared a binding sectoral fund in 2009 (Schweizerischer Bundesrat, 2009).

Conditions fostering cooperation

The construction sector consists of a broad variety of firms of different sizes. Several bigger ones dominate certain regions (INT 8), so that this sector is partially cartelized (INTs 10, 26). This means that firms do not necessarily view each other as competitors. The competitiveness on the product market is rather limited. The interviewees emphasized that all companies in the construction sector fulfil very similar tasks (INTs 1,6, 8) and therefore need similar skills (INT 8). This reduces conflicts within the association and supports the strong role of HVT. This is further strengthened by the shortage of *Kader* employees in the external labour market. There are some very specific requirements for the leadership positions on a construction site. These include practical

experience (INTs 1, 12), knowledge of the “language of the engineers” (INT 12) in combination with being familiar with the vocational construction culture in Switzerland (INT 3). It is difficult to fill these positions with people coming from higher education or from abroad (INTs 1, 3, 12). Of the *Kader* employees in a construction firm, about 95% have completed an apprenticeship (INT 8). They highly value vocational training, including HVT (INTs 8, 12, 13). According to our interviewees, large firms feel that they benefit greatly from the collective funding scheme (INTs 1, 8, 12, 13). They view the *Parifonds* as “very important” (INT 12) and as the “supporting element” (INT 13) because they would not be able to finance and provide the training themselves (INTs 6, 13). Thus, for employers, the collective training mechanisms are very important. The same is true for the employers’ association. The SBV uses its engagement in training as an important means to increase its membership. The central importance of IVT and HVT makes employers join the association in order to influence the training content and reap the benefits; if companies train, “at the least they will then become members of the SBV” (INT8). The costs of non-membership are rather high (INT3). The employers’ associations use positive sanctions to encourage support for their association and thereby collective action in training. Furthermore, in the construction sector, the state is the most important customer. The SBV functions as a channel through which the construction firms can stay on good terms with the public authorities. This encourages small as well as large firms to remain in the SBV (INT 1).

The SBV bundles together the provision and financing for IVT as well as HVT. For example, Campus Sursee started off as a school for IVT but soon integrated leadership courses (Campus Sursee, 2012, p. 3). Also in the collective labour agreements we find a long tradition of collective action and even the institutionalization of collective financing of vocational training through the collective fund *Parifonds Bau* which is anchored in the collective labour agreements (SVK, 2016).

MEM sector

High level of employer cooperation

The business association in the MEM sector is called *Swissmem*. Very similarly to the SBV in the construction sector, Swissmem is strongly engaged in training policies and negotiates the collective labour agreements. Swissmem emerged in 1999 when the

MEM employers' association (*Arbeitgeberverband der Schweizer Maschinenindustrie* (ASM) founded in 1905) and the MEM trade association (Verein Schweizerischer Maschinen-Industrieller (VSM) founded in 1883) merged (Swissmem, 2017).

In the MEM sector, Swissmem is the key player in HVT with more than 20 employees working on IVT/HVT (INTs 4, 26). Swissmem is involved in financing and running two important HVT schools: the *sfb* (*Bildungszentrum für Technologie und Management*) and the Swissmem Academy. The *sfb* was founded in 1970 by the employers' association for mechanical engineering in cooperation with the unions and is anchored in the collective labour agreements. Swissmem Academy is the provider of managerial HVT trainings and is run exclusively by Swissmem. The MEM sector is more diversified than the construction sector and a greater variety of providers offer HVT (INT 4). One example of another important provider is the professional college ABB, founded by the big firm ABB in 1971.

Similar to the construction sector, in the MEM sector, different collective VET funds finance the “structure behind the examinations” (INT 4) in HVT. Since 1969 the *Weiterbildungsfonds* of the machinery, electro, and metal industry is anchored in the collective labour agreements. It is co-funded by employers' and employees' contributions (Fluder, 1991, p. 333). Among others, this fund finances the HVT school *sfb* and the organization of HVT examinations. Swissmechanics, the employers' association of the SMEs in the MEM sector, runs the collectively funded *Swissmechanics Berufsbildungsfonds*. In addition to paying for IVT, this fund finances “the quality development of the [HVT training] modules” (Swissmechanic, 2005).

Conditions fostering cooperation

The heterogeneity of the MEM sector leads to a great diversity of skill needs including vocational as well as academic ones (INTs 4, 7, 24). Engineers, trained at universities and universities of applied sciences, are especially needed in the development and research departments (INT 4). Even though firms tend to outsource production processes abroad, a great part of the MEM sector is still active in manufacturing. Therefore, manual skills are required which are provided through vocational training (INT 4). Also, the outsourcing trend increases the need for higher vocational skills as the remaining tasks become more complex (INT 24). The interviewees representing large MEM firms emphasized that HVT is essential for the implementation of new techniques developed by

engineers (INTs 7, 24). Large employers in particular run development departments which is why they need HVT skills for the transfer from the theoretical to the practical level (INT 24). Global external labor markets are important for MEM firms when it comes to the recruitment of academically trained engineers. But for filling the “intermediate levels” (“*Zwischenbau*”) (INT24) between development and practical implementation MEM firms seem to rely on internal labor markets. HVT is an important means for updating the skills, but other tertiary education gains in importance. Some of our MEM interviewees noted that with internationalization comes a more international management who might not be as familiar with vocational skills. This reduces their willingness to invest in HVT (INTs 7, 24).

Due to the great heterogeneity in the MEM sector and its product market which is represented in firm’s specialization (INT 24) and export-orientation (INT 26) (heterogeneity of markets) large firms seem to view each other less as competitors. This increases their willingness to invest in collective training measures (INT 26).

Very similarly to the construction sector, in the MEM sector, the employers’ association represents employers’ interests in HVT policies. Thereby, Swissmem creates positive incentives for firms to become members (INT4). Firms benefit from the membership because they can communicate their training preferences and influence HVT (INTs 24, 25, 26).

In the MEM sector, the institutional ties between IVT and HVT are strong. Swissmem bundles employers’ competences and represents employers’ interests in the governance of IVT as well as HVT. It also represents the employer’s interests in the collective labour agreements negotiations. As in the construction sector, the collective labour agreement establishes the collective financing and provision of HVT with specific reference to the sfb school. (Swissmem, 2013, p. 55). It has to be added that due to the heterogeneity of the MEM sector, the metal industry has its own collective labour agreement, which establishes a separate collective fund.

Pharmaceutical and Chemical Sectors

Low level of employer cooperation

In the pharmaceutical and chemical sector, we find very little collective action in providing or financing HVT. For example, the sector lacks a collective training funds. Also, the employers' association which supports the collective labour agreements (*Employers' Association of Pharmaceutical, Chemical and Service Enterprises in Basel*) is a specialized association which consists of only 15 employers (GAV, 2012). It is not involved in IVT and HVT provision and financing (INTs 15, 26) and was described as a "very weak organization" that does not even run its own website (INT 26). Instead, the trade association *scienceindustries* gets involved in training policies. For example, it develops the curricula in IVT (SKB, 2014). However, in practice the training activities are governed by the inter-firm training network *aprentas*. This is due to the tradition in the pharmaceutical sector to organize vocational training on the firm-level. However, when in 1996 the big Ciba-Geyga AG was split up, three of the biggest pharmaceutical firms founded *aprentas* in 2000. They wanted to secure the provision of IVT (INT 14). Later, the firms asked *aprentas* to offer HVT too (INT 15). Today, *aprentas* is supported by two of the founding firms and 78 member firms (*aprentas*, 2017). *Aprentas* is located close to Basel because the Swiss pharmaceutical and chemical sector (the founding firms) is concentrated in the region of Basel. However, employers in other regions are reluctant to participate in *aprentas*, due to the spatial distance (INT 21). Interestingly, *aprentas* not only provides the training but also represents employers in developing training policies (INTs 15, 26).

Also, the collective funding is limited to the decentralized support of *aprentas*. *Aprentas* is essentially a collective funding mechanism because the two carrying firms (*Trägerfirmen*) provide substantial financial assistance (INT 14). Also, the member firms pay membership fees. This means that *aprentas* bundles together the financial resources of its members. However, this cooperation applies only to training firms. There are no collective training funds in the PC sector. In other words, in the PC sector, the collective provision and financing of HVT is limited to an inter-firm network without the involvement of the employers' association.

Conditions hindering cooperation

The PC sector is dominated by a few very large employers who are concentrated in the region around Basel. While the smaller companies are rather specialized, the large companies invest in research and development but were traditionally also involved in manufacturing (INT 17). However, manufacturing is increasingly outsourced abroad which – in contrast to the MEM sector – reduces the need for manual skills, obviating the need for vocational training (INT 14, 15, 17). The big companies can satisfy their rising skill demands with highly skilled labour from a global as well as the internal labour market (INT 14). As companies prefer to recruit those with the highest qualification (INT 14), international MA and PhD graduates compete with HVT graduates. In addition, for the updating of skills in the internal labour market, HVT does not seem to be the most important tool for the big companies. Especially in training for leadership positions, big firms rely on internal training rather than on HVT (INT 14). Large firms have the resources to maintain an extensive internal training system (INTs14, 17) and they are not interested in the exchange of expertise (which would be facilitated by collective training activities) because they face intense competition in the market (INT14). About 90% of the students at *aprentas* come from SMEs (INT15). Large employers support their apprentices to complete the vocational baccalaureate in order to enter a bachelor program at a university of applied sciences (INT 17). About 60% of the apprentices pursue this path (INT 15).

Furthermore, vocational training does not play an important role for the employers' associations (INT 26). They do not mingle their organizational interests with training policies (INT 26). Even though the trade association gets involved, it delegated the provision to *aprentas*. Scienceindustries even referred us to *aprentas* when we asked for an interview (email from the Scienceindustries secretariat 10 May 2017). The association does not use HVT as a means for attracting members.

In contrast to the previous two cases, the PC sector lacks a tradition of collective action in training. Traditionally, initial vocational training in the pharmaceutical sector was organized by firms. *Aprentas*, the inter-firm training network, established a kind of segmented skill system and extended its training activities to HVT. Also, the sector does not rely on encompassing sector-wide collective labour agreements.

Furthermore, the interviews explained that in the pharmaceutical and chemical sector, the often international (non-Swiss) management is not familiar with vocational training programs and therefore prefers to support academic training with which it is familiar (INTs 15, 17).

Banking sector

Low level of employer cooperation

The employers' association of the banking sector, the *Employers' Association of Banks in Switzerland (Arbeitgeber Banken)*, was founded in 2009 with the support of the trade association *Swissbanking (Arbeitgeber Banken, 2015)*. Arbeitgeber Banken replaced a loose network of regional banking associations which was dominated by the banking association of Zurich (ibid.). The trade association Swissbanking was founded in 1912 (Vogler, 2017). Even though Swissbanking is the trade association, and therefore concerned with the product market (INT 26), it deals with vocational training policies and runs its own division for training (INTs 18, 26; Swissbanking, 2010). In the banking sector, HVT was popular until the 1990s (INTs 18, 20) but this changed with the introduction of the universities of applied sciences. In response, in the early 2000s, Swissbanking decided to support the provision of HVT through a professional college which would focus on professional skills in banking (INT 18). Swissbanking was reluctant to run the college itself and looked for an external provider. The profit-oriented enterprise Kalaidos Bildungsgruppe AG opened the professional college *Höhere Fachschule Banking+Finance (HFBF)* in 2006. Swissbanking controls the steering committee of the college (INT 18) but does not invest further resources. The college receives 25% of its funding from the cantons and needs to cover the rest of the costs from tuition fees (INT 16). The college focuses on training in the field of retail banking. International private banks do not send their employees to the college because they focus on different fields of banking such as international asset management (INTs 19, 20). Because HVT is provided by a profit-oriented private provider, we consider collective action among banks (via Swissbanking) as very weak.

The financing of tuition fees is left completely to individual agreements between employer and employees. In our interviews, the relatively high wages were named as a reason for the absence of collective mechanisms (INTs 19, 20). However, most firms pay the tuition fees for their employees and in return the employee is obliged to stay

with the firm, which amounts to a “company-based loan” (INTs 14, 17, 20). The banking sector lacks any mechanism for collective funding.

Conditions hindering cooperation

The banking sector, even more so than the pharmaceutical sector, shifts its skill preferences towards academic training (INTs 17, 18). The large employers that focus on international customers require skills which are updated with very specific internal training (INT 19). These large banks can draw on their internal labour markets as well as on the global labour markets that offer labour with higher education certificates (INT 16). Also, banks seem to prefer their internal training systems because they compete for highly skilled and experienced labour. They perceive the competitiveness on the product market to be very intense and they fear poaching through collectively organized courses (INT 19). Especially large banks are able to establish their own internal training systems including very specialized courses and bilateral cooperation with universities where needed (INT 18). Furthermore, one interview partner pointed out that the professional college focuses on retail banking which makes it less attractive for banks focusing on asset management (INT 19). Also, large banks support the vocational baccalaureate. The share of apprentices completing a vocational baccalaureate rose from less than 50% in the 1990s to more than 65% nowadays (INTs 16, 18). This shift becomes visible in the declining number of students of the professional college (INT16; BFS 2016). In response, the training of the professional college is now embedded into the structure of the Kalaidos university of applied sciences (AKAD HFBF AG, 2016). In other words, large banks are reluctant to participate in collective training activities.

In the banking sector, it has been the trade association Swissbanking that tried to get involved in HVT in the 1990s. However, this approach failed because its members increasingly concentrated on higher and specialized training through academic training. One of our interviewees confirmed that this development challenges the role of the trade association (INT 18).

In the banking sector, IVT was traditionally organized by the Swiss Association of Commercial Employees (KV Schweiz) (Trampusch, 2010a). The banks’ employers’ association had limited influence on IVT. Moreover, the tradition of commercial IVT training is characterized as “all sector training” (“*Allbranchen Ausbildung*”, INT 2) because it cuts across various sectors so that occupational identity overlaps less with the sectors,

as in the construction and MEM sectors (INTs 2, 10). “All sector training” also contradicts to the logic of organizing employers’ interests at the sector-level which may also explain why employers’ associations do not centralize collective action in training (INT 26). In 2003, the reform of commercial training shifted competences from the KV to the sectors, but in banking it was not the employers’ association but the trade association that got involved. As a reaction to the 2003 reform, “the largest Swiss banks in cooperation with Swissbanking” (CYP, 2017) founded the training network CYP. In contrast to *aprentas*, which only handles inter-firm cooperation, Swissbanking is involved in the steering of CYP. However, Swissbanking is only one member among the founding banks, which is why CYP has a strong sectional character. Furthermore, CYP does not provide standardized HVT. Spill-over effects are further limited because, as trade associations, Swissbanking is not involved in the bargaining of the collective labour agreements. A selection of 50 banks (VAB, 2016) support a specialized association for the purpose of negotiating the collective labour agreements. Some employers choose to have company-based labour agreements. Furthermore, the collective labour agreements do not address the collective provision or financing of VET. On the contrary, the collective labour agreements underline the responsibility of the individual employers and employees (VAB, 2016, p. 6).

In the interviews, it became clear that the bank’s international and/or academically trained managers and HR authorities lack knowledge about HVT due to their academic educational cultural background. This reduces their willingness to invest in it (INTs 16, 18).

Comparison and Discussion

When do employers’ associations co-provide and co-finance transferable skills? Based on our four case studies of employers’ cooperation in the Swiss HVT system, our analysis reveals two different clusters of interrelated conditions that seem to foster (hinder) cooperation. Table 1 presents the two clusters.

Table 1: Overview two clusters of interrelated factors influencing employer's co-operation

	“high cooperation”	“low cooperation”
Large firms' commitment	Large firms use HVT to fill leadership positions, thus are committed to HVT	Large firms use alternatives to fill leadership positions, thus are not committed to HVT
Competitiveness on the product market	Low(er)	High
Association	Training policies attract members	Training policies do not matter (so much) for membership
Spill-over from initial VET and collective labour agreements	Long tradition of cooperation in IVT and CLA	No tradition of cooperation in IVT and CLA

Source: Authors' own

We analysed the cases along the four dimensions (1) large firms' commitment, (2) the competitiveness of the product market, (3) employers' associations' logic of organization building, (4) institutional spill-over effects. Our comparison of the construction with the MEM sector by the method of agreement reveals that the cluster of conditions leading to high cooperation among employers in the provision and financing of HVT can be characterized as follows: We observe that large firms are committed to HVT. This commitment in turn depends on large firms' capacity *and* willingness to recruit skilled labour for vocational leadership positions internally (trained through HVT) instead of from external markets. In the construction sector and MEM sector, internal labour markets are a central resource for these leadership positions. External labour markets seem to be less able to provide the necessary skills. Furthermore, large firms are willing to support their

employees to participate in HVT because the firms do not perceive the competitiveness on the product market to be too high. Closely related to the commitment of large firms is the commitment of the employer associations. In the cluster that is related to high level of cooperation, the employers' associations are very active in HVT because it is an important means to attract members and to mediate internal interests. Fourth, the tradition of cooperation in IVT and collective bargaining seems to have spill-over effects on cooperation in HVT. In the construction and MEM sector, collective labour agreements also embrace training issues and IVT is deeply rooted and well organized by the employers' associations, thus creating further spill-over effects in institutional and financial resources.

