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ARTICLE



Creating Apprenticeships in Switzerland: the case of the cableway mechanics

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ABSTRACT

Collective skill formation systems thrive if employers' skill needs are reflected in apprenticeship training programmes and firms offer apprenticeship positions. Occupation-level adaptation processes underpin these systems, which offer upper-secondary level vocational education leading to hundreds of occupations. Yet, it is considered challenging to introduce new apprenticeships in sectors without training tradition. Based on the case of the newly created cableway mechanic occupation, this paper suggests that the institutional context in combination with effortful institutional work allowed a business association to introduce a small new occupation in the Swiss vocational education and training system. The cableway association mobilised firms, legitimised the new occupation towards public authorities, lobbied for more financial support, and fought to gain apprentices. Ten years after the introduction, finally, financial difficulties were overcome, and the apprenticeship institutionalised in the educational landscape.

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Introduction

Occupations are embedded in their national socio-economic contexts (Clarke, Westerhuis, and Winch 2020; Busemeyer and Trampusch 2012). In collective skill formation systems, such as the German or Swiss vocational education and training (VET) systems,¹ the main access road to occupations are dual apprenticeships that take place in firms and are supplemented with school courses. The key asset of these systems is the close link between employment and education, which fosters a relatively smooth transition from education to work (De Lange, Gesthuizen, and Wolbers 2014; Bolli et al. 2018).

An important aspect of this link is that employers design the apprenticeship training programmes in cooperation with social partners and the state and that these apprenticeships lead to nationally standardised and certified occupational titles (Busemeyer and Trampusch 2012).

Despite their many advantages, through their tight links to the labour market dual VET systems are particularly exposed to socio-economic transformations. Not only academisation, deindustrialisation and technological change (Clarke, Westerhuis, and Winch 2020; Deissinger 2019; Haasler 2020), but also economic liberalisation can threaten the provision of collectively organised training because it lowers employers' coordination capacities (Thelen 2014). Consequently, collective skill formation systems have followed various trajectories of institutional change in the last decades. Depending on the constellations of the state, employer associations and unions in negotiations about VET policy, these reforms have altered VET systems; for example, by introducing more public workshop-based training or the inability to prevent the exclusion of large parts of the youth from training (Durazzi and Geyer 2020; Haasler 2020; Thelen 2014).

Yet, VET systems' institutional adaptation to technological and socio-economic change also unfolds at the subnational level: In the process of revising or creating apprenticeship programmes, specific occupations are aligned with employers' skills requirements (Clarke, Westerhuis, and Winch 2020; Thelen and Busemeyer 2008). In these processes, large firms' dominance, for example, may lead to more firm-specific forms of training, which discourages small firms from training, and thereby influences the overall character of the training system (Seitzl and Emmenegger 2019; Thelen and Busemeyer 2008). Moreover, due to the consensus-based corporatist systems that underpin occupational revision processes, these processes are generally slow, which raises concerns about the adaptation capacity of collective skill formation systems in times of rapidly changing skills demands (Haasler 2020; Maurer and Pieneck 2013).

A case in point is the creation of apprenticeships in sectors without a dual training tradition. Such an extension to new sectors could help to offset the shrinking training participation in the craft and industrial sectors of the economy (Deissinger 2019; Thelen and Busemeyer 2008). In this case, a new employer group would need to understand VET to tackle the challenges associated with introducing new firm-based training (Culpepper 2003; Nicklich and Fortwengel 2017). This presupposes the employer associations would have a high organisational capacity as firms would provide training on a voluntary basis (Culpepper 2003; Schmitter and Streeck 1999). Hence, to create new occupations, employer associations need to develop institutional work–purposive action aimed at influencing institutions (Lawrence and Suddaby 2006, 215). However, such an endeavour can fail, even in the well-established German VET system (Nicklich and Fortwengel 2017).

Thus, in today's challenging environment for dual VET, it appears surprising that bottom-up initiatives by employer groups to introduce apprenticeships still exist. Moreover, research on employer associations and their capacities to foster training at the decentralised level of occupations is relatively scarce (Emmenegger, Graf, and Trampusch 2019). Therefore, this paper addresses the questions about what

institutional work employers develop to create new apprenticeships and how this institutional work is connected to the national institutional context.

To answer these questions, I reconstruct the creation of a new apprenticeship for cableway mechanics in Switzerland, which represents the country with the highest share of youth in upper-secondary level dual VET (OECD 2017). Moreover, the last Swiss VET reform has been identified as a self-preserving type of institutional change (Trampusch 2010). Thus, the Swiss case allows exploring the institutional maintenance of collective skill formation in a changing environment.

The case of the cableway mechanics shows that association leaders' institutional work was built on various cultural-cognitive elements, such as a widespread shared understanding about organising apprenticeships. Here, employers and employees created positive normative associations with the apprenticeships based on expected improvements in quality and security. At the same time, public authorities supported the introduction of this training programme because it promised to offer apprenticeship positions in peripheral regions. Nevertheless, institutionalising the new apprenticeship may have failed because the employer association struggled to finance training infrastructure and convince firms and apprentices to engage in the training.

