

Cooperative VET in Training Networks: Analysing the Free-Rider Problem in a Sociology-of-Conventions Perspective

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Abstract: In training networks, particularly small and medium-sized enterprises pool their resources to train apprentices within the framework of the dual VET system, while an intermediary organisation is tasked with managing operations. Over the course of their apprenticeship, the apprentices switch from one training company to another on a (half-) yearly basis. Drawing on a case study of four training networks in Switzerland and the theoretical framework of the sociology of conventions, this paper aims to understand the reasons for the slow dissemination and reluctant adoption of this promising form of organising VET in Switzerland. The results of the study show that the system of moving from one company to another creates a variety of free-rider constellations in the distribution of the collectively generated corporative benefits. This explains why companies are reluctant to participate in this model. For the network to be sustainable, the intermediary organisation has to address discontent arising from free-rider problems while taking into account that the solutions found are always tentative and will often result in new free-rider problems.

Keywords: Vocational Education and Training, Inter-firm Cooperation, Training Networks, Cooperative VET, Initial VET, Dual VET, Case Studies, Sociology of Conventions, Switzerland

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1 Introduction

“It’s good that there is a network [...] because then one can also take advantage of synergies, but in our case it’s mainly the small ones [companies] that benefit.” (Person responsible for in-company training, Public Transport Network)

Over the past two decades, the Swiss VET system has seen the establishment of so-called training networks (*Ausbildungsverbände*). This model of vocational education and training means that companies, particularly small and medium-sized enterprises, form a network and pool their in-company training resources for the joint training of apprentices. Training networks have several objectives: they broaden the qualifications of apprentices (Leemann and Birr 2015), create new training places, increase training efficiency for the participating companies (Walther and Renold 2005) and enable more inclusive recruitment and mentoring practices than companies can provide on an individual basis (Imdorf and Leemann 2012).

This is why this model of vocational education and training has great potential in terms of the qualification and integration tasks associated with dual VET. It can thus play a major role in adapting the VET system to the new demands arising from technological, economic and social change.

In several other countries, national vocational education policy has promoted inter-firm cooperation and there are various other forms of cooperative training based on different organisational and funding models in these countries. The Swiss model involves some initial funding and information by the federal government, while the operational management of the largely self-sustaining network is in the hands of an intermediary organisation, the so-called lead agency. This agency recruits both the training companies and the apprentices and is responsible for the training programme as such. The apprentices are employed by the lead agency and switch companies several times over the course of their training (rotation principle).

However, despite being a very promising form of organising in-company training – be it for the companies, the apprentices or the VET system as a whole – the number of training networks in Switzerland is growing only slowly. Unfortunately, there is no statistical data available on the total number of training networks or the overall number of apprenticeship places that they provide. On the basis of an evaluation by the Swiss Federal Agency for Vocational Training and Technology (BBT 2008) and our own research on the Internet, we estimate that over the last decade there has been only a slight increase from roughly 1% of all training places within the dual VET system to around 2–3%.

The aim of this article is to identify reasons for the low degree of institutionalisation of this training model in Switzerland. How can it be that this organisational arrangement faces difficulties in gaining acceptance in a country with a long tradition of dual VET? In a first attempt to zero in on this question, we can state that the Swiss model is a very ambitious and complex form of organisation. The companies that participate in this division of labour in providing cooperative VET are in different situations and have different motives. While they can pass on part of their training responsibilities to the lead agency, this involves surrendering decision-making powers as well. From the apprentices’ perspective, to be trained in a network is interesting and offers broad knowledge of the occupational field. From the participating companies’ perspective, however, the

pooling of resources can create constellations that give rise to free-rider problems. This could possibly explain the low prevalence of training networks in Switzerland.

We will, therefore, take a closer look at such potentially problematic constellations. Starting from the assumption that free-rider problems do exist in these networks, we will address two questions: (1) Which particular constellations draw criticism because of single actors disproportionately profiting from the training network and its corporative benefits, that is, by contributing fewer resources than benefits reaped (free-rider problem)? (2) How do the lead agency and the companies within the network try to address these free-rider problems? What are their solution strategies?