The cluster of conditions hindering employers' cooperation in the provision and financing of HVT can be observed in the pharmaceutical and the banking sector. In both sectors the conditions display a similar dynamic. The banking and PC sectors heavily rely on internal labour markets although they can and also do recruit highly skilled people from all over the globe as university education gains in importance. However, firms view themselves as major competitors in the product market which constrains their willingness to pursue common objectives in CVT and invest in portable skills. Also, the large employers have enough resources to provide firm-specific internal training and cooperate with universities. Based on our analysis, it seems reasonable to argue that business views training more as a product market issue than as a labour market issue. We observe that in the cases with low levels of cooperation, if associations are involved, the trade not the employers' associations engage in collective good provision and financing. But even for these associations, training policies are not the prime means to attract members or to mediate internal interests. The association delegate IVT to external providers or we find inter-firm networks, excluding non-training firms. Collective labour agreements do not address collective vocational training activities. Our analysis also supports the argument that the less the firms' HR authorities are familiar with the vocational training system the less the firm is engaged in HVT.

The overall similarities and differences across our four cases let us conclude that the certification of skills, state support as well as high quality product markets do not condition the intensity of employers' cooperation in Switzerland.

Our study has started to disentangle the complex variety of conditions that influence employers' decision to invest in collective skill provision. Our findings contribute to a

better understanding of the diversity of ways how and why continuing vocational training is organized in collective systems. With regard to rising skill demands, the importance of further education is growing. Understanding underlying factors why different employers' associations do or do not invest in collective training thus is of high relevance. Thus, our findings are very relevant beyond the Swiss borders. We emphasized that collective action in training cannot be explained solely by one factor. A combination of different interrelated conditions has to be taken into account in order to understand why employers' associations provide skills that are of benefit even for non-training firms. Furthermore, the importance of large firms confirms Johansen's assumption that "collective action for transferable training must aim to a large extent at satisfying the large employers" (Johansen, 2002, p. 308) and is more likely when large firms do not perceive themselves as major competitors in the product market (*ibid.*, 309). Additionally, the tradition of cooperation in IVT and collective labour agreements points to the effect of institutional path dependency and the role of agency as associations reinforce their position by taking over further tasks.

With regard to the knowledge economy, this means that changes in one dimension do not automatically lead to the collapse of collective skill governance. The knowledge economy leads to rising skill demands. We showed however, that skill demands only represent one dimension in the cluster of factors that foster collective action. Nevertheless, in sectors with no or a weak tradition in collective governance, rising skill demands in combination with increasing global competition reinforce the destructive power of the knowledge economy on the collective provision of higher vocational skills.

Further cross-country analysis of the collective skill formation regime could also solve the following puzzle. The prime example of employers' cooperation in IVT and CLAs, Germany, shows very reluctant industry-level employers' associations in above-firm level cooperation in providing general skills through further training (Streeck et al., 1987, p. 26). In contrast to Switzerland, German chambers are based on compulsory membership which may weaken the use of CVT as an instrument for strengthening employers' associating and be more dysfunctional for employers' associations' role in CVT than in IVT. We suspect that the dynamic interaction between large firms' behaviour, employers' associations' logic of organization building, and spill-over effects by CLAs impacts employers' cooperation in CVT and IVT differently, due to substantial differences in the politics and institutional contexts of IVT and CVT. Our study did not look

at the effects of differences in the provision and financing of continuous vocational training. Further research might want to investigate in detail how differences in the governance influence participation rates in training for example.

References

- AKAD HFBF AG. (2016). Information zur Weiterentwicklung der Höheren Fachschule Bank + Finanz HFBF. Retrieved from (20.3.2017) www.swissbanking-future.ch%2F20160908-2600-all-kommunikation_hfbf_biko-deu_gesamtdokument-mlo.pdf&usg=AOvVaw0o-ZGUrX1vK-3ftwbva4ad
- aprentas. (2017). Mitgliedfirmen. Retrieved from (13.10.2017) <http://www.aprentas.ch/aprentas/mitgliedfirmen.cfm>
- Arbeitgeber Banken. (2015). Historie. Retrieved from (28.12.2017) <http://arbeitgeber-banken.ch/de/verband/organisation>
- Aventur, F., Campo, C., & Möbus, M. (1999). Factors in the Spread of Continuing Training in the European Community. *Training and Employment*, 35, 1-6.
- Ballauf, H. (2011). *Karriere mit beruflicher Fortbildung*. Bonn: Referat Ordnung und Qualitätssicherung der beruflichen Bildung.
- Baumeler, C., Dannecker, K., & Trede, I. (2014). *Höhere Berufsbildung in der Schweiz*. Bern: Eidgenössisches Hochschulinstitut für Berufsbildung.
- Beck, N., Kabst, R., & Walgenbach, P. (2009). The Cultural Dependence of Vocational Training. *Journal of International Business Studies*, 40(8), 1374-1395.
- Becker, G. S. (1962). Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy*, 70(5), 9-49.
- BFS. (2009). *Personen mit einem Abschluss der höheren Berufsbildung auf dem Arbeitsmarkt*. Neuchâtel: Bundesamt für Statistik.
- BFS. (2017a). Ausgewählte Bildungsabschlüsse, Entwicklung. Retrieved from (6.10.2017) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildungswissenschaft/bildungsabschluesse/sekundastufe-II/berufliche-grundbildung.assetdetail.2950613.html>
- BFS. (2017b). Beschäftigte nach Vollzeitäquivalente und Wirtschaftsabteilungen. Retrieved from (14.12.2017) <https://www.bfs.admin.ch/bfs/de/home/statistiken/industriedienstleistungen/unternehmen-beschaeftigte/beschaeftigungsstatistik/beschaeftigte.assetdetail.3865848.html>

- BFS. (2017c). Tertiärstufe - Höhere Berufsbildung. Retrieved from (19.11.2017) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/tertiaerstufe-hoehere-berufsbildung.html>
- Bowman, J. R. (1982). The Logic of Capitalist Collective Action. *Rationality and Society*, 21(4/5), 571-604.
- Bowman, J. R. (2005). Employers and the Politics of Skill Formation in a Coordinated Market Economy: Collective Action and Class Conflict in Norway. *Politics & Society*, 33(4), 567-594.
- Brandl, B., & Lehr, A. (2019). The strange non-death of employer and business associations: An analysis of their representativeness and activities in Western European countries. *Economic and Industrial Democracy*, 40(4), 932-953.
- Bussemeyer, M. R. (2009a). Asset Specificity, Institutional Complementarities and the Variety of Skill Regimes in Coordinated Market Economies. *Socio-Economic Review*, 7(3), 375-406.
- Bussemeyer, M. R. (2009b). *Wandel trotz Reformstau: Die Politik der beruflichen Bildung seit 1970*. Frankfurt am Main: Campus.
- Bussemeyer, M. R., & Trampusch, C. (2012). The Comparative Political Economy of Collective Skill Formation. In M. R. Bussemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 3-38). Oxford: Oxford University Press.
- Campus Sursee. (2012). *40 Jahre Campus Sursee Bildungszentrum Bau Vom Grundstein zum breitesten Bildungsangebot der Schweizer Baubranche*. Sursee: Campus Sursee Bildungszentrum Bau.
- Cognard, E. (2011). Varieties of Capitalism and financial cooperation between employers: The initial and continuous vocational training in comparison. *European Journal of Industrial Relations Journal*, 17(1), 25-40.
- Cognard, E. (2015). *Path Dependency, Cross-Class Coalitions, and the Slow Road of the French Further Training System away from Solidarism*. Paper presented at the Annual Conference of the European Sociological Association, Prague.
- Coleman, W., & Jacek, H. (1989). *Regionalism, Business Interests and Public Policy*. London: SAGE.
- Crouch, C., Sako, M., & Finegold, D. (1999). The Dispiriting Search for the Learning Society. In C. Crouch, M. Sako, & D. Finegold (Eds.), *Are Skills the Answer?: The Political Economy of Skill Creation in Advanced Industrial Countries* (pp. 1-31). Oxford: Oxford University Press.
- Culpepper, P. D. (2003). *Creating Cooperation. How States Develop Human Capital in Europe*. Ithaca: Cornell University Press.
- Culpepper, P. D. (2007). Small States and Skill Specificity: Austria, Switzerland, and Interemployer Cleavages in Coordinated Capitalism. *Comparative Political Studies*, 40(6), 611-637.
- Culpepper, P. D., & Finegold, D. (Eds.). (1999). *The German Skills Machine. Sustaining Comparative Advantage in a Global Economy*. New York: Berghahn Books.

- CYP. (2017). CYP Partner. Retrieved from (20.3.2017) <https://cyp.ch/ueber-uns/partner>
- Diana, M. (2012, 25.10.2012). Das Schiff Campus Sursee bricht zu neuen Horizonten auf. *bauwirtschaft online*. Retrieved from <http://www.schweizerbauwirtschaft.ch/Artikel-Einzelansicht.20+M5b3d60e0041.0.html>
- Eichenberger, P., & Ginalschi, S. (2017). "Si vis pacem, para bellum"- the construction of business cooperation in the Swiss machinery industry. *Socio-Economic Review*, 15(3), 615-635.
- Eichenberger, P., & Mach, A. (2011). Organized capital and coordinated market economy: Swiss business interest associations between socio-economic regulation and political influence. In C. Trampusch & A. Mach (Eds.), *Switzerland in Europe Continuity and change in the Swiss political economy* (pp. 63-81). London: Routledge.
- Fazekas, M., & Field, S. (2013). *A Skills beyond School Review of Switzerland*. Paris: OECD.
- Fluder, R. (1991). Arbeitnehmerorganisationen in der Maschinenindustrie. In R. Fluder (Ed.), *Gewerkschaften und Angestelltenverbände in der schweizerischen Privatwirtschaft* (pp. 201-386). Zürich: Seismo.
- GAV. (2012). Gesamtarbeitsvertrag für Basler Pharma- Chemie- und Dienstleistungsunternehmen. Retrieved from (6.10.2017) www.gav-service.ch/FileSpooler.axd?fileId=8819
- Gonon, P. (2013). Federal Vocational Baccalaureate: The Swiss Way of 'Hybridity'. In T. Deissinger, J. Aff, A. Fuller, & C. Helms Jørgensen (Eds.), *Hybrid Qualifications: Structures and Problems in the Context of European VET Policy* (pp. 181-196). Bern: Peter Lang.
- Graf, L. (2013). *The Hybridization of Vocational Training and Higher Education in Austria, Germany and Switzerland*. Opladen: Budrich UniPress.
- Johansen, I.-H. (1999). *Transferable training and the collective action problem for employers: an analysis of further education and training in four Norwegian industries*. (PhD Thesis), LSE, Oslo. (Fafo Report 335)
- Johansen, I.-H. (2002). Transferable Training as a Collective Good. *European Sociological Review*, 18(3), 301-314.
- Kriesi, H., & Farago, P. (1989). The Regional Differentiation of Business Interest Associations in Switzerland. In W. Coleman & H. Jacek (Eds.), *Regionalism, Business Interests and Public Policy* (pp. 153-171). London: SAGE.
- Mach, A., & Trampusch, C. (2011). The Swiss Political Economy in Comparative Perspective. In C. Trampusch & A. Mach (Eds.), *Switzerland in Europe. Continuity and Change in the Swiss Political Economy* (pp. 11-23). London: Routledge.
- Marsden, D. (1999). *A Theory of Employment Systems: Micro-Foundations of Societal Diversity*. Oxford: Oxford University Press.

- Martin, C. J., & Swank, D. (2008). The Political Origins of Coordinated Capitalism: Business Organizations, Party Systems, and State Structure in the Age of Innocence. *American Political Science Review*, 102(2), 181-198.
- Muehlemann, S. (2014). Training participation of internationalized firms: establishment-level evidence for Switzerland. *Empirical Research in Vocational Education and Training*, 6(5), 1-11.
- Parifonds Bau. (2017a). 2016/ Geschäftsbericht Parifonds Bau. Retrieved from (17.1.2017) https://www.consimo.ch/_cms/lib/f_dbstream.php?tn=tab_file&fd=file&mt=application/pdf&id=1195&hxfile&f=AK66_ELAR-#6128007-v16-2016_Parifonds_Bau_Gesch%C3%A4ftsbericht_de.pdf
- Parifonds Bau. (2017b). Beitrags- und Leistungsreglement Retrieved from (17.1.2017) https://www.consimo.ch/_cms/lib/f_dbstream.php?tn=tab_file&fd=file&mt=application/pdf&id=1173&hxfile&f=063682_Parifonds_Leistungsreglement_IH_d_neu.pdf
- Richenberger, H. (1997, 12.03.1997). Die Schweiz ist noch lange nicht gebaut. *Neue Zürcher Zeitung*.
- Rohrer, L., & Trampusch, C. (2011). Continuity and change in the Swiss vocational training system. In C. Trampusch & A. Mach (Eds.), *Switzerland in Europe Continuity and change in the Swiss political economy* (pp. 144-162). London: Routledge.
- SBFI. (2017). Berufsverzeichnis Höhere Berufsbildung. Retrieved from (23.11.2017) <http://www.bvz.admin.ch/bvz/hbb/index.html?lang=de>
- SBV. (2005). Jahresbericht. Retrieved from (6.10.2017) www.baumeister.ch/de/component/edocman/1043-jahresbericht-2005-d-pdf/download
- SBV. (2017a). Wir als Verband Leitbild und Ziele. Retrieved from www.baumeister.ch/de/component/edocman/2778-leitbild-sbv-deutsch/download
- SBV. (2017b). Wir über uns. Retrieved from (6.10.2017) <http://www.baumeister.ch/de/der-sbv>
- Schilliger, P. (2014, 4.9.2014). Bauwirtschaft; Baumeister gehen schwimmen. *HandelsZeitung*, p. 50.
- Schmid, E., & Gonon, P. (2013). Die höhere Berufsbildung unter Profilierungsdruck. In M. Maurer & P. Gonon (Eds.), *Herausforderungen für die Berufsbildung in der Schweiz* (Vol. 1). Bern: hep Verlag.
- Schmitter, P. C., & Streeck, W. (1999). *The Organization of Business Interests. Studying the Associative Action of Business in Advanced Industrial Societies*. Köln: Max-Planck-Institut für Gesellschaftsforschung.
- Schweizerischer Bundesrat. (2009). Bundesratsbeschluss über die Allgemeinverbindlicherklärung des Berufsbildungsfonds Bau. Retrieved from (6.10.2017) <https://www.admin.ch/opc/de/federal-gazette/2009/8837.pdf>

- SGV. (2004). *Finanzrelevante Aus- und Weiterbildungsaktivitäten der schweizerischen Berufsverbände*. Mimeo.
- SKB. (2014). Bildungsplan Chemie- und Pharmatechnologin / Chemie- und Pharmatechnologe mit eidgenössischem Fähigkeitszeugnis (EFZ). Retrieved from (6.10.2017) http://www.cp-technologe.ch/wp-content/uploads/2016/07/Bipla_37005_d.pdf
- SKBF. (2018). *Bildungsbericht Schweiz 2018*. Aarau:
- Soskice, D. (1994). Reconciling Markets and Institutions: The German Apprenticeship System. In L. M. Lynch (Ed.), *Training and the Private Sector* (pp. 25-60): University of Chicago Press.
- Streeck, W. (1989). Skills and the Limits of Neo-Liberalism: The Enterprise of the Future as a Place of Learning. *Work, Employment & Society*, 3(1), 89-107.
- Streeck, W. (1990). Interest Heterogeneity and Organizing Capacity: Two Class Logics of Collective Action. *Estudio/Working Paper*, 1990(2), 1-44.
- Streeck, W. (2012). Skills and Politics: General and Specific. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 317-352). Oxford: Oxford University Press.
- Streeck, W., Hilbert, J., Kevelaer, K.-H. v., Maier, F., & Weber, H. (1987). *Die Rolle der Sozialpartner in der Berufsausbildung und beruflichen Weiterbildung: Bundesrepublik Deutschland*. Berlin: European Centre for the Development of Vocational Training.
- SVK. (2016). Landesmantelvertrag für das schweizerische Bauhauptgewerbe. Retrieved from (21.11.2017) <http://www.gav-service.ch/Contract.aspx?stellaNumber=100001&versionName=8>
- Swissbanking. (2010). Statuten Schweizerische Bankiervereinigung (SwissBanking). Retrieved from (17.1.2018) www.swissbanking.org/de/bankiervereinigung/ueberuns/statuten_sbvg_2010.pdf
- Swissmechanic. (2005). Reglemente zum Berufsbildungsfonds. Retrieved from (22.11.2017) www.swissmechanic.ch/documents/Reglemente_zum_BBF.pdf
- Swissmem. (2007). Statuten Swissmem. Retrieved from (6.10.2017) https://www.swissmem.ch/fileadmin/_migrated/content_uploads/swissmem_statuten_07.pdf
- Swissmem. (2013). Gesamtarbeitsvertrag der Maschinen-, Elektro- und Metall-Industrie. Retrieved from (6.10.2017) https://www.swissmem.ch/fileadmin/user_upload/Sozialpartner/pdf/GAV_01.07.2013_-_30.06.2018_D.pdf
- Swissmem. (2017). Geschichtlicher Hintergrund. Retrieved from (11.10.2017) <https://www.swissmem.ch/de/organisation-mitglieder/verband/geschichtlicher-hintergrund.html>

- Thelen, K. (2004). *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*. New York: Cambridge University Press.
- Trampusch, C. (2010a). Employers, the State and the Politics of Institutional Change: Vocational Education and Training in Austria, Germany and Switzerland. *European Journal of Political Research*, 49(4), 545-573.
- Trampusch, C. (2010b). Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland. *Comparative Politics*, 41(2), 187-206.
- Trampusch, C. (2020). Social Partners' Policy Reactions to Migration in Occupational Labour Markets: The Case of the Swiss Construction Industry. *European Journal of Industrial Relations*, 26(2), 157-172.
- Trampusch, C., & Eichenberger, P. (2012). Skills and Industrial Relations in Coordinated Market Economies- Continuing Vocational Training in Denmark, the Netherlands, Austria and Switzerland. *British Journal of Industrial Relations*, 50(4), 644-666.
- Traxler, F. (2010). The long-term development of organised business and its implications for corporatism: A cross-national comparison of membership, activities and governing capacities of business interest associations, 1980-2003. *European Journal of Political Research*, 49(2), 151-173.
- VAB. (2016). Vereinbarung über die Anstellungsbedingungen der Bankangestellten (VAB). Retrieved from (6.10.2017) www.sbpv.ch/fileadmin/user_upload/Geschuetzter_Bereich/VAB/VAB_2016.pdf
- Vogler, R. U. (2017). Geschichte. Retrieved from (12.11.2017) <http://www.swissbanking.org/de/bankiervereinigung/ueber-uns/geschichte>
- Wettstein, E., & Gonon, P. (2009). *Berufsbildung in der Schweiz*. Bern: hep Verlag.
- Wicki, M. (1991). Gewerkschaften im Baugewerbe. In R. Fluder & e. al. (Eds.), *Gewerkschaften und Angestelltenverbände in der schweizerischen Privatwirtschaft* (pp. 387-457). Zürich: Seismo.
- Zofinger Tagblatt. (2006, 20.03.2006). Erneuerung AZ Sursee. *Zofinger Tagblatt*.