This paper is structured as follows. The next section reviews the existing literature on institutional change in collective skill formation systems, conceptualises a sociological institutionalist framework for analysing these change processes, and introduces the Swiss case. Then, the methodological approach is discussed. The fourth section presents the case study findings. Last, I offer a discussion and conclusion.

The Collective Governance of Apprenticeships

In skill formation systems based on dual apprenticeships, occupations are typically governed collectively by the state and the labour market stakeholders. Their tight links to the economy and firms' skills needs are the key asset of dual VET systems. Yet, important socio-economic changes, such as academisation, technological change, deindustrialisation, and liberalisation, affect the stability of collective skill formation systems (Deissinger 2019; Thelen 2014). Typically, these changes affect firms' provision of apprenticeship positions. Thus, collective skill formation systems struggle to integrate a section of the young people into the labour market (Di Maio, Graf, and Wilson 2019; Haasler 2020).

Dual VET systems rely on firms offering apprenticeship positions on a voluntary basis. Yet, firms face inherent cooperation dilemmas in providing the collective good of vocational skills that are transferable to other firms. Prior research has highlighted the important role of employer associations in helping firms overcome these cooperation dilemmas (Culpepper 2003). Unsurprisingly, dual VET systems have historically been developed in countries such as Austria, Germany and Switzerland, in which the state systematically involves business associations

in policy-making and implementation. In exchange for this organisational privilege, the associations should make their members comply with public policies; for example, offering apprenticeships, which is challenging (Schmitter and Streeck 1999).

Changing Institutions of Collective Skill Formation

Comparative historical institutionalist and VET research provides important insights into institutional change in collective skill formation systems. To address socio-economic change, new national-level policies were introduced without altering the core institutional dimensions of dual apprenticeships (Trampusch 2010). For example, such policies created pathways between VET and higher education through hybrid qualifications, thus maintaining VET as an attractive educational option for school leavers with good grades (Deissinger 2019; Gonon and Maurer 2012). Additionally, inclusion-enhancing policies, such as short-track training or public learning workshops, have been introduced in various countries to counteract the exclusion of certain youth from dual VET (Di Maio, Graf, and Wilson 2019; Durazzi and Geyer 2020).

Institutional change processes also come to the fore at the level of occupations. For example, in Germany, large firms' and unions' demands for high-quality skills led to increased training costs, which may have triggered the exit of many small firms from this system (Thelen and Busemeyer 2008). In the Swiss commercial sector, large firms also lobbied for more firm-specific training. Yet, small firms managed to defend their interests, at least partly (Seitzl and Emmenegger 2019). Hence, not only national-level reforms but also the outcomes of occupation-level negotiations affect the overall characteristics of VET systems.

Moreover, in a context of deindustrialisation, apprenticeships need to be strengthened in new sectors. However, previous research on introducing apprenticeships has highlighted that employer associations need to help firms overcome cooperation dilemmas associated with the provision of the collective good of transferable occupational skills (Culpepper 2003): Introducing firm-based training can hinge on the circulation of information amongst firms and the collaboration of the associations with public authorities to target wavering firms with smartly designed support. Other approaches argue that the associations mould firms' preferences and help to align them with long-term aims and public policies based on normative processes (Schmitter and Streeck 1999, 86–87). In summary, the changes in national-level institutions can influence the bottom-up development of new occupations, which also depends on associations' capacity to foster employer cooperation.

However, studies on employers who create new apprenticeships remain relatively scarce, albeit their potential to reveal detailed insights into the adaptation of collective skill formation to socio-economic change, including

employer attitudes to training and the career perceptions of young people (Deissinger 2019, 306). While historical institutionalists mainly focus on the formal rules and actor coalitions, recent research has started to bridge this literature with sociological institutionalist approaches that distinguish the regulative, normative and cultural-cognitive elements of institutions (Di Maio, Graf, and Wilson 2019; Nicklich and Fortwengel 2017). This also resonates with comparative VET research highlighting the cultural aspects of apprenticeships (e.g. Deissinger 2019). Therefore, the next section presents an analytical framework based on a broad conceptualisation of institutions.

Analytical framework: Institutional work

Broadly defined, 'institutions comprise regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life' (Scott 2014, 71). The regulative dimension is associated with rules and regulations that can be legally enforced, the normative dimension with norms and values, and the cultural-cognitive dimension influences behaviour through shared understandings, or cognitive templates (Scott 2014). Applied to collective skill formation, rules and regulations distribute governance tasks amongst the stakeholders. Dual apprenticeships represent a valorised educational pathway, and it is expected and seen as appropriate that firms will offer apprenticeship positions. In the cultural-cognitive dimension, there is a widely shared understanding of how apprenticeships are organised, and they are open to a broad share of the youth in all sectors of the economy (Nicklich and Fortwengel 2017).