To examine these questions from a theoretical angle, we will draw on the sociology of conventions (Boltanski and Thévenot 1999, 2006). This theoretical framework provides the means to get a grasp on (a) the mode of coordinating action among the various network actors, (b) the areas of conflict arising from the joint training of apprentices and (c) the ways of dealing with these conflicts. The data for our study come from four case studies of four training networks in Switzerland that were selected on the basis of typological criteria (Yin 2009). For each network, we conducted expert interviews with the representatives of the lead agency and with company representatives responsible for in-house VET.

The article is structured as follows: Section 2 starts by providing a summary of the current national and international state of research on the significance of training networks in VET (2.1) and then presents the Swiss model with particular attention paid to the concept of resource pooling and potential free-rider constellations (2.2). Section 3 introduces the reader to the theoretical framework of the sociology of conventions used to identify free-rider constellations. Section 4 presents the four training networks studied and outlines our methodological approach (4.1), gives the results of our analysis with special emphasis on imbalances in the distribution of corporative benefits and on strategies to resolve this problem during the provision of training (4.2) and after its completion (4.3). Section 5 summarises our findings and ends with a brief conclusion.

2 Training networks as an innovative model in vocational education and training: Opportunities and problems

In this section, we begin by presenting models of inter-firm cooperation in vocational training that exist in other national VET systems, ask how common these models are and review research findings on their opportunities and risks (2.1). We will then introduce the Swiss model and explain how resource pooling within a network can create free-rider problems in the distribution of the jointly generated collective goods (2.2).

2.1 The significance of inter-firm cooperation in vocational training in other national VET systems

In several countries, national vocational education policy has promoted inter-firm cooperation as an alternative way of organising the provision of vocational training. Of particular interest for our study are so-called group training companies in Australia, group training associations in the UK, local training agencies in Norway and training networks (*Ausbildungsverbände*) in Germany and Austria. The significance of these organisational arrangements varies by country. In the early 2000s, around 14% of all apprentices and trainees in Australia and around 10 per

cent in the UK received vocational training in cooperative training schemes (Cooney and Gospel 2008), compared to 70% of the apprentices in Norway (Bowman 2005; Michelsen and Høst 2004). Group training was introduced decades ago in the UK (late 1940s) and in Australia (1970s), whereas the expansion of training agencies and networks has been more recent in Norway, (Eastern) Germany and Austria (1990s).

Cooperative training structures come in different types, shapes and sizes (BMBF 2011). While some studies of such training schemes in Germany, Austria and Australia mention rotational systems (Cooney 2003; Lachmayr and Dornmayr 2008; Schlottau et al. 2003), other studies do not address the issue of whether apprentices switch companies.

The models range from community-based schemes geared to meeting local and regional needs to employer- and industry-based organisations providing industry-specific training designed to address skill shortages. Some of these arrangements are the result of bottom-up initiatives by cooperating firms with little external coordination; others were initiated top-down from the outside, i.e., with government support or the help of large firms (Cooney 2003; Cooney and Gospel 2008; Gospel and Foreman 2006). In the case of Norway, Michelsen and Høst (2004) distinguish three organisational models: the classical “artisan” model (one-trade model), the branch model (broader sector or trades), which is the most frequent form, and the multi-trade model (especially in rural areas), while Gospel and Foreman (2006) distinguish between single- and multi-occupational models. The Norwegian training agencies are run either by firms, independent associations, subsections of employer associations or by private for-profit enterprises.

International research has outlined several benefits of inter-firm cooperation in training: the costs of employment and training are collectivised and shared and the administrative costs of training are reduced especially for small and medium-sized enterprises (economies of scale). Apart from the costs, the risks of employing apprentices are also shared and lowered, in particular if the apprentices are employed directly with the training agency and not by the individual training firms. This factor reduces the employers’ fear of being at a competitive disadvantage and a potential victim of poaching, which makes them more willing to engage in training. Through the collective provision of training and employment of apprentices, cooperative training schemes provide collective goods not only to the member firms. The mobilisation of training firms secures apprentices and therefore creates a broader public good and social capital for communities, industries and the national economy (Bowman 2005; Cooney 2003; Gospel and Foreman 2006).