Appendix

Table 1: Overview Expert Interviews 2016/2017 on Higher Vocational Education in Switzerland

Code	Actor Group	Date
INT1	Employers' and Trade Association of the Construction Sector	29.11.2016
INT2	Cross-sector Employers' and Trade Association SMEs	09.12.2016
INT3	Cross-sector Employee Association	12.12.2016
INT4	Employers' and Trade Association of the MEM Sector	13.12.2016
INT5	Cross-sector Employee Association	13.12.2016
INT6	HVT Provider in the Construction Sector	15.12.2016
INT7	HVT Provider in the MEM Sector	02.02.2017
INT8	Construction Firm	06.03.2017
INT9	Cross-sector Employee association	15.03.2017
INT10	Former politician	15.03.2017
INT11	Cross-sector Employee association	16.03.2017
INT12	Construction Firm	20.03.2017
INT13	Construction Firm	21.03.2017
INT14	Pharmaceutical and Chemical Firm	28.03.2017
INT15	HVT Provider Pharmaceutical and Chemical Sector	28.03.2017
INT16	HVT Provider Banking Sector	31.03.2017
INT17	Pharmaceutical and Chemical Firm	04.04.2017
INT18	Trade Association Banking Sector	07.04.2017

Code	Actor Group	Date
INT19	Bank	19.04.2017
INT20	Bank	20.04.2017
INT21	Occupational Association Pharmaceutical and Chemical Sector	10.05.2017
INT22	HVT Provider MEM Sector	15.06.2017
INT23	Cross-sector Employee Association	26.06.2017
INT24	MEM Firm	10.10.2017
INT25	MEM Firm	26.10.2017
INT26	Cross-sector Employers' Association	24.11.2017

5 How rising skill demands undermine collective governance

An analysis of further training in the Swiss banking sector

Abstract

The number of small and medium sized firms that participate in vocational training is on the decline. In order to keep large firms on board, policy makers are willing to tailor training to large firms' specific needs. This process undermines the collective governance structure and is referred to as 'segmentalism'. So far, studies on segmentalism have concentrated on initial vocational training. This means we know little about segmentalism in other fields of vocational training such as further vocational training which represents the "upper" level in vocational training. The governance of further vocational training differs from that of initial vocational training which means that segmentalism is likely to work differently. This raises the question of how segmentalism changes further vocational training. My paper studies processes of change in further vocational training in the Swiss banking sector. My analysis reveals that segmentalism is not restricted to initial vocational training. In further vocational training, large employers are very powerful and are successful in influencing training content, in particular, when the training providers depend on large firms to be their customers. My case study reveals that in the banking sector, the introduction of private for-profit training providers triggered a process of displacement and conversion which grant more influence to large employers and undermine the collective governance tradition.

Introduction

Collective skill formation systems are based on the close cooperation between firms, their associations, state actors, and often unions in the content definition, certification, and the provision of training (Emmenegger, Graf, & Trampusch, 2019). This cooperation guarantees the provision of skills that are relevant beyond the internal firm-based labour market and allows graduates to move freely on the sectoral or occupational labour market. However, scholars observe institutional changes in these systems with severe consequences for the collective governance and the transferability of skills. Due to

macroeconomic trends, the influence of large firms on vocational training systems is growing and large firms can overrule the interests of business associations and small firms (Emmenegger & Seitzl, 2019). This means skill provision and training content is increasingly tailored towards the needs of internal labour markets of large firms instead of occupational or sectoral labour markets (Thelen & Busemeyer, 2011). The literature refers to this process as *segmentalism* and argues that the dominance of large firms undermines the collective nature of vocational training systems (Thelen & Busemeyer, 2011). The structural power of large firms to influence training is rooted in the dependency of collective skill formation systems on large firms to provide training. Their ability to retreat from training provision makes large employers very powerful (Emmenegger & Seitzl, 2019; Thelen & Busemeyer, 2011).

Our knowledge on segmentalism is growing but it is incomplete. This is for a simple reason: studies on segmentalism have so far neglected an important part of collective skill formation, namely collective further training (also often referred to as continuing vocational training, CVT). This is a gap in the literature that needs to be addressed because there are “significant differences between the political economy of initial training and the political economy of continuing training” (Bowman, 2005, p. 586). Collective further training equips learners with advanced professional skills in order to prepare them for leadership positions and new career opportunities. Thus, one of the key differences lies in the high level of transferability of skills provided by further training which intensifies the collective action problem (Johansen, 2002). Employers are, even more so than in initial vocational training, interested in directly benefiting of and controlling training (Bowman, 2005; Johansen, 2002). This makes segmentalism in further training even more likely than in initial vocational training.

Furthermore, there are some organizational differences between initial and further vocational training that are likely to influence the process segmentalism. Learning in further training is usually not divided between school and work but lessons only take place at school. Thus, employers are not the providers of training in collective further training. Consequently, the argument that large employers are powerful because they provide training, does not apply to further training. Thus, large employers cannot threaten other actors to retreat from providing training. Given these differences between initial and further training, the process of segmentalism is likely to work differently in further training but we know little about segmentalism in further training.

This paper contributes to closing this gap by investigating further training in the Swiss banking sector. I ask: How and under what circumstances does segmentalism take place in collective further training? Who are the key change agents in segmentalism in further training and what is their source of power? The Swiss banking sector is among the sectors in Switzerland that is most affected by globalization and international competition which increasingly requires skills to be updated. Furthermore, the Swiss banking sector is characterized by a few, but very powerful, players that have a lot of resources at hand. Against this backdrop, the Swiss banking sector represents an extreme case in which segmentalism is very likely to take place. This case selection offers me the opportunity to explore segmentalism in further training.

My case study investigates institutional change in the skill provision in the banking sector over the last 20 years by relying on desk research and 13 expert interviews. Through process tracing, I explore the underlying reasons for institutional changes and their effects on the collective nature of skill provision. In order to systematically investigate the process of institutional change, this paper applies the concept of different modes of institutional change.

This paper makes the following arguments. Segmentalism is not restricted to initial vocational training. Further training is strongly and increasingly influenced by large employers which undermines the collective nature of skill provision. Furthermore, the processes of segmentalism in initial vocational training and further vocational training differ with regard to two aspects. Firstly, training providers (schools) play a key role as change agents in segmentalism in further training. So far, we did not know much about the role of training providers in segmentalism. I show that for-profit schools have a strong interest and depend on the close cooperation with large employers. Secondly, large employers are able to influence the training content because they are important customers of the schools providing further training. My case study shows that the delegation of training responsibilities to private providers can set a process of change in motion that undermines the collective governance tradition in further training.

This paper is structured as follows: the next section presents the theoretical arguments on segmentalism, the governance of further training and different modes of institutional change. Then, I elaborate on my case selection and methodology. Next, I introduce the main characteristics of professional training in the banking sector before zooming in on

the case study that explains how the governance of skill provision in the banking sector changed since the 1990s. The final section offers a conclusion.

Theoretical framework

Macroeconomic trends challenge the governance of skill formation systems. This leads to the *liberalization* of systems which can be summarized as the “expansion of market mechanisms” (Streeck & Thelen, 2005, p. 30). However, liberalization is not a global and uniform process. Changes are influenced by the characteristics of national political economies. The literature has identified three main “trajectories of liberalization” (Thelen, 2012). Liberal market economies tend to undergo a process of ‘de-regulation’ which expands market forces even further. In political economies that are characterized by a strong state and a high level of coordination on the national level, liberalization tends to come as ‘embedded flexibilization’. This process can be observed in Scandinavian countries but also segments of coordinated market economies can change in the fashion of embedded flexibilization (Di Maio, Graf, & Wilson, 2020).

However, the typical trajectory of liberalization in coordinated market economies is described as ‘dualization’. Institutions of collective governance are not eliminated by liberalization, but the literature observes a “differential spread of market forces” (Thelen, 2012, p. 147). This leads to increasing inequality and widens the gap between insiders and outsiders (Emmenegger, Häusermann, Palier, & Seeleib-Kaiser, 2012). With regard to collective skill formation systems, this liberalization process is described as *segmentalism* (Thelen & Busemeyer, 2011). In the process of segmentalism, large firms increasingly overrule smaller firms in the governance of training. This has a profound effect on collective skill formation: it undermines the collective governance tradition.

This paper analyses the process of segmentalism in Swiss professional training. The following section (2.1) presents the literature on segmentalism. Additionally, this paper applies the concept of *layering*, *displacement* and *conversion* to the case study. These *modes of change* help to understand *how* and *under which circumstances* segmentalism changed the traditionally collective governance of professional training. The different modes of change are presented in section 2.3.

Segmentalism

Segmentalism describes the increasing influence of large employers on training which means that the orientation of training in collective skill formation systems shifts from the sectoral and occupational level to the firm level (Thelen, 2012; Thelen & Busemeyer, 2011). Collective governance is replaced by de-centralized, large employer-oriented governance.

Traditionally, the governance of vocational training in collective skill formation systems is characterized by cooperation and coordination among state actors and business. Business is very powerful, a “pivotal player” (Busemeyer, 2012) in collective skill formation because the system depends on employers’ voluntary engagement in key tasks such as the provision of training and the development of curricula. Traditionally, intermediary associations bundle the interests of all types of employers - small, medium and large - on the sectoral or occupational level and negotiate with state actors (Schmitter & Streeck, 1999). This process guarantees, for example, that the skills provided are portable across firms on the sectoral and occupational level.

However, macroeconomic trends such as the shift towards the service economy and increasing specialization, challenge the governance of collective skill formation. Decentralization of wage bargaining challenges the collective governance of VET and the positive benefits associated with vocational training such as low youth unemployment (Busemeyer & Iversen, 2012). The share of employers who provide training is decreasing (Culpepper & Thelen, 2008; Thelen, 2009). In particular, small firms are less likely to train (Muehleman, 2014). This puts the remaining participating employers, which tend to be large employers, in a more favourable position.

In simple terms, collective skill formation systems (especially state actors) increasingly depend on large firms to voluntarily offering apprenticeship position. Against this backdrop, policy makers are increasingly willing to institutionalize the needs of large firms in the governance of vocational training policies to keep them in the system (Thelen & Busemeyer, 2011). Additionally, large employers have more resources to invest in training (Culpepper, 2007). This power imbalance reduces the collective nature of the governance and impacts training in different ways. Training content is adapted to the large firms’ internal labour markets instead of serving sectoral or occupational labour markets. This is likely to be at the disadvantage of small and medium size firms as their skill

demands differ from those of large firms (Culpepper & Thelen, 2008). Also, the increasing influence of large employers challenges the “logics of associative action” of intermediary associations (Schmitter & Streeck, 1999, p. 21 ff.).

Thelen and Busemeyer (2011) identify three fields through which the German collective training system became more segmented: certification, standardization and the broadening of skills. They conclude that changes in all three areas “pull the German system away from its collective heritage” (Thelen & Busemeyer, 2011; 2012, p. 12). The introduction of dual study programs in Germany (Graf, 2018) and short-track training programs (Busemeyer, 2012) are often discussed as prominent examples in which large employers established training programs tailored towards their specific needs. These examples illustrate how large firms get involved in content definition, the design of examination and the selection of candidates.

Emmenegger and Seitzl (2018) analyse a process of segmentalism in the reform of commercial initial vocational training in Switzerland. The authors find that segmentalism is not restricted to Germany and that large banks managed to align initial commercial training to their specific needs. The structural power of large employers is rooted in their option to exit dual vocational training because they have alternatives at hand. The authors add that the position of the intermediary association also plays a role in segmentalism (Emmenegger & Seitzl, 2019).

In short, the literature has confirmed the existence of segmentalism in different collective skill formation systems and has identified large employers as key change agents. However, these insights on segmentalism are based on studies that have looked at only one of different levels in collective skill formation, namely initial dual vocational training. This bias towards initial vocational training neglects an important part of collective skill formation: further training on the upper level such as professional education and training (PET) in Switzerland. Research has shown that there are “significant differences between the political economy of initial training and the political economy of continuing training” (Bowman, 2005, p. 586) which suggest that segmentalism works differently in further training. These differences are explained in the following section.

Differences in the governance of further and initial training

This section explains the differences between the governance of further and initial training and the subsequent gap in our current knowledge about segmentalism. One of the

key differences between initial vocational training and further vocational training is the higher degree of transferability of skills in further training. Further vocational training broadens and deepens occupational skills and thereby makes skills more transferable. The fact that further training usually does not contain on-the-job training, but is taught by external providers and is based on standardized curricula developed by intermediary associations, enhances the transferability even further. The transferability of skills is the source of the collective action problem in collective skill formation systems because the provision of transferable skills means that other employers cannot be excluded from benefitting even without investing in training. Thus, poaching and the collective action problem are more intense in further training than in initial vocational training. This is also the reason why Bowman (2005) underlines that employers are only willing to invest in further training “as long as they retain control over which employee receives training and what kind” (Bowman, 2005, p. 588).

Another important difference between initial and further vocational training are the differing interests between smaller and large employers. Research has shown that in further training, differences of interests between smaller firms and large firms are more divided compared to conflicts of interests in initial vocational training (Cognard, 2011). This is due to different reasons. Firstly, smaller firms benefit more from participating in initial vocational training than large firms because smaller firms tend to rely more on apprentices as part of their workforce (Cognard, 2011, p. 30). Apprentices in initial vocational training receive low salaries but contribute to the productiveness of firms. A Swiss cost-benefit study on apprenticeships revealed that more than 60% of employers who participate in training benefit from their apprentices (Gehret, Aepli, Kuhn, & Schweri, 2019).

In further training, this cost-benefit calculation is different. In further training, training does not take place in the company, but is usually based on external courses. This requires employees to leave their work place to participate in further training which means that further training comes with higher opportunity costs for the firm (Cognard, 2011, p. 31). For smaller firms, it is more difficult to substitute or make up for absenteeism. This is one of the reasons why smaller firms are more reluctant to invest in further vocational training. Large firms invest more in further training because they have the organizational capacity to allow employees to leave their work place and spend time in training courses. Furthermore, large firms have more resources at hand that they can invest in training (Culpepper, 2007). Moreover, large firms require a higher skilled work

force (Almeida & Aterido, 2015) and are thus more dependent on investing in further training of their employees.

Research on factors influencing the decision of employers to participate in further training has shown that, for example, the (perceived) competition between the large employers can influence training participation. Furthermore, Johansen argues that superordinate bodies that create high opportunity costs for non-compliance can create cooperation (Johansen, 1999). Trampusch and Eichenberger (2012) find that support of public authorities, the commitment of unions and the cooperation culture matters for the development of continuing vocational training through collective labour agreements (Trampusch & Eichenberger, 2012).

Moreover, the fact that further training usually does not include on-the-job training but is provided by external providers, raises an important question with regard to the process of segmentalism. Literature argues that segmentalism in initial vocational training is fostered by the fact that large employers are training providers and that the functioning of the dual systems depends on their participation and supply of apprenticeship positions. This role in the system in initial vocational training equips employers with structural power (Busemeyer, 2012). In further vocational training, however, employers are not the training providers.

In summary, the governance of further vocational training differs from the governance of initial vocational training. The collective action problem is more intense in further training due to a higher level of transferability of skills. Large employers have stronger incentives to invest in further training than smaller employers but do not hold the structural power of being the providers of training. Against this backdrop, this paper asks the following research question: *How and under what circumstances does segmentalism take place in collective further training? Who are the key change agents in segmentalism in further training and what is their source of power?*

Thelen and Busemeyer (2011) argue that the political process of segmentalism takes place “beneath the facade of stability” (Thelen & Busemeyer, 2011, p. 12) which means that in order to understand and detect segmentalism, it is important to not only look at legal institutional change but to analyse changes not (yet) represented in the legal framework as well. The following section presents four modes of change that I use as a tool to describe and categorize the process of change that enabled segmentalism.

Four modes of institutional change

In order to understand *how* and *under what circumstances* the Swiss professional training system underwent and continues to undergo institutional change, I draw on the theory of four modes of institutional change developed by Streeck and Thelen (2005) and Mahoney and Thelen (2010). They distinguish four modes of institutional change. Firstly, *displacement* refers to change that occurs when new rules replace the old ones. Secondly, *layering* describes the introduction of new rules additionally to the old set of rules (Schickler, 2001). Displacement and layering are often implemented in policy reforms and represented in changes in the formal rules. Adding new institutional elements that change or come with new objectives and policy tools can influence institutions in the long run and might open the door for displacement or dualization (Carstensen & Ibsen, 2019, p. 23). Studies on institutional change often focus on high profile changes and reforms of formal rules (Hacker, Pierson, & Thelen, 2015, p. 198).