The institutional work approach argues that institutions need to be actively maintained, created or disrupted (Hampel, Lawrence, and Tracey 2017; Lawrence and Suddaby 2006). The actors need to mobilise material and discursive resources to affect institutional change or to maintain institutions. Institutional work research typically zooms into processes at the micro-level; for example, the practices in organisations. However, it conceptualises these as embedded in a broader social context. Hence, institutions can be understood as a multi-level phenomenon, where national-level institutions are connected to subnational levels.

Institutional work addresses the three dimensions of institutions. Influencing regulative institutions involves creating rules; for example, through advocacy, i.e. the mobilisation of political and regulatory support. Further, regulative work may aim at installing, reinforcing or disrupting social mechanisms, which can help ensure compliance, such as rewards and sanctions. Ensuring the adherence to rules may rely on policing to audit and monitor behaviour or to provide a deterrence, such as the threat of coercion (Lawrence and Suddaby 2006, 221–238).

Through normative institutional work, the actors attempt to change or reinforce the moral foundations of a certain rule or practice. This associates certain

behaviours with positive and others with negative images; for example, through valorising and demonising, which contributes to maintaining belief systems (ibid, 232–233).

Cultural-cognitive institutional work aims to influence meaning systems. However, moving away from taken-for-granted practices usually implies costs for the actors; whereby additional efforts are needed, and the outcome may be uncertain (ibid, 237). The means of reducing these costs include training (educating; ibid, 226–228), reducing the perceived risks of innovation, for example, by mimicking existing practices, or providing new templates for action to replace the existing ones (ibid, 237).

Nicklich and Fortwengel (2017) used this approach to provide insights into the process of institutionalising an apprenticeship in Germany, specifically a security sector apprenticeship. To create such an apprenticeship, the stakeholders built on normative elements to valorise the apprenticeship, but neglected the regulative aspect of associating the new occupation with wage gains and career perspectives. Consequently, the incentives for the youth to engage in these apprenticeships were perceived as very low and hence the initiative (partially) failed.

The next section describes the institutional dimensions of the Swiss system to contextualise the case of creating a new apprenticeship in Switzerland.

Empirical context: three Institutional Dimensions in Swiss VET

Applied to Swiss VET, in the regulative dimension, the national VET Act defines stakeholders' responsibilities (SERI 2019). The State Secretariat for Education, Research and Innovation (SERI) is responsible for strategically developing the system. Regional public authorities, i.e. the cantons, monitor training implementation in firms. They also finance part-time VET schools. Firms offer apprenticeship positions, and their associations play the leading role in the process of defining the training content including the school curricula (Bundesamt für Berufsbildung und Technologie BBT 2005b). The unions have a more limited role in the Swiss than in the Austrian or German VET system (Emmenegger, Graf, and Strebel 2020; Emmenegger and Seitzl 2020). Yet, with the 2002 reform, new standards for the occupational development process were introduced (Berner 2013). These standards regulate the steps needed to revise or create training regulations and curricula. While the employer-side associations still take the leading role, the standards prescribe the educational approaches to be used and the in-process consultation of all concerned stakeholders, including the federal and cantonal authorities but also employee representatives, if an employee association exists (BBT 2005b, 8). Further, the VET reform aimed to increase labour market mobility by broadening occupational profiles and reducing the number of small occupations (Strebel, Baumeler, and Engelage forthcoming; Maurer and Pieneck 2013). New financing mechanisms based on per capita

payments also potentially disadvantaged small occupational groups (Wettstein 2020). However, associations were empowered to install compulsory VET funds. In this case, all companies that employ diploma holders of a certain occupation are obliged to contribute to the funds.

In the normative dimension, the state agency responsible for VET actively valorised apprenticeships through promotional campaigns. These campaigns highlighted the educational pathways from VET to higher education that were introduced in the 1990s to keep VET attractive to school leavers (Gonon 2016). Moreover, a large part of the Swiss population, especially in the German-speaking part of the country, prefers the private provision of training by firms over public training workshops (Kuhn, Schweri, and Wolter 2019).

Concerning the cultural-cognitive dimension, the Swiss dual VET system still offers upper-secondary level education to around 60% of school leavers (OECD 2017). At the same time, apprenticeships are widespread in many economic sectors, both in small and large firms (Müller and Schweri 2012), and lead to around 240 federally recognised occupations. However, many of these occupations are rather small. Only 18 occupations offer more than 1000 apprenticeship positions annually, while over half (56%) of them offer less than 100 (BFS (Bundesamt für Statistik) 2018).

Methods and data

To reconstruct the creation of an apprenticeship in a specific country setting, I conducted an embedded single case study (Yin 2014). I selected an information-rich case (Patton 2015) amongst a number of potential cases of new apprenticeships in Switzerland, which represents a country that has maintained its traditional dual VET system in a changing context. Between 2005 and 2016, 11 new apprenticeships were introduced (SERI 2016).² I selected the first occupation that was created by an employer association after the VET reform, cableway mechanics, to study its development over a longer timeframe.