However, a high level of government funding seems to be an essential prerequisite for this model to materialise, at least in countries such as Australia, the UK and Norway where group training heavily depends on government subsidies. In those three countries, but also in Germany, cooperation in the provision of training has proven to be reliable and has boosted the quality of VET, especially in small-firm economies and at local levels (Unwin et al. 2012; Lutz and Grünert 1999).

Culpepper’s (2003) in-depth analysis of the development of training networks in Eastern Germany in the 1990s has shown that the successful implementation of cooperative training depends on the capacity of intermediary actors (e.g., lead agencies, training agencies) to respond to the fears and concerns of local companies that are reluctant to offer training. A decisive factor is gaining the confidence of the cooperating companies that they will benefit from investing in

training. The authors highlight two main factors that are crucial for individual companies to cooperate in the collective provision of training: continuous government aid and relief of financial burden on training companies especially during the apprentices' first year of training when training costs are usually the highest and the productive return from the apprentices the lowest. Gospel and Foreman (2006) emphasise that inter-firm cooperation becomes especially fragile when the participating companies lack broader government support resulting in uncertainties about funding.

With respect to our own research, this raises the question as to which features of the model favoured in Switzerland contribute to the low prevalence of training networks there.

2.2 Cooperative VET in training networks in Switzerland

Conceptually, a *training network* is an *organisational network* (Leemann and Imdorf 2015). Several firms pool their in-company training resources in order to generate collective benefits (the *corporative benefits*) that they could not generate as single players or that is qualitatively better than the benefit achievable through their individual efforts alone. The collectively generated benefit is then distributed among or made accessible to all participating actors (Preisendörfer 2011).

The management and control of a training network is in the hands of an intermediary organisation, the so-called lead agency. This entity can have different legal forms, such as an association, foundation or limited company (cf. BBT 2008). The lead agency recruits suitable companies and provides them with technical and administrative support. The participating companies pay for these services, which constitutes the lead agency's main source of funding. Other sources of funding are e.g. public subsidies or financial contributions by the the founding organisation (e.g. trade association).

The lead agency also recruits the apprentices, who during the course of their training switch training companies on a yearly or half-yearly basis (rotation principle). They are employed by the lead agency and have two supervisors: a training manager at the lead agency and a vocational trainer at each company. The participating companies must transfer certain rights, decision-making powers, and areas of exercising influence to the lead agency and the network partner companies, such as, for instance, the right to choose their own apprentices or the possibility to keep the apprentices for the whole duration of their training.

According to Preisendörfer (2011, 26ff.), corporative actors (like organisations) are faced with three *dimensions of questions and problems* that need to be defined, negotiated and coordinated:

- (I) *Initiation and participation*: What are the shared objectives and motives of a network (for Switzerland, cf. Leemann et al. 2016)? Which resources have to be contributed?
- (II) *Decisions*: How to organise training and its supervision? How to organise member participation in decision making?
- (III) *Distribution*: How to distribute the corporative benefits?

This article will analyse the third dimension – the distribution of the corporative benefits – to find answers to problems that might form an obstacle to the organisation of VET in training networks. One problem arising from the pooling of resources is that of *free riding*, i.e., the possibility that an actor benefits from the

network without giving an equivalent in return, which may give rise to imbalances in the companies' commitments. There is, on the one hand, the potential problem of *internal free riding* in the event that one of the participating companies contributes fewer resources than the others but claims the same (or even bigger) share of the corporative benefits. On the other hand, it is also conceivable that there may be *external free riding* in the sense that companies from outside the network take advantage of these corporative benefits without having contributed to the cooperative training scheme.

3 The problem of free riding in a sociology-of-conventions perspective

The theoretical framework of this study is based on the sociology of conventions (also known as the economics of conventions) (Boltanski and Thévenot 1999, 2006; Diaz-Bone 2011, 2015). This pragmatic and transdisciplinary institutional theory approach is well-established among French economic sociologists and increasingly being adopted also by their German-speaking counterparts. Our attempt is to make productive use of this concept in the organisational and institutional analysis of VET (Imdorf and Leemann 2012; Leemann and Imdorf 2015).