However, “changes in an institution’s functioning and effects can occur without fundamental shifts in formal institutional structures” (Hacker, 2005, p. 42). The following two modes of change – *drift* and *conversion* – capture the changes that “often occur beyond the bright glare of legislative politics” as “they happen through the transformation of existing institutions” (Hacker et al., 2015, p. 181). These changes often take place behind the façade of stable institutions but can lead to fundamental changes in the long run. When institutions stay the same but their context changes, this might have an impact on the effects these same institutions have. *Drift* describes the changes in the impact of existing rules. The more dependent the effects of an institution are on the context, the more likely drift occurs (Hacker et al., 2015, p. 180).

Likewise, in the case of *conversion*, the rules formally stay the same but the interpretation and use of rules changes. Conversion is likely to happen when key players change who have an interest in redirecting institutions in their favour (Hacker et al., 2015, p. 195). However, when strong veto players and defenders protect the old set of rules, change is less likely (Mahoney & Thelen, 2010). Drift and conversion are not only “mechanisms” of change but also “means” by which actors can shape institutional change (Hacker et al., 2015, p. 200).

The concept of the four modes of change has been widely applied in the literature of political economy (van der Heijden & Kuhlmann, 2017, p. 541) but has also triggered a

critical view of the concept (for a summary of the critique see van der Heijden & Kuhlmann, 2017). For example, Steinlin and Trampusch (2012) argue that the model is unable to explain the (strategic) erosion and breakdown of institutions. The authors suggest adding the mode of “shrinkage” to the model in order to account for cases in which institutions are gradually removed but not replaced (Steinlin & Trampusch, 2012). This is closely related to the critique that the boundaries of the modes of changes are not clear cut (van der Heijden, 2010; van der Heijden & Kuhlmann, 2017). Furthermore, van der Heijden (2010) argues that the theory lacks the ability of “predictive causality” (van der Heijden, 2010, p. 239) because the theory does not clarify the patterns and sequences of change and does not provide a clear explanation on how change and influential factors are associated. Moreover, van der Heijden and Kuhlman (2017) find “concept stretching” and “concept proliferation” (van der Heijden & Kuhlmann, 2017) in the literature that relies on the modes of change which is rooted in the lack of conceptual clarity.

Despite the critique, van der Heijden (2010) concludes that the theory “provides hands-on tools and language to describe processes of change with a focus on explanatory variables” (van der Heijden, 2010, p. 240) which is why I rely on the four modes of change in order to *describe* and thereby better understand how segmentalism changes the provision of professional skills in the Swiss banking sector. I use the modes of institutional change as a tool to describe *how* change happened. This paper identifies three key modes of change in the process of segmentalism in the provision of professional skills in the Swiss banking sector: layering, displacement, and conversion. The following section explains the case selection strategy and methodology.

Case selection and methodology

The aim of this case study is to explore the factors that enable segmentalism in a yet under-researched field of vocational education, namely further vocational training. For this purpose, I chose to study institutional change in the Swiss banking sector. My case selection represents an extreme case for the following reasons.¹⁶ The Swiss banking sector is characterized by a few, but very powerful, players (Cassis, 2006, p. 275). The sector is very exposed to international competition and requires high skills.

¹⁶ From a more general perspective, the choice to study further vocational training can be understood as a deviant case selection because it differs from initial vocational training.

Globalization, deregulation and innovation challenge the banking sector, in particular the Swiss banking sector because it is one of the most important and internationalized banking sectors in the world (Cassis, 2006). My interview partners argued that the banking sector is probably the sector in which skill demands are most affected by globalization and digitalization. Furthermore, banks have a lot of resources at hand which enable institutional change. Thus, within a very collective system, I look at the sector characterized by powerful large employers and in which the collective provision of advanced skills is under a lot of pressure which makes segmentalism very likely. Against this backdrop, I classify my case as an *extreme case* (Seawright & Gerring, 2008, p. 301). The challenge of studying an extreme case is the question of to what extent the findings also apply to other cases. The banking sector has often distinguished itself as a pioneer which suggests that insights gained through this case study are likely to be applicable to other cases of further training. Moreover, other sectors such as the insurance and pharmaceutical sector are also characterized by large employers that are under pressure and that increasingly demand high skills.

My research applies a within-case analysis (Gerring, 2007). This approach helps me to untangle the complex relationships and causal linkages within the professional training system. Process tracing, which is guided by the question of “what links causal factors, events, sequences and outcomes together” (Trampusch & Palier, 2016, p. 442) enables me to identify the reasons and factors behind institutional change.

Through desk research, I analyse documents published by educational institutions, employer associations and different banks. Additionally, I conducted 13 semi-structured expert interviews with representatives from key stakeholders such as banks and educational institutions. The interviews took place in the years 2017, 2019 and 2020. I triangulate these sources in order to reveal the underlying reasons and dynamics behind segmentalism in the provision of professional skills in the Swiss banking sector.

The provision of professional advanced skills in Switzerland

This paper argues that we know little about segmentalism in further vocational training because research on segmentalism in collective skill formation has only looked at initial vocational training. This case study investigates segmentalism in the provision of professional advanced skills in the Swiss banking sector. In order to understand institutional

change in this case study, it is of high importance to explain the system of further professional training in Switzerland first. In Switzerland, professional, advanced skills are provided by two different educational institutions: (1) collective professional education training and (2) universities of applied sciences. Both are located on the tertiary level in the Swiss education system and the skills provided by these two institutions are very similar (Euler & Collenberg, 2016). However, the governance differs as the following two sections explain.

Professional education and training in Switzerland

Collective professional education and training (PET, *Höhere Berufsbildung*) is located on the tertiary level and is deeply rooted in the Swiss vocational training system. Its history reaches back to the 1930s (Wettstein, Schmid, & Gonon, 2014) and in 2018, it made up for 46% of all certificates awarded on the tertiary level equivalent to a Bachelor degree (BFS, 2019a, 2019b). About two thirds of young people in Switzerland opt for initial vocational training after compulsory school (SERI, 2017). For them, PET represents an important option to attain advanced certified skills after completing initial vocational training (Baumeler, Dannecker, & Trede, 2014). Participation in PET requires a respective vocational certificate, often also some years of work experience and being employed (usually at least 50%) in a related occupational field. The lessons are usually organized part-time. Typically, PET takes between two to four years. Tuition fees vary greatly, with 16,000 CHF per semester at a professional college being a representative example (Baumeler et al., 2014, p. 59). Similar to initial vocational training, higher vocational training is based on collective governance. Intermediary associations govern the content definition and development of examinations (Baumeler et al., 2014). However, in contrast to initial vocational training, PET is usually based on theory instruction and training is not divided between school-based and work-based learning.

The focus of this case study is on the “highest” level of three in Swiss PET, namely professional colleges (*Höheren Fachschule*) (SBFI, 2014). Teaching in professional colleges “is based on a core syllabus that is prepared by the professional education and training provider in collaboration with the corresponding professional organisations” (SDBB, 2013). The State Secretariat for Education, Research and Innovation approves of the syllabus and officially accredits the professional college. While in initial VET the provision of training is often one of the central controversial aspects of the governance (e.g. lack of apprenticeship positions leading to rising youth unemployment), this is

different in PET. In the collective governance of PET, the controversial topic is that of content definition (INT 7, 8, 9).

In order to understand challenges and changes in PET, it is important to look at the key players, their interests, and sources of power. Table 1 provides an overview.

Table 1: Key players, their interests, and sources of power in Swiss PET

Actor	Interest	Source of power
Employer	Improve own competitiveness Tailor training to own needs	Finances training through: Employee, if applicable through association or directly to provider
Association	Attract membership control	Develops training content in some cases the association runs and finances providers
Training provider	Satisfy demands of sponsors Increase revenue	Some freedom to organize training
Employee	Advance career	Buys training

Source: Authors' own

Employers' key aim when investing in training is to improve their competitiveness (Johansen, 2002, p. 311). This is best achieved when training is tailored to the specific needs of the employer. Employers finance PET in different ways. They pay the salary of the employer who participates and pays for training. In some cases, employers pay the training fees directly and in return the employee agrees to stay with the company for a certain time (INT 5). In some sectors, employers are obliged to contribute to collective training funds that finance training (Di Maio & Trampusch, 2019). Furthermore, employers pay fees to their associations that develop the content of training and in some cases run their own schools. Thus, employers have a strong interest to get as much as possible out of training and influence content development to their benefits.

However, intermediary associations, that are the actors developing the content of training, bundle resources and interests of their members. The more encompassing collective governance of PET is (e.g. collective funding, provider is run by the association), the more influence the association has on training. Membership of intermediary associations in Switzerland is voluntary (in contrast to the system of German chambers). Thus, the logic of membership (Schmitter & Streeck, 1999) is very important to the association and training can play an important role in attracting membership (Di Maio & Trampusch, 2019). For associations, large employers' membership is important because it means secured income. However, the associations also have to incorporate the interests of other members. With regard to PET, associations are interested in designing training in a way that it serves its members, especially when the association runs a PET school.

Swiss PET is characterized by a great diversity of training providers that have different interests. In some sectors, such as the construction sector, the occupational associations play a central role not only in the content definition but also in managing collective funds and operating PET schools such as professional colleges (Di Maio & Trampusch, 2019). The associations are funded by their members. Then, there are public vocational schools that offer PET next to initial VET. These schools are (at least partly) financed by the cantons and offer PET “on top”. They can offer PET courses at cheaper rates because the cantons (indirectly) subsidize the schools by paying the rent and parts of the staff.

Private providers, in particular, criticise these indirect subsidies of their competitors. Private provider can be understood as for-profit companies. Their aim is to attract as many learners as possible as this means profit. In order to be attractive to potential learners, training has to be of high quality and relevant to the labour market. However, the content is controlled by the association which leaves only limited room for the provider to influence training. To what extent training providers are able to design training, depends on their dependence on intermediary association.

Another important actor group consists of the employees. They participate in training in order to improve their position on the labour market (Johansen, 2002). For employees, standardized and recognized certificates are very attractive because they increase their mobility on the labour market. Motivated and career-oriented employees strive for the most marketable and prestigious certificates possible. Individual employees are not very

powerful, but the larger the number of employees with a similar interest, the more likely it is that other actors react.

Universities of applied sciences

The second institution that provides advanced professional skills on the tertiary level in Switzerland are universities of applied sciences (*Fachhochschulen*). Professional colleges and universities of applied sciences have a lot in common. They both provide advanced occupational skills and are interested in cooperation with business partners. However, an important difference is the fact that universities of applied sciences do not develop training content collectively and that they are authorized to issue internationally recognized Bachelor and Master certificates (Weber, Tremel, & Balthasar, 2010, p. 699) while professional colleges issue “professional college diplomas”. The Swiss State Secretariat for Education, Research and Innovation describes the universities of applied sciences’ task as to “prepare students for professional activities through practice-oriented studies and application-oriented research and development” (own translation) (SBFI, 2020b). The difference to “traditional” universities is the stronger orientation towards occupational profiles and the labour market (Weber et al., 2010). Lecturers are required to have professional experience (Weber et al., 2010, p. 702).

Universities of applied sciences were introduced to the Swiss education system in the 1990s. The aim was twofold (Zosso, 2006). Firstly, the federal government wanted to create new stimuli for the national economy. The second aim was to upgrade vocational education and training by lifting and institutionalizing professional education and training on the tertiary level¹⁷. Universities of applied sciences were not created from scratch, but professional colleges were transformed into universities of applied sciences. Thus, half of the professional education and training programs were transferred to the new universities of applied sciences (Baumeler et al., 2014, p. 21; Graf, 2012; Weber et al., 2010). At the same time, the Federal Vocational Baccalaureate (*Berufsmaturität*) was introduced (Gonon, 2002; Pilz, 2007, p. 73). This qualification enables graduates to enter universities of applied sciences. Apprentices who want to complete the vocational baccalaureate, can participate in additional lessons in parallel or after their VET training. The aim of the introduction of the universities of applied sciences and the vocational

¹⁷ For a more detailed analyses of the political process of the introduction of universities of applied sciences to the Swiss education system see: Weber et al., 2010; Zosso, 2006.

baccalaureate was to strengthen vocational education and training by creating a connection between VET and higher education (SBFI, 2020b; Weber et al., 2010).

Trampusch (2010) characterizes the introduction of universities of applied sciences and the vocational baccalaureate as “transformative, not self-preserving change” because the new institutions are situated “beyond the old institutional pathway” (Trampusch, 2010, p. 196). Furthermore, Trampusch underlines that this reform was highly oriented to the interests of large employers (Trampusch, 2010, p. 198). This is due to the fact that already since the 1960s, technical change and internationalization pressured Swiss employers to upgrade the skills of their work force (Culpepper, 2007; Trampusch, 2010, p. 198). Together with administrative and school elites, employers supported the upgrading of vocational training (Culpepper, 2007, p. 613). The administrative elites and schools pushed for a reform because they were afraid of being left behind by international and European developments towards academic training (Gonon, 2002).

Today, about 15% of the graduates from initial vocational training complete the vocational baccalaureate (SERI, 2015, p. 16). This share, however, varies greatly across sectors. In the banking sector the share of apprentices completing the vocational baccalaureate is much higher than the average. The interview partners explained that more than 50% of the apprentices in banks complete the vocational baccalaureate which means that, for them, studying at a university of applied sciences is an attractive option. A study on the educational ambitions of apprentices showed that 80% of the apprentices in the occupation “banker” intent to study after completing initial VET which is significantly higher than other occupations (Ebner, Edeling, & Pilz, 2019; Ederling & Pilz, 2017). Universities of applied sciences are very popular and the number of students doubled since the year 2000. Students at universities of applied sciences represent about one third of all students enrolled in higher education in Switzerland (BFS, 2020). Today (as of 2020), there are eight public and one private universities of applied sciences in Switzerland (SBFI, 2020a).

In order to become a university of applied sciences, the candidate school has to go through an evaluation procedure conducted by the “Accreditation Council”. The “Higher Education Act” from the year 2011 (updated 2015) regulates that the “Accreditation Council” consists of members who “represent in particular higher education institutions, professional organisations, students, mid-level faculty as well as professors

and lecturers” (HEdA, Art.21). Thus, professional associations such as occupational, sectoral or employer associations are involved in the accreditation process.

Furthermore, each university of applied sciences is governed by a university council (*Fachhochschulrat*) in which also representatives from business are included. The operative decision making is implemented by the respective heads of the departments of the universities. On this level, business representatives are not involved in an institutionalized way. Thus, a central difference to professional colleges is that business representatives and associations are not involved in the content definition in an institutionalized way. The provision of advanced professional skills by universities of applied sciences is not governed collectively as is the case in professional education and training. This governance mode puts the university of applied sciences in a powerful position when it comes to content definition and the regulation of examinations as Table 2 shows.

Table 2: Key players, their interests and sources of power in university of applied sciences

Actor	Interest	Source of power
Employer	Improve competitiveness Tailor training to own needs	Finances training and employee
Association	Attractiveness for members	Offer university collaboration
University of applied sciences	Public: sustainable existence Private: make profit	Defines content and examination
Employee	Advance career	Buys training

Source: Authors' own

Universities of applied sciences have an interest and are dependent on the cooperation with business players for two reasons (Weber et al., 2010, p. 703). Firstly, to prepare students for professional tasks, universities of applied sciences need to adjust training programs to the needs of the labour market and do this by cooperating with business players. Secondly, universities of applied sciences have, compared to “traditional”

universities, limited research budgets and depend on external funding of research projects (Weber et al., 2010, p. 703). Public universities of applied sciences are financed by the cantons. The focus of this case study, however, is on the one private university of applied sciences in Switzerland: Kalaidos Fachhochschule. It does not receive subsidies from the state but financially depends on the tuition fees the students pay.

Employers have an interest in cooperating with universities of applied sciences to bring in their specific needs in content definition and research agendas in order to profit from research insights. From an employee's perspective, there are different reasons to sign up at a university of applied sciences. Internationally and standardized certificates such as a Bachelor degree increase the employee's mobility on the labour market. At the same time, the student has an interest in learning skills that are relevant to employers, thus learners have an interest that the study programs are oriented toward the demands of employers.

This interdependent relationship between the university of applied sciences and employers is very important when it comes to understanding segmentalism. In the case of public universities of applied sciences, the financing does not depend directly on getting employers involved. This is very different in the case of private universities of applied sciences. As the case study will show in greater detail, the private university of applied sciences is very dependent on large employers sending and financing their employees and, in return, is willing to adjust the courses in line with the demands of employers. The following section presents the case study.

Case study: segmentalism undermining collective governance

Since the 1990s, international and European developments increasingly pressured the Swiss training system (Gonon, 1998). In the late 1990s and early 2000s, increasing pressure from globalization changed the skill demands of banks (Pilz, 2007). Traditionally, banks relied on vocational training and further collective professional training when it came to training their work force. However, facing increasing global competition, in particular the large banks demanded new training programs for their employees (INT5). As a reaction, in the mid-2000s, two new training providers entered the stage that both provide professional skills in the banking sector: a private professional college and a private university of applied sciences (*layering*). While training content in the

professional college is governed by the banks' association, the university of applied sciences cooperates directly with large banks to design training according to their needs. In the following years, the number of students at the professional college declined while the number of students at the university of applied sciences rose (*displacement*). In order to survive, the professional college put up a new strategy. It expanded its function from offering stand-alone professional certificates to becoming a stepping stone on the way to a Bachelor degree (*conversion*). To enable professional college graduates to study at the university of applied sciences, the professional college intensified its collaboration with the university.