Case study research is particularly appropriate for analysing processes and the experiences of the actors involved in them. Process-oriented methods study the sequences of events and activities that lead to an outcome (Langley 1999). In this case, the institutional work of the employer association that leads to a new occupation. To gain a detailed insight into the process, I used various data sources. I conducted six semi-structured, in-depth interviews with representatives of the employers (2), employees (2), and public authorities (2) that were directly involved in the process (see list in the appendix for details) (Bogner, Littig, and Menz 2009). I contextualised these interviews with documents from the process. These included the minutes of internal meetings and meetings with public authorities (22 meetings, 2004–2007), funding requests, pedagogical documents, letters to members and public authorities, information for members on the website (checklists, templates for advertising apprenticeship positions,

etc.), and survey results (2003, 2005, 2006, 2018). Finally, official publications of the business association (27 extracts from internal news (2003–2010), annual reports (2006–2016), and annual reports of the union (2003, 2005, 2011) were included.

To analyse the data, I used sensitising concepts from the institutional work approach and literature on Swiss VET. Sensitising concepts direct the researchers' attention to theoretically relevant aspects of the qualitative data without limiting the analysis to operationalised indicators (Kelle and Kluge 2010, 29). I identified the involved stakeholders, institutional dimensions, types of institutional work, and supportive or hindering elements from the institutional context in the documents ($n = 58$) and interviews ($n = 6$) and coded them using the content analysis software NVivo. In a second step, I used information from the interviews and documents to create a detailed timeline of the process (Yin 2014). Based on this timeline, I identified the key phases of the process and the main issues that needed to be addressed in each phase, which were: 1) developing the idea, 2) convincing firms, 3) creating training regulations, 4) implementing training in firms, and 5) the outcomes. These phases are presented below and illustrated with exemplary quotes from the interviews and documents to give the involved stakeholders a voice and to illustrate their institutional work.

Findings: the creation work of cableways Switzerland

In Switzerland, apprenticeships are firmly embedded in many economic sectors, but in the cableway sector, the business association Cableways Switzerland (*Seilbahnen Schweiz (SBS)*) only organised further training. In the early 2000s, it created a new apprenticeship for the occupation of 'cableway mechanics'.

Founded in 1900, the cableway association represents the companies that run the cableways, ski lifts, and mountain railways. It has a high organisational density, with 75% of the 500 existing companies in this area being association members (SBS 2006). For security reasons, the companies are obliged to employ adequately qualified staff as technical managers. In 1984, a further training course leading to the title of Certified Cableway Specialist (*Seilbahnfachmann*) was introduced. The technical managers built their own association (*Verein Technischer Kader (VTK)*), which today counts around 700 members. Although, VTK is an employee association, it is perceived as being very close to the employers and its role is clearly distinct from that of the unions (CH3, CH4). Conversely, the transport sector union (*Schweizerischer Eisenbahner-Verband (SEV)*) has thus far not managed to negotiate a national framework agreement on minimum wages with Cableways Switzerland (SBS 2012). These labour market stakeholders were involved in the process of creating the cableway apprenticeship together with federal and cantonal public authorities. The following sections present the five main phases of the process.

1) *Developing the idea*

In the early 2000s, Cableway Switzerland's expert commission on training developed the idea of introducing a new apprenticeship. The commission, which thus far had discussed further training, also included a representative of the technical managers association (employees). Employment in the sector was characterised by a tension between the highly qualified and rather well-paid technical managers and other part-time staff (CH4). The sector traditionally relied on hiring local farmers in the winter season, yet, this type of workforce started to lack as the number of farmers was decreasing and they were not available in the increasingly important summer season (CH2, CH4). Cableway firms also recruited skilled workers from other occupations, such as mechanics or electricians, and qualified them for the position of technical manager through further training. Yet, this strategy was now problematic due to the perceived increase in the complexity of cableway technology and higher security requirements. Not offering initial VET was now seen as a gap: 'In our profession, we always had only lateral entrants and then we concentrated on further education [...] there was a gap that was the apprenticeship' (employer association leader).

Given that the industry did not train branch-specific apprentices, the workforce they were able to recruit lacked certain skills or the combination of skills that the firms needed (CH1, CH2, CH3). Recruiting skilled workers from other occupations and training them up was perceived to be increasingly difficult, as further training implied high costs for the firms and required the willingness of the employees (CH2). Moreover, the initiators of the new apprenticeships started to paint the traditional farmers' work as not fulfilling the security standards.

He is a tinkerer from A to Z. It's not possible if you want to get safely on the mountain, you understand, in agriculture you may put up with it if the combine harvester's wheel falls off. In the cableway industry, you cannot put up with it. (technical manager)

Thus, the stakeholders changed the normative associations, they delegitimised the farmers' work, and associated the new form of training with improving quality and security, which would also contribute to the competitiveness of the sector: 'Our director [...], he always said that education is quality and quality is education and if we push education, we increase the quality for the whole industry' (employer association leader). This argument was diffused amongst firms through the associations' publications (SBS 2005).