These three steps (layering, displacement, conversion) increased the ways in which large banks can directly influence training content. At the same time, the influence of the association decreased which represents a decline in collective governance in the banking sector. The following table summarizes the key steps of segmentalism in the provision of advanced professional skills in the Swiss banking sector.

Table 3: From layering to conversion: Steps in the process of segmentalism in the provision of professional skills in the Swiss banking sector

	Change	Mode of Change	Governance	Influence of large banks/ segmentalism
Until 1990s	Professional training is the gold standard	-	Collective: intermediary association is central player	Association brings together interests of all banks, influence of large banks is limited
Mid-1990s	Introduction universities of applied sciences in CH	Layering	Independent higher education institution with ties to the world of work	Decentralized cooperation with business partners
2005	Introduction private university of applied sciences	Layering	Higher education institution dependent on banks as customers	Intense informal and decentralized cooperation with large banks
2006	Introduction private professional college	Layering	Mix of collective and decentralized cooperation: association involved in content definition but college depends on banks as customers	Influence of large banks is limited
Since 2010s	Declining number of students at professional college, shift to university	Displacement	Increasing decentralized and informal cooperation between university and large banks	Intensifying informal and decentralized cooperation with large banks
Since mid-2010s	PET increasingly used as stepping stone into higher education	Conversion	Private college and university increase cooperation	

Source: Authors' own

New players enter the stage: Layering in the 2000s

Increasing pressure on PET

The banking apprenticeship system traditionally attracts career oriented and high-performing pupils (Ebner et al., 2019, INT2). For many years, the “gold standard” (*Königsweg*) in the banking sector to climb up the career ladder was further education through collective professional education and training after completing initial vocational training and a few years of work experience (INTs 7,8).

The introduction of universities of applied sciences in the 1990s opened new training and new career opportunities for the career-oriented apprenticeship graduates in the banking sector. The share of apprentices that completes the vocational baccalaureate is significantly higher than in other sectors (about 60% compared to about 15%). Thus, a high share of graduates is qualified to directly enter a university of applied sciences. At the same time, the banking sector is increasingly exposed to global competition and requires advanced skills such as language skills, abstract problem solving or network thinking (Pilz, 2007, INTs 7, 8, 9). These rapid changes in the banking sector triggered a reform of initial vocational commercial training in the late 1990s (Pilz, 2007, p. 82; Seitzl & Emmenegger, 2019).

Another factor that challenges professional education and training are the changing preferences of human resource (HR) experts and management in the banks. International and academically trained managers and HR managers tend to support university-based education instead of vocational programmes (Ballauf, 2011; Beck, Kabst, & Walgenbach, 2009; Di Maio & Trampusch, 2019; Muehlemann, 2014). Non-Swiss managers tend to be less familiar with the options of further training within the field of Swiss vocational training. One interview partner summarized this mechanism as “academics recruit academics” (INT10). This has an important influence on the investment decision of banks in further training because the banking systems is characterized by an internationalized management.

In short, since the 1990s, the collective PET system of the banking sector is under increasing pressure. Rising skill demands, the introduction of the universities of applied sciences which represent an attractive alternative to PET, and the increasingly internationalized management favours academic training to PET. The following section shows what changes this pressure triggered and why they can be characterized as segmentalism

Introduction of the private professional college

The association of the banks *Swissbanking* reacted to the increasing pressure in the early 2000s. In collaboration with the insurances, Swissbanking introduced new PET programs which were supposed to meet the rising skill demands (INT 2). However, this project was short-lived. Established in 2000, the joint programs were abolished in 2009 (bbaktuell, 2008). One of the reasons was that the banks demanded higher skills than these programs provided. In response, Swissbanking dropped these joint programs (INT2).

Instead, Swissbanking decided to focus on skill provision through a professional college. In many sectors, the employer associations run their own professional colleges which is an important way for them to control further training and attract membership (Di Maio & Trampusch, 2019). In the banking sector, however, the association did not want to run and carry the risk of the professional college itself (INT2, 6, 9). Instead, Swissbanking conducted a procurement to delegate the establishment of the professional college to another actor. The profit-oriented enterprise *Kalaidos* won the procurement and opened the private professional college *Höhere Fachschule Banking+Finance* in 2006. Swissbanking officially “supports” (*trägt*) the professional college (SwissBanking, 2020a) which includes that Swissbanking controls the steering committee of the college (INT 2) and officially is responsible for the core syllabus. In this steering committee, all banks are represented and have the possibility to influence the development of the professional college. However, the large banks disagree(d) with the association with regard to the training content. The large banks want(ed) even more advanced skills to be incorporated into the syllabus but the association was not open to a reform (INT 8,9). One example is the college’s focus on retail banking which, however, is not the focus of international private banks. It is for this reason that these banks do not send their employees to the professional college (INT 3, 4).

The key difference between a professional college that is run by an intermediary association and the private professional college is the funding. Swissbanking is not involved in the financing of the college. The professional college receives 25% funding from the cantons (INT 1) and has to generate the rest of its funding itself which it does through charging rather high tuition fees (INT6). This means the professional college is very dependent on generating a sufficient number of students per course (INT 8). This translates into a strong dependency on banks, large banks in particular, to send and finance

their employees' training. This makes the private college very prone to "listen to" the large banks in order to make them send their employees. However, at the same time, the college has to work closely with the banking association when it comes to the content definition. The association weakens the influence of large banks on the content and examination because the association has a veto power in the content definition.

In parallel to the foundation of the private professional college, a second process of layering in the provision of professional skills took place. The private university of applied sciences the *Kalaidos Fachhochschule* entered the stage. The following section discusses how the introduction of this private educational institutions created new ways for large banks to influence training.

Introduction of the private university of applied sciences

In 2005, the private university of applied sciences *Kalaidos Fachhochschule – Die Hochschule für Berufstätige* was accredited by the Accreditation Council (Kalaidos Fachhochschule, 2020a). The accreditation allows the provider to issue recognized Bachelor and Master degrees. This private university of applied sciences is rooted in the fusion of different private business schools (Kalaidos Fachhochschule, 2020a). Among others, it offers different programs in the field of banking and finance. It is the only private university in Switzerland.

Being a private university of applied sciences means that it does not receive any public subsidies but is financed by the tuition fees the students pay. The university of applied sciences only offers part-time study programs which allow the students to keep their (often well-paid) job. It advertises with the slogan "the university for professionals" (*die Hochschule für Berufstätige*) (Kalaidos Fachhochschule, 2020b). The interviewees explained that the possibility to keep their well-paid jobs in the bank and complete the bachelor program part-time in eight semesters is one of the reasons why employees chose to study at the Kalaidos Fachhochschule, even though tuition fees are about five times higher compared to a public university of applied sciences (CHF 40,000 vs. CHF 8,000 for a bachelor degree) (INT 3,6).

Being attractive for employees and banks is very important for the university of applied sciences, more than it is for public universities, because the employees and employers

are the customers the university depends on (INTs 7,8). The university can only survive if it provides the skills that are demanded by the market. This market position of the large banks gives them a lot of power and influence over the providers that are very dependent on the large banks to “buy” their product (skill provision). In initial vocational training, large banks are powerful because they provide training. In further training, large banks are powerful players because they demand training and pay for it. The interviewees explained that this dependency has a strong influence on the content development of training. The university is very interested in being in very close contact with the banks and to adjust the programs to their needs. The university uses different channels to “feel” (INTs 7, 8) what the market needs: learners can suggest changes and demand certain content as they usually work in a bank while completing a Bachelor program.

Furthermore, the lecturers of the university of applied sciences are practitioners working in the banking sector. They “commute” between the classroom and the banks and adjust their teaching content to up to date topics that are of interest to the banks (INT8). Also, the study program managers regularly meet with representatives from banks and collect ideas about how to develop the programs further (INTs7, 8).

In short, the introduction of the private university of applied sciences represents a new way for large banks to influence skill provision of advanced professional skills. The university of applied sciences develops the training content based on the needs of the banks, large banks in particular, because large banks are the biggest and most profitable customers. It can be concluded that the introduction of the private university of applied sciences represents an important step in the process of segmentalism. In contrast to the professional college, the employer’s association has no veto power within the university of applied sciences’ content development. It is the university’s program managers who design the content and who established and maintain a variety of informal communication channels with large banks. Thus, the introduction of this university of applied sciences can be understood as segmentalism. The process of segmentalism does not stop here. The following section elaborates on the effects the introduction of these two players had on the system of professional skill provision.

Displacement and conversion in professional training

Declining interest in PET leading to displacement

In the years following their introduction, both new providers of advanced professional skills managed to establish themselves successfully on the market. In general, the interest in completing a Bachelor degree grew in Switzerland which is represented in the rising number of graduates from universities of applied sciences (BFS, 2019a). Also the number of students at the private university of applied sciences continuously grew (Kalaidos Fachhochschule Schweiz, 2020, p. 20). This is closely connected to the fact that a rising share of banking employees hold the vocational baccalaureate (INT2). However, the trend towards the vocational baccalaureate meant a decline of the target group - banking employees not holding the vocational baccalaureate - for the professional college. This had consequences for the professional college as it got into serious trouble in the early 2010s.

The number of students graduating from a professional college dropped from 441 in 2012 to 268 in 2015 (BFS 2016). This steep decline can be interpreted as a process of displacement. The decreasing number of students was a big problem for the professional college because it is financed by the tuition fees of the students. How can this process of displacement be explained and what does it mean with regard to segmentalism? There is no veto player who decides on which type of professional skill provision is to be favoured by employees and employers. Banks and their employees are free to choose which type of professional training they pursue (support). Additionally, the employer association does not use further training policies as a means to attract membership. In other sectors, employer associations are much more involved in the governance of further training (Di Maio & Trampusch, 2019) but in the banking sector, further training does not play an important role for the association (INT 2, 3, 6, 9). The association is not dependent on the professional college to be profitable because the professional college bears the responsibility for its funding itself. Thus, the employer association had no means and interest in convincing banks to send their employees to the professional college. The absence of veto powers fosters change through displacement (Mahoney & Thelen, 2010, p. 28).

The shift from professional education and training to university-based training can be explained with the higher reputation that international bachelor degrees enjoy. This

trend of academization challenges professional education and training in general and triggered an intense debate about the future of professional training (Schmid & Gonon, 2013). For example, one controversial topic is the name of the PET certificates. Political actors and experts in the field of PET discuss about the introduction of “professional bachelor” degrees to increase the attractiveness of PET. This debate shows that the increasing attractiveness of university degrees challenges the role of professional education and training. In the case of the banking sector the different factors increased the process of displacement. A rising share of employees who complete the vocational baccalaureate, thus who hold the entry ticket to a university of applied sciences, in combination with the success of the university of applied sciences to offer attractive bachelor programs, meant that the professional college lost in importance.

The declining number of students at the professional college represents a declining relevance and reach of the collective training option in which the employer association is involved in. The share of further vocational training that is governed collectively is declining. This development allows large banks to influence a growing share of further vocational training. This share is not governed collectively but is provided by the private university of applied sciences that is very open to the ideas of large banks when it comes to the development of training content. Against this backdrop, I conclude that further training in the Swiss banking sector goes through a process of segmentalism.

For the professional college, the declining number of students meant a downturn in the income while the costs remained the same (INT2). The professional college struggled for survival and had to come up with a solution if it wanted to stay on the market. The following section explains how displacement eventually triggered a process of conversion which consolidates segmentalism in the provision of professional skills in the Swiss banking sector.

Conversion as survival tactic

The private professional college faced the challenge of a declining number of students (INT2). As described above, the college has an interest in tailoring its training content more to the interests of the large banks to attract more students employed at large banks (INT9). However, the college faced the situation that the employers’ association is a veto player in the content definition. When institutions have an interest to change but

face strong veto players, change through the modes of drift and conversion becomes very likely. While the professional college had not much discretion in the content definition, it looked for other ways to increase its attractiveness for banks and their employees (INT9). Against the backdrop that university-based training is very popular, the professional college decided to become a stepping stone to enter a university of applied sciences for candidates without the vocational baccalaureate. Traditionally, professional education and training represents a distinct institutional pillar in the education system. Even though there are debates on introducing “professional bachelor” degrees based on PET, many experts in the field of professional education and training are of the opinion that the stand-alone character of PET should be maintained. For example, in 2016, the Secretary General of the Conference of Professional Colleges underlined in an interview that “professional colleges should not become suppliers of bachelor students” and that “the fusion of universities of applied sciences and professional colleges is not desired” (Desarzens, 2016). However, this is what happened in the Swiss banking sector.

In cooperation with the private university of applied sciences, the professional college introduced an institutional ‘bridge’ (*Passarelle*) between the two institutions (Kalaidos Banking+Finance School, 2020). As the private college and the private university belong to the same company, the Kalaidos group, it made collaboration easier (INT9). This bridge enables graduates from the professional college to enter a Bachelor program at the university of applied sciences at an advanced stage (AKAD HFBF AG, 2016). Learners have to add four semesters to complete a Bachelor program, for example, in Banking and Finance at the university of applied sciences (Kalaidos Banking+Finance School, 2020). This is possible because the university of applied sciences recognises the courses completed in the professional college. This might not look like a big change.

However, establishing this bridge, intensifying cooperation between the two institutional pillars, and advertising strongly for the combination of PET and a bachelor degree, represent a conversion of the function of collectively governed further vocational training. The image and role of training at the professional college changed from being an independent stand-alone certificate to being a stepping stone on the way to a Bachelor degree. It has to be noted that this trend is not exclusive to the banking sector. Since 2006, a recommendation from the Rector’s Conference of the Swiss Universities of Applied Sciences (KFH) governs the transition from PET to higher education (SDBB, 2013). However, it is up to the university of applied sciences to decide on how and to

which degree PET skills are counted into a Bachelor programme (SDBB, 2013). As of today (2020), graduates from the professional college can choose between four different universities of applied sciences in Switzerland that offer the advanced entrance to Bachelor degrees (Swissbanking, 2020b).

While professional education and training traditionally was a stand-alone, independent training that enjoyed a high reputation in the banking sector, this role changed with the closer collaboration between the two educational institutions. The training at the professional college turned into a means to receive a Bachelor degree without holding a vocational baccalaureate. This is a case of conversion which strengthens the university of applied sciences because it means that also those employees not holding a vocational baccalaureate can enter a Bachelor program. As discussed above, the governance of the university of applied sciences is not characterized by collective action but by decentralized cooperation between large banks and the university. At the same time, this development challenges the position of PET in general which is not welcome by the representatives of professional colleges (Desarzens, 2016) because they are afraid of losing the reputation they traditionally enjoy(ed) and thereby their *raison d'être*.

Which circumstances triggered this process of conversion? In the case of the private professional college in the banking sector, the conversion strategy successfully increased the number of students (INTs 2,9) which was the aim of the professional college. The professional college is a private, profit-oriented actor that has a strong interest in being attractive to large banks to keep the number of students on a high level. The provider was under strong pressure to increase its attractiveness to secure its funding. However, adjusting the training content to the needs of the large employers was not possible because the employer association has a veto power when it comes to the development of the curricula. Thus, maintaining the core of the institution and intensifying institutional ties with other institutions was an option to circumvent the associations' veto power while increasing the attractiveness of PET. In contrast to professional colleges that are run by an intermediary association, the private professional college has to cater less for the needs of smaller firms because it depends more on the larger employers.

To sum this case study up, in the early 2000s, rising skill demands pressured the system of professional skill provision in the Swiss banking sector. Two new providers of professional skills entered the stage. Both of them are private and profit-oriented but they differ in the governance of the training content. Training content in the professional

college is controlled by the banks' employer association which is why it can be characterized as collective governance. In contrast, the university of applied sciences develops the training content based on direct exchange with large banks. The introduction of this private university of applied sciences offers a new option for large banks to influence training in further professional training. Furthermore, the number of students at the university went up while the number of students at the professional college went down. This represents a more general trend towards university-based training which means that the relevance and share of collectively governed training is on the decline in the banking sector. In order to survive, the professional college decided to reinterpret its role as independent training provider and to go through a process of conversion. To attract more candidates, the college intensified its collaboration with the university and became a stepping stone into university-based training. Thereby the professional college becomes a supplier of bachelor students which increases the share of training completed at the university.

Based on this case study, I conclude that the institutional changes increased the options and number of channels for large banks to influence training and that the share and relevance of collectively governed training is on the decline. Therefore, these changes can be characterized as segmentalism. However, this case study showed some important differences to segmentalism in initial vocational training. Firstly, large employers are powerful because they represent the demand side for training and they finance training (directly and indirectly through paying their employees). Secondly, in the literature on segmentalism in initial vocational training, training providers do not play a prominent role. I argue that in particular profit-oriented training providers can be important change agents that have distinct interests from intermediary associations.

Conclusion

The literature on segmentalism argues that liberalization shifts the balance of power in the governance of collective skill formation systems in favour of large employers. Large employers increasingly influence the governance of vocational training which includes that they tailor training content to their needs. So far, the literature had identified segmentalism in initial vocational training and had investigated the role of business players

and associations. This paper contributes to our understanding of segmentalism in three ways.

Firstly, the case study has shown that segmentalism is not restricted to initial VET. Increasing influence of large employers on training content is also very visible and challenges collective further training. Secondly, the source of power of large banks to influence training differs between initial and further training. In initial vocational training, large employers are powerful because they represent the supply side of training and the collective skill formation systems are dependent on the voluntary provision of training of these employers. In contrast, in further training, large employers are powerful players because they represent the demand side that is paying for training. The providers of training, private, for-profit ones in particular, are dependent on large firms to “buy” their skill provision. Thirdly, the literature on segmentalism in initial vocational training has not paid much attention to the role of training providers in segmentalism. This case study has revealed that training providers can function as important change agents when they do not face the veto power of an association.

This study has looked at a case in which two private providers of professional skills entered the stage (layering). Both providers are dependent on large employers and their employees to participate in training. While the private university of applied sciences is free to adapt its training to the needs of the large employers, the training content of the professional college is controlled by the employer association. However, being a private provider meant that the college was under pressure when the number of students went down (displacement) because its funding depends on the number of students. In order to survive, the private professional college repositioned itself and transformed the role of collective professional training from being an independent training opportunity into a stepping stone that supplies universities with candidates (conversion).

The banking sector is an extreme case because it is characterized by a few, but very powerful players, banks have a lot of resources at hand and the Swiss banking sector is very challenged by global competition which requires higher skills. However, similar processes of segmentalism are likely to occur in other sectors for different reasons. Firstly, also other sectors are characterized by large employers that are willing and under pressure to invest in further training due to increasing global competition, such as the insurance or pharmaceutical sector. Secondly, I argue that the process of segmentalism in this case study is rooted in the delegation of training provision to private providers.

Private providers, in contrast to collectively governed providers, have a strong incentive to adjust training to the needs of large employers, in particular when the funding of the provider is not governed collectively. From an associations' perspective, it might seem attractive to maintain the control over the content definition but to delegate the funding responsibility to a private provider. However, the delegation of the funding responsibility means that the private provider develops its own interest in increasing its attractiveness for large employers and thus has little incentive to maintain collective governance.

The delegation of funding responsibilities to private providers is likely to occur in times of crises and economic constraints. However, the delegation of funding responsibilities opens new windows of opportunity for segmentalism. This means that the governance of collective skill provision should think very carefully about the delegation of key competences to private actors as this might undermine the collective governance tradition in the long run.

References

- AKAD HFBF AG. (2016). Information zur Weiterentwicklung der Höheren Fachschule Bank + Finanz HFBF. Retrieved from (20.3.2017) www.swissbanking-future.ch%2F20160908-2600-all-kommunikation_hfbf_biko-deu_gesamtdokument-mlo.pdf&usg=AOvVaw0o-ZGUrX1vK-3ftwbva4ad
- Almeida, R. K., & Aterido, R. (2015). Investing in formal on-the-job training: are SMEs lagging much behind? *IZA Journal of Labor & Development*, 4(8), 1-23.
- Ballauf, H. (2011). *Karriere mit beruflicher Fortbildung*. Bonn: Referat Ordnung und Qualitätssicherung der beruflichen Bildung.
- Baumeler, C., Dannecker, K., & Trede, I. (2014). *Höhere Berufsbildung in der Schweiz*. Bern: Eidgenössisches Hochschulinstitut für Berufsbildung.
- bbaktuell. (2008). Versicherungen setzen ihre neue Bildungspolitik um. Retrieved from (19.07.2020) <https://www.panorama.ch/pdf/bba4636a.pdf>
- Beck, N., Kabst, R., & Walgenbach, P. (2009). The Cultural Dependence of Vocational Training. *Journal of International Business Studies*, 40(8), 1374-1395.

- BFS. (2019a). Tertiärstufe - Hochschulen. Retrieved from (4.5.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/tertiaerstufe-hochschulen.html>
- BFS. (2019b). Tertiärstufe - Höhere Berufsbildung. Retrieved from (4.5.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/bildungsabschluesse/tertiaerstufe-hoehere-berufsbildung.html>
- BFS. (2020). Tertiärstufe - Hochschulen. Retrieved from (05.05.2020) <https://www.bfs.admin.ch/bfs/de/home/statistiken/bildung-wissenschaft/personen-ausbildung/tertiaerstufe-hochschulen.html>
- Bowman, J. R. (2005). Employers and the Politics of Skill Formation in a Coordinated Market Economy: Collective Action and Class Conflict in Norway. *Politics & Society*, 33(4), 567-594.
- Bussemeyer, M. R. (2012). Business as a Pivotal Actor in the Politics of Training Reform: Insights from the Case of Germany. *British Journal of Industrial Relations*, 50(4), 690-713.
- Bussemeyer, M. R., & Iversen, T. (2012). Collective skill systems, wage bargaining, and labor market stratification. In M. R. Bussemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 205-233). Oxford: Oxford University Press.
- Carstensen, M. B., & Ibsen, C. L. (2019). Three dimensions of institutional contention: efficiency, equality and governance in Danish vocational education and training reform. *Socio-Economic Review*, 1-27.
- Cassis, Y. (2006). *Capitals of Capital: A History of International Financial Centres, 1780-2005*. Cambridge: Cambridge University Press.
- Cognard, E. (2011). Varieties of Capitalism and financial cooperation between employers: The initial and continuous vocational training in comparison. *European Journal of Industrial Relations Journal*, 17(1), 25-40.
- Culpepper, P. D. (2007). Small States and Skill Specificity: Austria, Switzerland, and Interemployer Cleavages in Coordinated Capitalism. *Comparative Political Studies*, 40(6), 611-637.
- Culpepper, P. D., & Thelen, K. (2008). Institutions and Collective Actors in the Provision of Training: Historical and Cross-National Comparisons. In K. U. Mayer & H. Solga (Eds.), *Skill Formation: Interdisciplinary and Cross-National Perspectives*. New York: Cambridge University Press.
- Desarzens, E. (2016) «Darüber freuen wir uns»/Interviewer: D. Fleischmann.
- Di Maio, G., Graf, L., & Wilson, A. (2020). Embedded flexibilization and polite employer domination: the case of short-track apprenticeships in Switzerland. *Empirical Research in Vocational Education and Training*, 12(2), 1-21.
- Di Maio, G., & Trampusch, C. (2019). *Employers' Cooperation in Continuing Vocational Training: An Analysis of Sectoral Differences in Switzerland*. Paper presented at the Book Workshop Collective skill formation in the knowledge economy, St. Gallen, Switzerland.

- Ebner, C., Edeling, S., & Pilz, M. (2019). Master statt Meister: Warum nehmen Abiturienten mit abgeschlossener Berufsausbildung ein Studium auf? In V. Bank, R. Hinz, E. König, R. Lassahn, A. Nießeler, B. Ofenbach, S. Seichter, & T. Tashiro (Eds.), *Pädagogische Rundschau* (Vol. 73, pp. 375-390). Berlin: Peter Lang GmbH Internationaler Verlag der Wissenschaften.
- Ederling, S., & Pilz, M. (2017). 'Should I stay or should I go?' – the additive double qualification pathway in Germany. *Journal of Vocational Education & Training*, 69(1), 81-99.
- Emmenegger, P., Graf, L., & Trampusch, C. (2019). The governance of decentralised cooperation in collective training systems: a review and conceptualisation. *Journal of Vocational Education and Training*, 71(1), 21-45.
- Emmenegger, P., Häusermann, S., Palier, B., & Seeleib-Kaiser, M. (2012). *The age of dualization: the changing face of inequality in deindustrializing societies*. New York: Oxford University Press.
- Emmenegger, P., & Seitzl, L. (2019). Collective Action, Business Cleavages and Politics of Control: Segmentalism in the Swiss Skill Formation System. *British Journal of Industrial Relations*, 57(3), 576-598.
- Euler, D., & Collenberg, M. (2016). *Positionierung der Höheren Berufsbildung im internationalen Vergleich: Eine vergleichende Analyse mit Fokus auf Höhere Fachschulen*. St. Gallen: Universität St.Gallen.
- Gehret, A., Aepli, M., Kuhn, A., & Schweri, J. (2019). *Lohnt sich die Lehrlingsausbildung für die Betriebe? Resultate der vierten Kosten-Nutzen-Erhebung*. Zollikofen: Eidgenössisches Hochschulinstitut für Berufsbildung EHB.
- Gerring, J. (2007). *Case Study Research. Principles and Practices*. Cambridge: Cambridge University Press.
- Gonon, P. (1998). *Das internationale Argument in der Bildungsreform. Die Rolle internationaler Bezüge in den bildungspolitischen Debatten zur schweizerischen Berufsbildung und zur englischen Reform der Sekundarstufe II*. Bern: Peter Lang.
- Gonon, P. (2002). The dynamics of vocational training innovation in Switzerland. In Cedefop (Ed.), *Towards a history of vocational education and training (VET) in Europe in a comparative perspective* (13 ed.). Luxembourg.
- Graf, L. (2012). *The Hybridization of Vocational Training and Higher Education in Austria, Germany and Switzerland*: Dissertation, Freie Universität Berlin.
- Graf, L. (2018). Combined modes of gradual change: the case of academic upgrading and declining collectivism in German skill formation. *Socio-Economic Review*, 16(1), 185-205.
- Hacker, J. S. (2005). Policy Drift: The Hidden Politics of US Welfare State Retrenchment. In W. Streeck & K. Thelen (Eds.), *Beyond Continuity: Institutional Change in Advanced Political Economies* (pp. 40-82). Oxford: Oxford University Press.

- Hacker, J. S., Pierson, P., & Thelen, K. (2015). Drift and conversion: hidden faces of institutional change. In J. Mahoney & K. Thelen (Eds.), *Advances in Comparative-Historical Analysis* (pp. 180-210). Cambridge: Cambridge University Press.
- Johansen, I.-H. (1999). *Transferable training and the collective action problem for employers: an analysis of further education and training in four Norwegian industries*. (PhD Thesis), LSE, Oslo. (Fafo Report 335)
- Johansen, I.-H. (2002). Transferable Training as a Collective Good. *European Sociological Review*, 18(3), 301-314.
- Kalaidos Banking+Finance School. (2020). Anschlussangebote. Retrieved from <https://www.kalaidos-hfbf.ch/de-CH/Anschlussangebote>
- Kalaidos Fachhochschule. (2020a). Geschichte. Retrieved from (18.06.2020) <https://www.kalaidos-fh.ch/de-CH/Ueber-die-Kalaidos-FH/Geschichte>
- Kalaidos Fachhochschule. (2020b). Kalaidos Fachhochschule - die Hochschule für Berufstätige. Retrieved from (18.06.2020) <https://www.kalaidos-fh.ch/de-CH>
- Kalaidos Fachhochschule Schweiz. (2020). *Facts & Figures 2019*.
- Mahoney, J., & Thelen, K. (2010). A Theory of Gradual Institutional Change. In J. Mahoney & K. Thelen (Eds.), *Explaining Institutional Change: Ambiguity, Agency, and Power* (pp. 1-37). New York: Cambridge University Press.
- Muehleemann, S. (2014). Training participation of internationalized firms: establishment-level evidence for Switzerland. *Empirical Research in Vocational Education and Training*, 6(5), 1-11.
- Pilz, M. (2007). Two countries—one system of vocational education? A comparison of the apprenticeship reform in the commercial sector in Switzerland and Germany. *Compare*, 31(1), 69-87.
- SBFI. (2014). *Kick-off NQR Berufsbildung* Bern: Staatssekretariat für Bildung Forschung und Innovation.
- SBFI. (2020a). Die Fachhochschulen der Schweiz. Retrieved from <https://www.sbf.admin.ch/sbf/de/home/hs/hochschulen/kantonale-hochschulen/fh-ph/die-fachhochschulen-der-schweiz.html>
- SBFI. (2020b). Fachhochschulen und pädagogische Hochschulen. Retrieved from (17.06.2020) <https://www.sbf.admin.ch/sbf/de/home/hs/hochschulen/kantonale-hochschulen/fh-ph.html>
- Schickler, E. (2001). *Disjointed Pluralism: Institutional Innovation and the Development of the U.S. Congress*. Princeton, NJ: Princeton University Press.
- Schmid, E., & Gonon, P. (2013). Die höhere Berufsbildung unter Profilierungsdruck. In M. Maurer & P. Gonon (Eds.), *Herausforderungen für die Berufsbildung in der Schweiz* (Vol. 1). Bern: hep Verlag.

- Schmitter, P. C., & Streeck, W. (1999). *The Organization of Business Interests. Studying the Associative Action of Business in Advanced Industrial Societies*. Köln: Max-Planck-Institut für Gesellschaftsforschung.
- SDBB. (2013). Professional college. Retrieved from (4.5.2020) <https://lex.berufsbildung.ch/dyn/11014.aspx?lang=DE&action=detail&value=333&lex=0>
- Seawright, J., & Gerring, J. (2008). Case Selection Techniques in Case Study Research. *Political Research Quarterly*, 61(2), 294-308.
- Seitzl, L., & Emmenegger, P. (2019). How agents change institutions: Coalitional dynamics and the reform of commercial training in Switzerland. *Business and Politics*, 21(2), 145-171.
- SERI. (2015). *Vocational and professional education and training in Switzerland Facts and figures 2015*. Bern: State Secretariat for Education, Research and Innovation (SERI).
- SERI. (2017). *Vocational and Professional Education and Training in Switzerland Facts and Figures 2017*.
- Steinlin, S., & Trampusch, C. (2012). Institutional shrinkage: The deviant case of Swiss banking secrecy. *Regulation & Governance*, 6, 242-259.
- Streeck, W., & Thelen, K. (2005). Introduction: Institutional Change in Advanced Political Economies. In W. Streeck & K. Thelen (Eds.), *Beyond Continuity - Institutional Change in Advanced Political Economies* (pp. 1-39). New York: Oxford University Press.
- SwissBanking. (2020a). HFBBF. Retrieved from <https://www.swissbanking.org/de/themen/ausbildung/hfbf>
- Swissbanking. (2020b). Nach der HFBBF. Retrieved from (20.06.2020) <http://weiterbildung.swissbanking-future.ch/nach-der-hfbf/>
- Higher Education Act, HEdA, (2015).
- Thelen, K. (2009). Institutional change in advanced political economies. *British Journal of Industrial Relations*, 47(3), 471-498.
- Thelen, K. (2012). Varieties of Capitalism: Trajectories of Liberalization and the New Politics of Social Solidarity. *Annual Review of Political Science*, 15, 137-159.
- Thelen, K., & Busemeyer, M. R. (2011). Institutional Change in German Vocational Training: From Collectivism towards Segmentalism. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation*. Oxford: Oxford University Press.
- Thelen, K., & Busemeyer, M. R. (2012). Institutional Change in German Vocational Training: From Collectivism toward Segmentalism. In M. R. Busemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 68-100). Oxford: Oxford University Press.

- Trampusch, C. (2010). The Politics of Institutional Change Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland. *Comparative Politics*, 42(2), 187-206.
- Trampusch, C., & Eichenberger, P. (2012). Skills and Industrial Relations in Coordinated Market Economies- Continuing Vocational Training in Denmark, the Netherlands, Austria and Switzerland. *British Journal of Industrial Relations*, 50(4), 644-666.
- Trampusch, C., & Palier, B. (2016). Between X and Y: how process tracing contributes to opening the black box of causality. *New Political Economy*, 21(5), 437-454.
- van der Heijden, J. (2010). A short history of studying incremental institutional change: Does Explaining Institutional Change provide any new explanations? *Regulation & Governance*, 4(2), 230-243.
- van der Heijden, J., & Kuhlmann, J. (2017). Studying Incremental Institutional Change: A Systematic and Critical Meta-Review of the Literature from 2005 to 2015 *Policy Studies Journal*, 45(3), 64-80.
- Weber, K., Tremel, P., & Balthasar, A. (2010). Die Fachhochschulen in der Schweiz: Pfadabhängigkeit und Profilbildung. *Swiss Political Science Review*, 14(4), 687-713.
- Wettstein, E., Schmid, E., & Gonon, P. (2014). *Berufsbildung in der Schweiz Formen Strukturen Akteure*. Bern: hep Verlag.
- Zosso, B. (2006). *Gleichwertig und gleichartig? Eine vergleichende Untersuchung der Entstehung der Fachhochschulen in der Schweiz in den Bereichen Technik/Wirtschaft/Gestaltung vs. Gesundheit/Soziales*. Lausanne: Insitut de Hautes Études en Administration Publique.

Appendix

Table 4: Overview interviews

Code	Organization	Date	Place
INT1	State representative	15.03.2017	Bern
INT2	Educational institution	31.03.2017	Zürich
INT3	Employer representative	07.04.2017	Telephone Call
INT4	Bank	19.04.2017	Telephone Call
INT5	Bank	20.04.2017	Telephone Call
INT6	Educational institution	09.12.2019	Zürich
INT7	Educational institution	23.01.2020	Zürich
INT8	Educational institution	30.01.2020	Zürich
INT9	Educational institution	31.01.2020	Zürich
INT10	Union	16.03.2020	Telephone
INT11	Union	15.04.2020	Written statement
INT12	Association	09.05.2020	Written statement
INT13	Scientific expert	16.6.2020	Telephone Call

6 Conclusion

Why do economic and political institutions differ across countries and how do they change over time? This dissertation contributes in-depth knowledge to the comparative political economy in two ways. Firstly, I provide answers to the question of how to get employers to cooperate and overcome collective action problems. Secondly, I contribute to a more fine-grained understanding of how collective governance systems adapt to global challenges and go through processes of liberalization. I have investigated the puzzles of employer coordination and liberalization by studying collective skill formation in Switzerland. The following section 6.1 presents my general contributions to the comparative political economy literature before going into the additional more detailed findings that each paper provides. Section 6.2 discusses the limitations of my research and the subsequent questions that future research could investigate. Section 6.3 presents the final remarks of this dissertation.

6.1 Contributions

Coordinated market economies build on institutional arrangements, such as strong intermediary associations, that foster employer's cooperation and thereby solve collective action problems. However, collective governance faces different challenges such as globalization, a shift from manufacturing to the service sector, and the growing importance of the knowledge economy. Furthermore, creating cooperation among employers in new fields is challenging. My dissertation provides new insights into what brings employers (not) to cooperate.