Once they had decided to create an apprenticeship, they visited various training centres that were run by other associations (CH2, CH3). Because they expected only a low number of apprentices, the cableway association considered centralised forms of training.

We went to see other things, we went to the master builder centre [...] to see how they do it with the building professions or we also looked at the possibilities of cooperation [...] and we came across the small occupation of the pavement worker that is a part of road construction workers and they advised us against it because they said they have to put in practically everything in the last six months that is actually their specialty. (technical manager)

They considered different forms of organising apprenticeship training and exchanged information with other associational leaders. Finally, they concluded that building their own training centre to train all their apprentices together in cable-car-specific classes would be the best solution (SBS 2004, 16). The other associations assisted by making their own training plans, cost calculations, and other documentation available for the cableway association. The cableway association portrayed these training centres as success models in its newsletters. Thus, to introduce a new form of training, Cableways Switzerland aimed to imitate the available training models, which is an aspect associated with the cognitive dimension of institutional work.

2) Convincing firms

The cableway sector comprises a limited number of firms, which form a well-organised network. Cableways Switzerland aims to promote cooperation amongst firms; for example, by highlighting that for skiing resorts in the Alps, 'the competition are the Maldives' (CH2) not their neighbours. While the association has seen some progress in cooperation levels between its members (CH1, CH2), the traditional competition between close-by skiing resorts remains a hindrance (CH3, CH4).

Yet at the same time, the association of the technical managers played an important role in fostering the cableway network. They organised events for the technical managers, who knew each other and felt 'like a big family' (CH3). This tight network amongst employers and employees provided a platform for the normative work of raising awareness for the necessity of providing training activities.

Cableways Switzerland consulted its member firms once the project was well defined. In a survey (SBS 2003b), companies were asked if they would train apprentices and send them to a central training centre instead of weekly classes at cantonal vocational schools. The companies' feedback was mostly positive: Of around 400 members, 132 companies responded to the survey, with 65 stating that they would participate in the pilot project, and the idea of centralised training was widely accepted (98 yes) (SBS 2003a).

Nevertheless, the companies mentioned obstacles to their participation in training: their small size, lack of infrastructure, and seasonal employment. Some companies favoured continuing to offer further training courses for the diploma holders of other occupations. However, based on the survey results, Cableways

Switzerland anticipated there would be 15 to 20 apprentices per year and the association's board decided to pursue the project.

It was expected that small firms would not be able to offer apprenticeship positions but would recruit the cableway mechanics trained by the larger firms (CH3). Therefore, a training fund was created to share the costs amongst all the firms: 'the small ones should not only benefit but they should also pay their share [...] the vocational training fund has actually been set up out of solidarity [between small and large firms, author's comment]' (technical manager). Yet, rather than introducing a compulsory training fund according to the new VET Act, the association preferred a voluntary fund.

There are two possibilities one legal and we said no legal we don't want and because of this we have done it voluntarily [...] and these [funds] are only used for this training and this was immediately accepted in the General Assembly. (employer association leader)

This means that the association leaders were reluctant to introduce coercive measures enforceable by public authorities and instead, normatively associated the training fund with solidarity amongst firms. In 2004, the general assembly voted in favour of the new apprenticeships and the training fund (SBS 2005, 35).

3) Gaining approval for the training regulations

In a next step, the new apprenticeship needed to be designed and needed to gain approval from the relevant public authorities. Cableways Switzerland brought together vocational teachers from the school that offered further training, technical managers, and firm representatives. They designed a curriculum composed of elements from various occupations and then added cableway-specific content to it (CH2, CH3). Again, the available models facilitated the association's institutional creation work. The resulting occupation took shape as very industry specific with a profile designed to fit the cableway companies' needs as closely as possible; however, this raised the question of the labour market mobility of the future cableway mechanics. However, although they were about to create a 'small occupation' in a context in which the public authorities aimed to broaden occupational profiles and reduce the number of occupations, the public authorities did not hinder the association.

In contrast, the association representatives perceived the public authorities as supportive; for example, the public authorities financed an educational consultant to help design the curriculum according to the new standards introduced by the VET Act (CH1, CH3). Moreover, the self-conception of the initiators was that they – as the employer association – had a defined need and the state agency's task was to support them: 'The group that initiated this also pursued it with a certain tenacity, I think they probably said, this is what we want and now the [state agency] must help' (training manager).

This reflects the legitimacy employer associations enjoy because the national regulations delegate the task of defining training content to them. However, some conditions still needed to be fulfilled. Most importantly, the cableway association had to convince authorities that they had a unique skill need. They also had to show that a sufficiently large number of training firms (around 60 firms according to their survey) and a labour market for the future cableway mechanics existed (CH1, CH5). Moreover, further training in the sector was available, which was important to meet the authorities' aim to have no initial VET occupation without a possibility to continue education and training (CH5, CH6).