My dissertation has studied collective skill formation systems in order to deepen our knowledge of employer cooperation. I have looked at two levels of training in which the collective action problem is particularly intense. Firstly, I have investigated training for disadvantaged candidates who potentially require more intense supervision and thereby more investment from the employer. Higher investments in training intensify the collective action problem because employers face the risk of losing more when they invest in training without having a guarantee to benefit from it. Secondly, I have studied further vocational training which provides more transferable skills than initial vocational training. Higher transferability increases the danger of poaching and thereby the collective action problem.

My analysis has shown that it is possible for the state to motivate employers to establish cooperation in new fields even in times of increasing global pressure on employers. The introduction of a new training program was characterized by two features. Firstly, the new training program entered through a process of layering which meant it was added to a well-established tradition of employer cooperation and did not replace another institution. In other words, the introduction of the new training program did not change or interfere with the system of employer cooperation that was already in place. Secondly, the new training program built on voluntary employer cooperation. Employers were not forced to participate but could decide themselves if cooperation would be beneficial for them. Furthermore, the state delegated key competences in the governance to employers. This governance approach allowed for sectoral and employer-specific variation in the implementation which increased the incentive for employers to cooperate.

Furthermore, my analysis has shown that in coordinated market economies, employers do not have to be very “loud” to have their interests incorporated in new policies. Policy makers are aware of the business interests and additionally, institutionalized way of expressing their opinion, allowed employers to voice their concerns without becoming confrontational. In return, employers were eventually willing to invest beyond their own interest and thereby create a collective good.

The literature on the governance of vocational training argues that employer associations are of key importance for establishing employer cooperation. However, my study on further training revealed that employer associations are only one part of the puzzle. The commitment of large firms can be decisive for the creation and maintenance of cooperation among employers. The importance of the internal labour market and level of competitiveness on the product market influence the (large) employer’s decision to invest in collective activities.

Another finding of my research was concerned with the tradition of cooperation and spill-over effects. My analysis has shown that a long tradition in cooperation is not a guarantee for continuing cooperation. In cases where employer associations actively expand cooperation, for example, by expanding the course offer of schools that already exist, a long tradition of cooperation promoted further cooperation. However, my case study on the banking sector has shown that the introduction of new institutions that do not build on cooperation can lead to a retreat from collective institutions and their

replacement when the intermediary association does not actively support cooperation. Thus, cooperation is difficult to create but it is just as difficult to maintain it.

My dissertation also addressed the debate on how political economies react to global challenges and in what way their institutions change. A common argument in this literature is that due to global pressure, market forces expand which leads to a decrease in equality. However, my analysis has revealed that systems of collective action are able to maintain high levels of employer cooperation while at the same time increasing social equality. My research has investigated a case in which social inclusion of the overall system was increased by the introduction of a new training option. As this new training option was based on employer cooperation, this example shows that equality can be increased without reducing employers' cooperation. However, it has to be mentioned that the state who was interested in increasing social inclusion to a larger extent as well as the employers who were afraid of increasing costs of training, both had to make concessions to the other side. These findings support the literature that argues that even though pressure challenges coordinated market economies, there are cases in which key institutional features that distinguish liberal and coordinated market economies prevail.

Next to addressing these two major strands in the political economy literature, my dissertation contributes to closing several gaps in the body of literature on collective skill formation systems. A rather new strand in the literature on the governance of vocational training deals with the question of how training systems balance social and economic goals (Bonoli & Emmenegger, 2020; Bonoli & Wilson, 2019; Busemeyer, 2014; Carstensen & Ibsen, 2019; Durazzi & Geyer, 2019). My dissertation developed a comparative framework that allows for a fine-grained analysis of the institutionalization of social and economic goals in different training systems. One of the distinct features of this framework is the incorporation of institutional aspects beyond the regulative dimension. With the help of this framework, my dissertation offers the first structured overview of short-track trainings that are key examples of training programs at the crossroads of social inclusion and economic efficiency.

Moreover, my research contributed to a more encompassing understanding of collective skill formation systems. Collective skill formation systems offer different levels of training. The “lower” level offers vocational training to disadvantaged candidates, the “middle” level is represented by initial vocational training and the “upper” level provides advanced professional skills through further vocational training. However, most

literature on collective skill formation focuses on initial vocational training and thereby overlooks the other two levels. This bias leads to an incomplete understanding of the governance and changes of collective skill formation systems because the governance and interests of the key actors differ across the three levels. With my research on training that targets disadvantaged candidates and further vocational training, I have contributed to a more complete understanding of collective skill formation. Next to these general contributions, each paper has to offer more specific arguments.

The paper *Torn between economic efficiency and social equality? Short-track apprenticeships in Denmark, Germany and Switzerland* has compared the institutionalization of economic and social goals in training across different countries. As a prime example of training that serves social as well as economic demands, the paper concentrated on short-track dual training programs which can be found in three typical collective skill formation systems, namely Denmark, Germany and Switzerland. To go into the details of institutionalization, we, me and the co-authors, differentiated between the regulative (rules), normative (standards) and cultural–cognitive (ideas) dimension in institutions. This fine-grained account of institutionalization allowed us to offer a detailed picture of the differences across but also within the training systems.

Our analysis revealed that in Denmark all three institutional dimensions are oriented towards the social goal. The training content is adjusted to the individuals' needs which leaves less influence for employers. Youth counsellors are part of a strong state-financed support structure that aims at supporting candidates landing and successfully completing apprenticeship positions. With regard to the cultural-cognitive dimension, the key actors - state, unions, and employers - understand short-tracks as a means to offer academically and socially disadvantaged young people the opportunity to receive vocational training. Our analysis found that the situation in Switzerland and Germany differs from that in Denmark. The training content is much more influenced by employers which represents a much stronger orientation towards the economic goal dimension in regulative institutionalization. In Germany, the normative and cultural–cognitive dimensions have a slightly stronger social equality orientation than the regulative framework prescribes. In Switzerland, the leaning towards the economic goal orientation is present in all three dimensions of institutionalization, in particular, in the normative and cultural–cognitive dimensions. This was an interesting finding because in Switzerland it was the state who initiated the introduction of short-tracks as a means to reduce youth unemployment.

Based on these findings, our second paper investigated the introduction process of short-tracks in Switzerland in greater detail and revealed the underlying reasons for the particular choice for institutionalization.

Our analysis showed that each collective skill formation system has its own way of institutionalizing social and economic goals. This might not come as a big surprise to experts of collective skill formation but understanding differences within the family of coordinated market economies is an important contribution to research on the varieties of capitalism. Moreover, this paper offered a new comparative framework that can be applied to other training systems and training programs. Our comparative approach that combines sociological institutionalism with comparative political economy and, more specifically, the economic efficiency and social equality perspectives, has allowed us to move beyond written rules and accentuate variation between the three key institutional dimensions: regulative, normative and cultural–cognitive. In short, we developed an instrument that allows informal rules to be taken into account which is a feature of institutions that Hall and Soskice (2001, p.14) have highlighted. This fine-grained study provided an important basis for a better understanding of how complex institutional configurations are put into practice in strongly decentralized governance systems and for uncovering the specific normative and cultural underpinnings of collectively organized work-based educational programmes.

The paper *Embedded flexibilization and polite employer domination: the case of short-track apprenticeships in Switzerland* was a follow-up study of the comparison of the first paper. The paper has investigated the political process that started in the 1990s and that eventually led to the introduction of short-track training in 2002 in Switzerland. The apprenticeship crisis in the 1990s led to rising youth unemployment which meant increasing pressure on the state to take care of the disadvantaged candidates that were facing a high risk of not landing an apprenticeship position. However, employers were not willing and could not be forced to increase the number of apprenticeship positions, in particular not with regard to candidates who might require more intense supervision and support (disadvantaged candidates).

From the perspective of the different modes of institutional change, this situation meant that conversion or displacement of regular training programmes was not possible due to the strong veto player (business). To overcome this challenge, the state set a process of layering in motion, suggesting the introduction of short-tracks as an additional new

training level. Employers, however, voiced their concerns that they would not be willing to invest in disadvantaged candidates in the standardized pre-parliamentary consultation process (*Vernehmlassung*). Due to the fact that vocational training depends on employers' willingness to train, the state considered the employers' demands when deciding on the institutionalization of short-tracks. The employers did not have to express their concerns very loudly, but policy makers were aware of their demands and did not force short-tracks on them. Short-tracks were introduced in the legal framework but the employers' associations and firms are free to choose if they want to implement short-tracks. Furthermore, key competences such as content definition were delegated to the business players. We labelled this process of change "embedded flexibilization" because the training system was made more flexible with an additional training option entering the system while at the same time its "embedded" due to the fact that it built on traditional collective governance. However, we argued that this embedded flexibilization is characterized by "polite employer domination" because employers received a lot of key competences without voicing their concerns very loudly.

With this finding, the paper contributed to a more fine-grained understanding of liberalization processes. The trajectory of embedded flexibilization is traditionally associated with Scandinavian countries such as Denmark (Thelen, 2014). Reforms make training more flexible and thereby develop more training options to disadvantaged candidates which means that flexibilization increases equality. However, according to the model of this trajectory of embedded flexibilization, the state gets involved in competences traditionally governed by employers, such as content definition. Thus, embedded flexibilization has so far been associated with high levels of equality but decreasing levels of strategic employer cooperation.

However, our study revealed a new variant of embedded flexibilization in which equality can be increased without reducing the level of strategic employer coordination. It can even be argued that short-tracks increase the level of strategic employer coordination because it is an additional field that requires employers to get together and govern training. The state got employers on board by delegating key competences such as content definition and selection of candidates to employers. Being in charge of the content and access to short-tracks, enabled employers to highlight the economic efficiency dimension of short-tracks. Furthermore, the composition of the employer's camp played an important role. While the process of segmentalism in Germany is associated with the

increasing influence of large and export-oriented firms, Switzerland is not dominated by a strong manufacturing nor export-oriented sector per se but by a rather pluralistic group of business actors (Gonon & Maurer, 2012; Mach & Trampusch, 2011). The absence of very strong and dominant business players led the business camp to eventually tolerate some concessions to the benefit of disadvantaged groups by accepting the introduction of short-tracks.

Additionally, the state agreed to provide funding to implement individual support measures for short-track apprentices who are in danger of failing their apprenticeship. The implementation of these state-funded support measures could at least partly be ascribed to the unions. This was another important finding of our study because it meant that even though Switzerland is considered to be the most liberal collective skill formation system (Emmenegger, Graf, & Trampusch, 2019), the state and the unions can have the capacity to influence the design of inclusiveness-enhancing training options. Moreover, our findings have improved the understanding of institutional change in the Swiss skill formation system. Trampusch (2010a) has described change in the Swiss VET system as self-preserving and transformative. We have added to this that the Swiss VET reform made the training system more flexible and accessible for disadvantaged candidates while maintaining a high level of employer coordination.

Our findings also benefitted future policy-making that deals with the question of how to design inclusiveness-enhancing dual vocational training. Crucially, the combination of layering with continued voluntary engagement of employers seems to be a promising strategy. However, having employers as gatekeepers and content developers has some limiting effects on inclusiveness. Therefore, in collective skill formation, as elsewhere, finding a balance between economic efficiency and social equality remains a complex policy challenge.

The paper *Employers' cooperation in the knowledge economy: continuing vocational training in Switzerland* has pursued the question of which factors influence the extent to which employers' associations co-provide and co-finance transferable skills. Together with my co-author, we have examined sectoral variation in the provision of further vocational training in Switzerland. Little was known about the underlying reasons for the sectoral differences in the provision of professional education and training (*Höhere Berufsbildung*) in Switzerland. This is due to the fact that most literature has focused on

initial vocational training and neglected the “upper” level in collective skill formation. Our study has contributed to closing this gap in the literature.

The analysis covered four sectors: the construction sector, the machinery and metal sector, the pharmaceutical sector, and the banking sector. While the construction and the machinery and metal sector are characterized by high levels of collective action in the provision and financing of professional training, this is not the case in the pharmaceutical and banking sector. Literature suggests that the following four dimensions influence the decision to invest in collective training provision and financing: (1) large firms’ commitment, (2) the competitiveness of the product market, (3) employers’ associations’ logic of organization building, (4) institutional spill-over effects.

The analysis revealed that the commitment of large firms was essential for establishing and maintaining collective action in the governance of skills. Our study went a step further and investigated under what conditions large employers are committed to collective funding and provision schemes. We found that the role of internal labour markets can make the difference. In the construction sector and machinery and metal sector, internal labour markets are a central resource for filling leadership positions. External labour markets seem to be less able to provide the necessary skills. In the pharmaceutical and banking sector, skilled labour can be recruited from the global labour market. This does not mean that in the latter two sectors the internal labour market is not important but professional education and training does not play a key role to fill leadership positions. Furthermore, our study showed that a low (perceived) level of competitiveness on the product market is associated with high levels of collective action in skill formation.

We also found that the logic of organization building of the employers’ association influences their decision to run their own schools and to establish collective funding mechanisms. For example, in the construction sector, the employer association uses training policies as an important means to attract membership. In the banking sector, training policies do not seem to play a role in the motivation for membership in the employers’ association. Moreover, the tradition of cooperation in initial vocational training and collective bargaining seems to have spill-over effects on cooperation in professional education and training. For instance, in the construction and metal sector, collective labour agreements also embrace training issues and initial vocational training is deeply rooted and well organized by the employers’ associations, thus creating further spill-over effects in institutional and financial resources.

Our study has started to disentangle the complex variety of conditions that influence employers' decision to invest in collective skill provision. Our findings contributed to a better understanding of the diversity of ways how and why continuing vocational training is organized in collective systems. Thus, our findings were very relevant beyond the Swiss borders. We emphasized that collective action in training cannot be explained solely by one factor. A combination of different interrelated conditions has to be taken into account in order to understand why employers' associations provide skills that are of benefit even for non-training firms.

The paper *How rising skill demands undermine collective governance - An analysis of further training in the Swiss banking sector* has led to a better and more fine-grained understanding of processes of segmentalism and institutional change in further training. Segmentalism is described as a process of change in which large firms increasingly tailor vocational training to their specific needs. The argument why large employers are able to convince policy makers to change training in line with their needs said that initial vocational training increasingly depends on large employers to provide training. I extended this argument by adding three findings.

Firstly, the case study has shown that segmentalism is not restricted to initial VET. Increasing influence of large employers on training content is also very visible and challenges collective further training. Secondly, the source of power of large banks to influence training differs between initial and further training. In initial vocational training, large employers are powerful because they represent the supply side of training and the collective skill formation systems are dependent on the voluntary provision of training of these employers. In contrast, in further training, large employers are powerful players because they represent the demand side that is paying for training. The providers of training, private, for-profit ones in particular, are dependent on large firms to "buy" their skill provision. Thirdly, the literature on segmentalism in initial vocational training has not paid much attention to the role of training providers in segmentalism. This case study has revealed that training providers can function as important change agents when they do not face the veto power of an association.

These findings indicated that the delegation of financing the provision of further training to a private provider can have negative medium and long-term consequences for the level of collective action in skill formation. When the employer association shifted the responsibility to finance the provision of training to a new actor, this actor developed

market-driven interests to attract as many customers as possible which means that large employers are very important.

The introduction of the private university of applied sciences triggered a process of segmentalism in a way that this profit-oriented training institution very openly tailors its training content to the needs of large employers as this is an important part of its corporate strategy. These two examples showed that when financing responsibilities depend on attracting large employers, this leads to a situation in which large employers use this power to tailor training to their needs.

Thus, my study has complemented our understanding of the process of segmentalism not only for the case of the banking sector but in general. My findings can travel to other cases because private for-profit providers can be found in other sectors as well. However, it has to be mentioned that the combination of a private provider of professional training and a private university of applied sciences is rather specific. This raises the need for further research to study institutional change in further vocational training in other sectors. Further limitations and subsequent research puzzles are discussed in the following section.

6.2 Limitations and subsequent questions

Based on different case studies, my dissertation offers new insights on factors influencing employers' cooperation. However, some limitations of my research have to be discussed. I highlight two general limitations before going into more detail of how each paper is limited and what subsequent questions arise.

My dissertation is based on case studies. The case study approach allows an intensive examination of the complex relations within the cases. However, the focus on only a few cases limits the extent to which the findings can be generalized which is important to extend our knowledge about institutional differences across coordinated market economies (Hall & Soskice, 2001). The limitations to generalizability is rooted in the fact that the governance of vocational training in Switzerland varies greatly on the sectoral level (as we have shown in the third paper) and that Switzerland shows some specific features such as voluntary membership in intermediary associations or the low involvement of unions in comparison to other countries (Emmenegger, Graf, & Strebel, 2019). Against this backdrop, my focus on Switzerland and a few sectors raises the need for

future research to build on my findings and complete our understanding by applying the research questions posed in my dissertation to more sectors and other countries.

Moreover, my dissertation focuses on the sectoral and national level of skill formation. This perspective offers insights on the system development but it neglects an important actor group in training, namely the learners. Bridging the institutionalist perspective with taking the learners' perspective into account could enrich future research on inclusion and equality in training (Busemeyer, 2015; Kreckel, 2009 [1982]; Powell, 2011; Solga, 2005). Future research could go into detail on how institutions influence the learners' training decisions and how they experience training. This would, for example, contribute to a better understanding of developments in further training in the context of the knowledge economy. Also, zooming in on the individuals' level in combination with an institutional perspective, would enrich our knowledge on inclusiveness of training.

My research investigated training that targets disadvantaged candidates and further training. Both are fields of training that have often been overlooked in seminal works on the governance of collective skill formation. Thus, the body of literature my research could build on was limited and my research often followed an explorative approach. Nevertheless, the following section discusses the specific limitations of each paper and the subsequent questions.