Interestingly, the new standardised procedure for occupation development gave the unions more weight in the occupation development than they would have had before the VET reform: 'They said otherwise we don't do apprenticeship if there is no trade union representative' (union representative). However, the union largely approved of the new apprenticeship because it raised the hope that trained workers would be better paid due to having better qualifications (CH4). Moreover, it was thought that the apprenticeship would improve the work safety in cableway firms.

With the apprenticeship you could say "you who did the apprenticeship, make the revisions and so on". They get more pay that was my motivation because the whole story about working time was a big question and afterwards safety in general. (union representative)

However, the unions' influence remained very limited. In particular, the low pay of apprentices in Switzerland and their productive work in the companies in the later phases of the apprenticeship are perceived as something normal, and this has always been the case (CH4). Hence, these taken-for-granted assumptions hindered the union from formulating more extensive demands, even once it sat at the table in negotiations about the training.

The public authorities hoped that this apprenticeship would create new possibilities for the youth in the mountain regions, where they would not find other apprenticeship positions in technical fields (CH5). Hence, in the consultation procedure amongst the cantons and other stakeholders, the feedback was mainly positive: 'We are pleased to expand the range of apprenticeship places on offer in mountain and peripheral regions with these new basic vocational training courses' (BBT 2005a, 1).

Additionally, the cableway association took over the full responsibility for the school-based part of the training, which would take place in their new training centre. Organising and financing the school-based part of training was usually a cantonal task, but by taking it over, the association limited the financial risk for the cantons. Hence, for different reasons, all the stakeholders consented to the introduction of the new apprenticeship. Consequently, the federal authorities enacted the new training regulations in January 2006.

4) *Implementing the apprenticeships*

Against expectations, implementing the training in firms proved to be difficult. The initiators' calculations had foreseen at least 20 apprentices per year. However, initially there were only a few apprentices, which caused financial problems: 'and then afterwards with this reform, everything was only per apprentice, but with eight apprentices what do you do?' (association leader). The association was supported by local politicians who helped to negotiate an increase in the public contribution in the initial years.

Who really helped us very well it was the State Councillor [name] before he was mayor in [the training centre municipality] and he really helped us because somewhere it was on the edge because after this reform we suddenly had a gap of I don't know, I believe over half a million. (association leader)

Moreover, they raised further funds and materials, for example, from suppliers. However, the first years were still marked by financial problems: 'but there have been a few sleepless nights. [. . .]. We have too few apprentices, what to do now?' (training manager). Yet, giving up was not considered an option (CH1, CH3). The initial investment had been high already and the initiators were deeply convinced of their project.

Conflicts between regions were identified as one of the causes for the lack of apprentices. Firms from the south-eastern part of the country, the Grisons, hesitated to start apprenticeships because the training centre was too far away (CH1, CH2, CH3).

I mean it was of course a change for everyone if you have to send the apprentices to [the training centre] practically every second week in the first year of their apprenticeship you have to be used to that. (technical manager)

Yet, once other firms had their first experiences with the new form of training, together with additional lobbying efforts from the association, these firms also started offering apprenticeship positions.

Cableways Switzerland monitored the implementation in firms through regular surveys. It also organised information events for the potential training firms, produced guidelines that spelled out each step needed to start training, and diffused information on the advancement of the apprenticeship project in internal newsletters and via press releases.

The internal newsletters also diffused calls for firms to offer apprenticeships and increased the normative pressure on firms by naming each firm that offered apprenticeships (SBS 2007, 5) and asking firms to invest in the training of skilled workers.

Unfortunately, a total of only 39 companies offer 57 apprenticeships [. . .]. However, this is not enough to ensure the financing of the training centre. It is in the interest of our industry to train qualified specialists. (SBS 2010, 1)

Thus, although the firms had been initially supportive of the idea to introduce new apprenticeships, once they needed to offer apprenticeship positions, they only slowly started to do so.

Additionally, the training manager realised that potential apprentices did not know the occupation well and companies struggled to find young people interested in the new apprenticeship: 'They [the firms] called me "I can't get an apprentice" and five years ago we started to really strengthen the marketing' (training manager). The cableway association started a promotional campaign: it participated in events where apprenticeships were presented to school leavers, contacted career counsellors, and visited schools (CH1, CH3).

Moreover, it was argued that parents, teachers, and apprentices perceived the initially chosen occupational title 'cableway man' (*Seilbahner*) as unattractive. Instead of conferring the high, technical requirements of the apprenticeship, it was associated with unqualified staff. Hence, the federal authorities were asked to change the occupational title to cableway mechanic to highlight the technical aspect of the occupation (CH1, CH5) and change the negative normative associations with the occupational title.

And then afterwards, with the help of [a state agency representative], we really stepped on the gas, and then we got a name that sounds a bit sexier, cableway man, that's so not cool. (training centre manager)

Hence, marketing made the new occupation known amongst potential apprentices and diffused a positive image of a versatile mechanic working 'where other people spend their holidays' (CH1).

The cableway association also created clever regulations. Recently graduated apprentices could easily access branch-specific higher-level vocational training to become certified cableway specialists and these courses included the qualification required to train apprentices. 'We must have about a dozen former apprentices who said "Now, I want an apprentice" and that has a knock-on effect' (training manager).

Since 2011, the number of apprentices has been rising. Finally, in 2016, the aim of training around one hundred apprentices at the training centre was reached.

5) Outcomes: professionalisation and mobility

The cableway association managed to overcome the initial hurdles and now belongs to the large group of small occupations in which less than 100 apprentices per year are trained. Currently, the apprentices only supply a part of the labour force in the sector and they have substantial labour market mobility. The persons responsible for the training argue that it is normal that some of the apprentices will leave after completing their apprenticeship, and some of these may return to cableway companies at a later stage in life (CH1, CH3). The many pathways that are open after apprenticeships are even an argument in favour of

the apprenticeship (CH1). In contrast, from a union perspective, the low wages in the sector also represent a reason for leaving.

The lift builder also needs people in Zermatt and St. Moritz [...] and then he suddenly earns 2000 francs more than when he works for the cableway, then of course this also puts pressure on the wages at the cableway companies; this is actually a good story from a union perspective. (union representative)

A recent survey³ of former apprentices gives further insights into their career paths (SBS 2018). Indeed, 56% of the respondents (55 former apprentices) engaged in further training, predominantly to become certified cableway specialists. Four apprentices passed a vocational baccalaureate to access higher education and four had already entered higher education. At the same time, 16 respondents left the sector on average one year after the apprenticeship. Some of them reported working conditions as a reason to leave; for example, the lack of workplace safety, working schedules, salaries, lacking recognition from employers, too much responsibility, or physical strain.

In sum, although the apprenticeship was tailored to the specific skill needs of the sector, the acquired skills are transferable to other sectors and thus allow labour market mobility. For the cableway companies, retaining apprentices can be challenging as they can find better working conditions outside the sector. Nevertheless, a significant number of apprentices remain in the sector and work as highly trained professionals in cableway companies.

Discussion

Although the institutional context for apprenticeships remains comparatively favourable in Switzerland, the cableway association needed to mobilise substantial institutional work and additional resources to create a new apprenticeship. Facilitating elements included the already widespread knowledge about apprenticeships from other sectors, which supported cultural-cognitive institutional work, such that the cableway association could imitate existing training models (*mimicry*, Lawrence and Suddaby 2006). Additionally, the association's well-established cooperation with its member firms and management-level employees facilitated normative institutional work, such as appealing for solidarity amongst firms that they all should contribute to training through a new VET fund. Such normative work was preferred to coercive measures; for example, making a branch-specific VET fund compulsory.

Yet, although firms expressed their support for the new apprenticeship, the association needed to use various strategies to make them actually participate in the training; for example, *educating* institutional work to build up the knowledge needed to enact the new practices (Lawrence and Suddaby 2006) but also monitoring and applying normative pressure. As a relatively small association with a high membership density, this association may have been particularly well

placed to develop these types of institutional work towards firms (Schmitter and Streeck 1999).

The state agency could have acted as a gatekeeper to prevent the introduction of the apprenticeships, especially because the reform pursued the aim of reducing the number of small occupations (Bundesrat 2000; Maurer and Pieneck 2013). Yet the aim to increase the number of apprenticeship positions, which was a dominant concern at the time (Strahm 2008), prevailed over the wish to broaden occupational profiles. Nevertheless, new financing rules based on per capita payments in the VET policy area put another hurdle in the associations' way, but the association successfully managed to mobilise its political network to gain further public contributions to overcome these financial difficulties. Thus, the threshold for creating new apprenticeships seems relatively low if an employer association can claim a skill need. The cableway association then received organisational and financial support from the state agency for creating the training regulations, which finally contributed to it increasing its organisational capacity by enlarging its field of activities.

Conversely, although the unions were invited to participate in the creation process, their influence remained limited. Low apprenticeship wages and the productive work of apprentices were widely accepted also by the union, which rather focused on improving the employees' qualification levels and workplace safety. This reflects the marginal role of unions in Swiss VET more generally. Hence, the legitimacy of the employers' primordial role in VET and their political networks may be key reasons for the persistence of a multitude of small occupations in Switzerland.