The first paper compared how short-tracks are institutionalised in Denmark, Germany and Switzerland. This explorative study provided the first overview of how these different countries understand and govern inclusiveness-enhancing vocational training. Nevertheless, our focus on short-track trainings did not take other training options or support measures into account. We picked a specific training program which means that our study did not analyse the whole set of measures that are installed to increase inclusiveness of vocational training. We made this choice because it allowed us to conduct a structured comparison of very similar training programs that represent inclusiveness-enhancing training. Concentrating on short-tracks allowed us to identify country-specific differences and variation within a national context of how social and economic goals are supported. Future research could apply a more holistic approach to inclusiveness-enhancing training and compare a broader set of measures in order to generate further knowledge that broadens our understanding of the institutionalization of equality and dualization (Carstensen & Ibsen, 2019; Emmenegger, Häusermann, Palier, & Seeleib-Kaiser, 2012; Thelen, 2014)

Furthermore, our study did not measure the actual level of inclusiveness or the effect of short-tracks on social equality because this requires a different research approach. Analysing the effects on inclusiveness would be a very important follow-up project that could contribute to the discussion of the relationship between inequality and education (Solga, 2014). For this purpose, the analysis should take into account the micro level, namely the learners' perspective.

Moreover, further analyses are needed to explore the extent to which these findings travel beyond the case of short-tracks. Also “regular” apprenticeships combine social and economic goals. Future research could apply our framework to investigate how and why full-length apprenticeships differ across countries, sectors and even occupations.

Additionally, our study did not answer the question of how the institutionalization of short-tracks has come about and developed over time. It remains to be studied which political processes and characteristics of the market economies influenced the development of short-tracks in Denmark and Germany. This would enrich the literature on institutional change in vocational training (Graf, 2018; Seitzl & Emmenegger, 2019; Trampusch, 2010b).

We contributed to closing this gap with the second paper that traced the political process of the introduction of short-tracks in Switzerland. The analysis focused on the national level because short-tracks were introduced by the vocational training act that is located on the national level. However, the governance of vocational training is characterized by great variety on the sectoral level. Our analysis did not take sectoral variation in the formation of the opinion into account. Future research could apply a comparative approach and highlight differences between the interests, the voicing of opinion in the policy process and, very importantly, in the implementation of short-tracks across sectors. This would contribute to a better understanding which factors influence the decision of employers to cooperate (Crouch, Finegold, & Sako, 1999; Culpepper, 2003) and the capacities of employer association to enable cooperation (Marsden, 1999; Streeck & Schmitter, 1985; Traxler, 2010). A more detailed analysis on the sectoral level would also allow a focus on informal cooperation in the policy making process which we did not pay a lot of attention to. Our study was the first one to disentangle the policy process leading to the introduction of short-tracks in Switzerland. In order to trace this process for each sector, more research capacity is needed.

Moreover, as did the first paper, this study did not directly measure the effect of short-tracks on equality in vocational training. We used some indicators to argue that it is very likely that short-tracks offer training to candidates that are more disadvantaged than the candidates in regular length trainings and thus do increase the level of inclusiveness. Further research could connect the political process, the institutionalization and effect on inclusiveness. This would be of great help to policy makers, in particular.

The third paper has looked at cross-sectoral differences in the collective provision and financing of further vocational training in order to shed light on the question of what brings employers to cooperate in skill formation (Crouch et al., 1999; Streeck, 1989) and what role employer associations play (Streeck & Schmitter, 1985; Traxler, 2010). The study concentrated on four sectors of which two are characterized by high levels of employer cooperation and two by low levels of employer cooperation. This comparative approach allowed us to identify different factors that influence the level of collective action. Our study is among the first comparative studies that looks at sectoral variation in the provision of further vocational training in Switzerland. We picked the four sectors very carefully, based on the level of collective action which allowed us to draw conclusions beyond our cases. Future research could add to our findings by comparing a broader set of sectors which would also strengthen the more general conclusions.

The Swiss case of collective skill formation is characterized by voluntary membership in intermediary associations which differs from the German or Austrian model of collective skill formation. As a result, the logic of membership is likely to differ across these countries. Compulsory membership might weaken the need for employer associations to use further training as a means to attract membership. For example, in Germany, industry-level employers' associations are rather reluctant to invest in cooperation in further training (Streeck, Hilbert, Kevelaer, Maier, & Weber, 1987, p. 26). Against this backdrop, future research is needed to test how the differing logics of membership influences the governance of further training.

Furthermore, our study provides new grounds to combine institutional research with educational sociology which might want to look at the effects of the institutional set-up on participation rates and career development. Our analysis mapped differences in the provision and funding of training but did not explain the development of these differences as this was beyond the scope of the project. I picked up on this puzzle with the

fourth paper which examined institutional change in the provision of further skills in the Swiss banking sector.

The fourth paper concentrated on the banking sector. On the one hand the single-case study approach allowed me to go into detail of the complicated system of provision of advanced professional skills and processes and modes of change. Choosing an extreme case to study, allowed me to explore new mechanisms in a field of training (further training) that had not been studied extensively yet. On the other hand, one has to be careful with the application of my findings to other Swiss sectors or to other countries. The Swiss banking sector is characterized by a few but powerful players that have a lot of resources at hand. Furthermore, a private university of applied sciences provides advanced skill in the Swiss banking sector. These two characteristics are different in other sectors. Thus, it remains to be tested how the banking sector relates to other Swiss sectors with regard to the provision of advanced skills. However, the delegation of key competences such as the funding responsibility to private actors is not restricted to the banking sector. This makes it very likely that other sectors go through similar processes of segmentalism.

Future research should investigate institutional change in the provision of advanced skills in sectors that are, for example, characterized by small and medium sized enterprises and where public universities of applied sciences provide advanced skills. Furthermore, a comparison with other countries could reveal more insights and thereby contribute to the discussion on the role of intermediary associations (Streeck & Schmitter, 1985). As discussed above, in Switzerland, membership in the intermediary association is voluntary, in Germany membership in the chambers is obligatory. This difference is very likely to have an influence on the role of the association and thereby on institutional change.

Another path for future research could be to study the learner's perspective. To better understand to which extent and why a shift from professional to higher education took place, it would be beneficial to trace the individuals' training decision. One possibility would be to incorporate the perspective of the employees and conduct a survey and ask about the training options, decisions and factors influencing this decision. As there is little research on institutional change in the provision of advanced vocational skills in Switzerland, my project has been of an explorative nature. Conducting surveys would have required a high additional investment in resources. Nevertheless, the findings can

inform future research and surveys on the individuals' preferences and training decisions.

6.3 Final remarks

Successful governance of skill formation is crucial for a well-functioning society as it has a strong influence on social well-being, economic growth, and competitiveness on the individual, societal and national level (Gonon, 2016). Skills and education enable people to engage in political and social activities and educational certificates are the entry ticket to the labour market and well-paid jobs (Busemeyer, 2015). My dissertation has contributed to a better understanding of the governance of collective skill formation systems.

I have investigated how vocational training adapts to challenges such as rising skill demands. My research has focused on two fields in vocational training that are particularly challenged by rising skill demands. On the one hand, I have looked at training that targets disadvantaged candidates and aims at increasing equality. In times of rising skill demands, disadvantaged candidates find it even harder to land an apprenticeship position. On the other hand, my research has investigated further vocational training that equips students with advanced professional skills. Further vocational training is an important means to meet the rising skill demands. By studying these two fields in vocational training, my dissertation offered answers to the question of what brings employers to cooperate and how liberalization changes vocational training.

Our understanding of the governance of vocational education and training is growing. Nevertheless, training is rapidly developing and responding to challenges both at the global and local level, such as seen in the current Corona virus pandemic. Thus, further research on these topics will continue to be of high importance.

6.4 References

- Bonoli, G., & Emmenegger, P. (2020). The limits of decentralized cooperation: promoting inclusiveness in collective skill formation systems? *Journal of European Public Policy*.
- Bonoli, G., & Wilson, A. (2019). Bringing firms on board: Inclusiveness of the dual apprenticeship systems in Germany, Switzerland and Denmark. *International Journal of Social Welfare*, 28(4), 369-379.
- Bussemeyer, M. R. (2014). *Skills and Inequality. Partisan Politics and the Political Economy of Educational Reform in Western Welfare States*. Cambridge: Cambridge University Press.
- Bussemeyer, M. R. (2015). *Skills and Inequality. Partisan Politics and the Political Economy of Education Reforms in Western Welfare States*. Cambridge: Cambridge University Press.
- Carstensen, M. B., & Ibsen, C. L. (2019). Three dimensions of institutional contention: efficiency, equality and governance in Danish vocational and training reform. *Socio-Economic Review*, 0(0), 1-27.
- Crouch, C., Finegold, D., & Sako, M. (1999). *Are Skills the Answer? The Political Economy of Skill Creation in Advanced Industrial Countries*. Oxford: Oxford University Press.
- Culpepper, P. D. (2003). *Creating Cooperation. How States Develop Human Capital in Europe*. Ithaca: Cornell University Press.
- Durazzi, N., & Geyer, L. (2019). Social inclusion in the knowledge economy: unions' strategies and institutional change in the Austrian and German training systems. *Socio-Economic Review*, 18(1), 103-124.
- Emmenegger, P., Graf, L., & Strebel, A. (2019). Social versus liberal collective skill formation systems? A comparative-historical analysis of the role of trade unions in German and Swiss VET. *European Journal of Industrial Relations*, 26(3), 263-278.
- Emmenegger, P., Graf, L., & Trampusch, C. (2019). The governance of decentralised cooperation in collective training systems: a review and conceptualisation. *Journal of Vocational Education and Training*, 71(1), 21-45.
- Emmenegger, P., Häusermann, S., Palier, B., & Seeleib-Kaiser, M. (2012). *The age of dualization: the changing face of inequality in deindustrializing societies*. New York: Oxford University Press.
- Gonon, P. (2016). Zunehmende Steuerungsdiskrepanzen in der Berufsbildung. In P. Gonon, A. Hügli, R. Künzli, K. M. Merki, M. Rosenmund, & K. Weber (Eds.), *Governance im Spannungsfeld des schweizerischen Bildungsföderalismus* (pp. 39-49). Bern hep Verlag.
- Gonon, P., & Maurer, M. (2012). Educational Policy Actors as Stakeholders in the Development of the Collective Skill System: The Case of Switzerland. In M. R.

- Bussemeyer & C. Trampusch (Eds.), *The Political Economy of Collective Skill Formation* (pp. 126-149). Oxford: Oxford University Press.
- Graf, L. (2018). Combined modes of gradual change: the case of academic upgrading and declining collectivism in German skill formation. *Socio-Economic Review*, 16(1), 185-205.
- Hall, P. A., & Soskice, D. (Eds.). (2001). *Varieties of Capitalism – The Institutional Foundation of Comparative Advantage*. New York: Oxford University Press.
- Kreckel, R. (2009 [1982]). Dimensionen vertikaler Ungleichheit heute. In H. Solga, J. J. W. Powell, & P. A. Berger (Eds.), *Soziale Ungleichheit - Klassische Texte zur Sozialstrukturanalyse* (pp. 143-154). Frankfurt am Main: Campus.
- Mach, A., & Trampusch, C. (2011). The Swiss Political Economy in Comparative Perspective. In C. Trampusch & A. Mach (Eds.), *Switzerland in Europe. Continuity and Change in the Swiss Political Economy* (pp. 11-23). London: Routledge.
- Marsden, D. (1999). *A Theory of Employment Systems: Micro-Foundations of Societal Diversity*. Oxford: Oxford University Press.
- Powell, J. J. W. (2011). *Barriers to Inclusion: Special Education in the United States and Germany*. Boulder, CO: Paradigm Publishers.
- Seitzl, L., & Emmenegger, P. (2019). How agents change institutions: Coalitional dynamics and the reform of commercial training in Switzerland. *Business and Politics*, 21(2), 145-171.
- Solga, H. (2005). *Ohne Abschluss in die Bildungsgesellschaft*. Opladen: Verlag Barbara Budrich.
- Solga, H. (2014). Education, economic inequality and the promises of the social investment state. *Socio-Economic Review*, 12(2), 269-297.
- Streeck, W. (1989). Skills and the Limits of Neo-Liberalism: The Enterprise of the Future as a Place of Learning. *Work, Employment & Society*, 3(1), 89-107.
- Streeck, W., Hilbert, J., Kevelaer, K.-H. v., Maier, F., & Weber, H. (1987). *Die Rolle der Sozialpartner in der Berufsausbildung und beruflichen Weiterbildung: Bundesrepublik Deutschland*. Berlin: European Centre for the Development of Vocational Training.
- Streeck, W., & Schmitter, P. (Eds.). (1985). *Private Interest Government: Beyond Market and State*. London: Sage.
- Thelen, K. (2014). *Varieties of Liberalization and the New Politics of Social Solidarity*. New York: Cambridge University Press.
- Trampusch, C. (2010a). The Politics of Institutional Change Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland. *Comparative Politics*, 42(2), 187-206.
- Trampusch, C. (2010b). Transformative and Self-Preserving Change in the Vocational Education and Training System in Switzerland. *Comparative Politics*, 41(2), 187-206.

Traxler, F. (2010). The long-term development of organised business and its implications for corporatism: A cross-national comparison of membership, activities and governing capacities of business interest associations, 1980-2003. *European Journal of Political Research*, 49(2), 151-173.

Curriculum Vitae

Gina Di Maio

Date of birth 15.01.1988 in Cologne, DE
Nationality German

Education

to 10/2020 **University of St.Gallen (CH)**
from 07/2015 PhD in International Affairs and Political Economy

06/2019 **Oxford University (GB)**
04/2019 Research visit at the Department of Social Policy and Intervention

04/2019 **University of St.Gallen (CH)**
07/2017 Certificate of Advanced Studies Learning and Teaching in Higher Education

08/2014 **Maastricht University (NL) and University of Cologne (DE)**
04/2012 Research Master European Studies (M.Sc. & M.A.)

04/2012 **University of Cologne (DE)**
04/2008 Bachelor of Social Science (B.Sc.)

07/2010 **Charles University Prague (CZ)**
08/2009 Erasmus Exchange

2007 **Otto-Hahn-Gymnasium Bensberg (DE)**
A-levels

Work experience

to 12/2020 **Chair for European Politics, University of St.Gallen (CH)**
from 09/2016 Teaching Assistant

06/2020 **Chair for Political Economy, University of St.Gallen (CH)**
07/2015 Doctoral Researcher

12/2019 **Organisation for Economic Co-operation and Development (OECD)**
01/2019 Research Consultant

06/2014	University of Cologne (DE)
09/2010	Tutor and Student Assistant
09/2009	Federal Institute for Vocational Education and Training in
11/2008	Bonn (DE)
	Student Assistant

Extracurricular activities

06/2019	Student Union of the University St.Gallen (SHSG)
09/2016	Representative of the PhD Students
2008	Swimming Team TV Refrath (DE)
2003	Swimming Instructor

Further competencies

Languages

German	native
English	business-level fluency, C1
French	basic skills, B1

IT – competencies

MS Office, SPSS, Learning Management Systems (e.g. Canvas)

Interests

Sport: Swimming (participation in competitions for many years), Fitness (e.g. TosoX, Bodycombat), Yoga, Hiking, Skiing
Travelling

Awards

Best Paper Award

Eidgenössisches Hochschulinstitut für Berufsbildung / Swiss Federal Institute for Vocational Education and Training: 6th Congress on Research in Vocational Education and Training (March 2019) for the paper Di Maio, G., Graf, L. & Wilson, A.: *Trajectories of Liberalization in Collective Governance: The Swiss Case of Polite Employer Domination and Embedded Flexibilization*

Early Career Workshop

Society for the Advancement of Socio-Economics: Competitive workshop for junior researchers at the SASE annual conference 2019 at The New School, New York City, USA (June, 2019)

List of selected publications

International Education Politics

Di Maio, G. (2020): Lifelong Learning in Korea. In: OECD. *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*. OECD Publishing. Paris.

Di Maio, G. (2020): The Estonian Education Information System (EHIS). In: OECD. *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*. OECD Publishing. Paris.

Vocational Education and Training

Di Maio, G. & Trampusch, C. (forthcoming 2020): Employers' Cooperation in the Knowledge Economy: Continuing Vocational Training in Switzerland. In: Emmenegger, P. & Bonoli, G. (eds.). *Collective Skill Formation Systems in the Knowledge Economy*

Di Maio, G. (forthcoming 2020): Meeting rising skill demands: Higher vocational training in Switzerland as an example of tertiary vocational training. In: Eigenmann, P., Gonon, P. & Weil, M. (eds.) *Opening and Extending Vocational Education and Training*. Peter Lang Publishing Inc. Bern

Di Maio, G., Graf, L. & Wilson, A. (2020): Embedded flexibilization and polite employer domination: the case of short-track apprenticeships in Switzerland. *Empirical Research in Vocational Education and Training*. 12(2)

Di Maio, G., Graf, L. & Wilson, A. (2019): Torn between economic efficiency and social equality? Short-track apprenticeships in Denmark, Germany and Switzerland. *European Educational Research Journal*. 18(6)

Higher Education and Teaching

Di Maio, G., Witzig, V. & Schüller, S. (2019): *PhD Survey 2019*

Di Maio, G. & Gerber, J. (2019): Fähigkeiten zur theoriegeleiteten Analyse erfolgreich in einer Vorlesung schärfen – Die didaktische Umsetzung einer interaktiven Übung. *Neues Handbuch für Hochschullehre*. DUZ Verlag. Berlin