Importantly, not only firms but also potential apprentices needed to be convinced of engaging in the training. While there was no collective agreement on wages for the new occupation, internal career paths to become technical managers with a vocational degree at the tertiary level of education were foreseen for the apprentices. Thus, in contrast to the case of the German security apprenticeship (Nicklich and Fortwengel 2017), the apprenticeship was clearly conceptualised as the first step to a career in the sector. Additionally, in Switzerland, apprentices have the possibility to complete a vocational baccalaureate in parallel to or after the apprenticeship, which allows them to access higher education. This availability of a hybrid qualification (Deissinger 2019; Gonon and Maurer 2012) also made the cableway apprenticeship more attractive for potential apprentices.

Finally, the apprenticeship was tailored to cableway companies, yet the apprentices' skills proved to be transferable to firms outside the sector, allowing them to leave in search for better working conditions. However, even in this case, the cableway companies would already have profited from the apprentices' productive work they performed during the apprenticeship (CH3, CH4), while a significant number of apprentices remain in the sector too.

Conclusion

Dual apprenticeship systems need to be adapted to technological and socio-economic change. Adaptation takes place not only at the national but also at the occupational level. Yet, due to the consensus-based corporatist procedures, these processes are generally slow. Moreover, in a changing socio-economic environment, offering transferable training seems increasingly difficult for firms. Therefore, employer associations' capacity to formulate skills needs, foster the decentralised cooperation of employers, and work with the state is essential to maintaining these systems, which have been proven to be particularly successful in integrating youth into the labour market. This case study provided a detailed insight into the process of creating a new apprenticeship in Switzerland and thereby complements research on national-level institutional change in collective skill formation systems.

To create a new apprenticeship for their sector-specific skill needs, employers need to develop effortful institutional work, but this work can be facilitated by the institutional context. In the Swiss system, employer-side intermediary associations are the dominant stakeholders for defining training content (Emmenegger and Seitzl 2020). In contrast, the unions have a more limited role than is the case for the German or Austrian unions (Trampusch 2010; Emmenegger, Graf, and Strebelt 2020). These differences also play out at the level of single apprenticeships and make the Swiss system particularly employer friendly. Yet, this does not imply a low commitment of employers to training. As the case study showed, employers and their associations developed a positive attitude towards training apprentices for their sector, although this implied high costs for the association in the initial years. The good reputation, which the Swiss share with German apprenticeships (Deissinger 2019), was key for this commitment. Moreover, in a context of academisation, Switzerland introduced the hybrid qualification of the vocational baccalaureate in the 1990s (Gonon and Maurer 2012). This pathway helps promoting apprenticeships amongst school leavers, who can realise their educational aspirations through apprenticeships without first completing a baccalaureate school in the general education system, which contrasts with the German system (Deissinger 2019).

Regarding employer associations' organisational capacity, while liberalisation may enable internationally mobile firms to circumvent national regulations, firms bound to the domestic market remain exposed to such regulations and therefore encounter more incentives to create associations (Schmitter and Streeck 1999). Such associations may build up the organisational capacity that can also help to foster employer cooperation in VET.

The case study showed that widespread knowledge about apprenticeships and their good reputation were essential for encouraging firms' training provision and promoting apprenticeships amongst school leavers. However, although associational leaders saw the creation of the new apprenticeship as a success, to cover

their changing skill needs, they needed to invest in institutional creation work for over ten years and even today the training capacity of the whole sector remains relatively low. Thus, the process of creating new apprenticeships remains relatively slow. Moreover, only if employers in larger sectors also create new apprenticeships could this compensate for the losses of apprenticeship positions in the crafts and industrial sectors, which threaten collective skill formation systems.

My findings suggest that in countries or sectors in which apprenticeships are not valorised and widespread, policymakers willing to promote firm-based training could focus on enabling employer associations to develop strong networks with firms and employees, providing them with sufficient resources, and templates for action. However, given that associations tend to design sector-specific curricula, state actors need to ensure that the apprenticeships are linked to the educational system and that skills can be transferred outside the sector. These results, based on a single embedded case study, certainly have limits. Further research could contrast these findings with occupational creation in other countries or larger sectors. Especially the case of sectors in which employers are not yet organised in associations promises to provide further insights into fostering employer cooperation for training.

Notes

1. Austria, Denmark and the Netherlands also have collective skill formation systems (Busemeyer and Trampusch 2012). To limit complexity, I focus on the Swiss case and only use the best-known German case as a contrast to discuss certain aspects of the Swiss system.
2. These are: health and social care workers, stage dancers, cableway mechanics, drainage technicians, event management employees, call centre agents, public transport clerks, hearing aid acousticians, health promotion employees, and catering service employees.
3. This online survey was conducted amongst former apprentices in 2018 and is not statistically representative.

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Appendix: List of interviews

Abbreviation	Date	Place	Duration (h:min)
CH1 (employers)	28.06.2017	Zollikofen	01:10
CH2 (employers)	28.11.2017	Zollikofen	00:56
CH3 (employees)	12.02.2018	Luzern	01:18
CH4 (employees)	16.07.2019	Zollikofen	00:56
CH5 (public authorities)	30.07.2019	Phone interview	00:30
CH6 (public authorities)	06.08.2019	Bern	00:58