The starting point is the assumption that competing and mutually conflicting *logics of action* and *orders of justice* (or *conventions*) co-exist within organisations (Jagd 2011). The respective organisational structure is a compromising device for coordinating the different logics of action. It is designed to bridge the contradictions between the different conventions and to reduce tensions (Knoll 2015, 19; Thévenot 2011). However, this process of designing the organisational structure is fluid and never completed since the solutions achieved through compromises will always create new problems, which the responsible organisational actors again need to address (Leemann and Imdorf 2015).

With regard to the actors in a training network, this means that the companies and the lead agency draw on a limited number of historically evolved conventions in their efforts to co-ordinate their training activities, assess the social situations occurring in cooperative training settings (e.g., the distribution of corporative benefits) and make sound training-related decisions despite inherent uncertainties. Table 1 lists the conventions that are relevant to our object of research. Each of these conventions is characterised by its orientation towards a certain common good, by the significant worth and quality of objects, subjects and processes with respect to this common good and by a particular logic of action and order of justice meant to contribute to the common good. The order of justice is determined on the basis of the principle of equivalence and the model for testing worth (reality test): objects, subjects, and processes must be related to some common measure to clarify what they have in common (Boltanski and Thévenot 1999, 361) and arrive at a socially shared and commonly comprehensible assessment. They must hold up to the measure applied, i.e., they are assessed against the measure and ranked according to their worth.

As mentioned above, free-rider problems emerge from mismatches between the resources contributed and corporative benefits reaped. The quality of contributed resources and distributed benefits as well as the advantages or disadvantages associated with this arrangement are always assessed on the basis of conventions.

Table 1: Conventions

Conventions	Logics of action, orders of justice	Significant worth / quality
Industrial convention	Efficiency, expertise (long term)	High productivity, know-how, technical skills
Market convention	Exchange, competition, price (short term)	Low costs – high return, customer orientation
Civic convention	Equality, solidarity, participation, inclusion	Collective interest, democratic principles
Domestic convention	Community, hierarchy, tradition, socialisation	Respect, trust, loyalty, social fit
Convention of fame	Fame, renown	Reputation, visibility, popularity, image
Convention of inspiration	Inspiration	Intrinsic motivation, passion, vocation, creativity

Source: Boltanski and Thévenot (1999, 2006), Diaz-Bone (2009, 2015).

Highly valued *resources* are, for instance, a company's competencies and expertise (industrial convention), money (market convention), inclusive recruitment practices (civic convention), shaping the individual (domestic convention), brand (convention of fame) and attractive training opportunities (convention of inspiration).

The nature of the *corporative benefits* varies depending on the convention. In regard to the convention of fame, it is, for instance, the reputation that a company gains from taking part in the network and in dual VET. However, in the following, we will focus on the apprentices (including the graduates who have already completed their training) as the corporative benefit that is assessed in terms of its quality. With regard to the industrial convention, this involves, for instance, the quantity and quality of expertise of skilled junior staff; in terms of the convention of inspiration, it refers to having trainees who are highly motivated and identify with their chosen occupation or trade.

4 Analysing free-rider problems in training networks

After an introduction to the empirical design of this study (4.1), we will present two different kinds of free-rider problems and the solution strategies that we reconstructed from the data collected in the four networks examined and analyse both the problems and solutions from a sociology-of-conventions perspective. The first problem that we will address is the imbalances in the distribution of apprentices as they move from one company to another (4.2). The second problem has to do with the issue of post-training employment (4.3).

4.1 Research design

The data used for this article are derived from a larger research project¹, a three-year case study of four training networks in Switzerland that were selected on the basis of typological criteria (Yin 2009). Apart from network size, a factor that will not be discussed in detail here, other important selection criteria were the *founding initiative* – who initiated the network and how? Table 2 shows that two of the training networks under examination, the Freight Forwarding Network and the Public Transport Network, were the result of bottom-up initiatives taken by economic actors from the respective industries, while the other two cases studied, the Region Network and the Integration Network, were initiated top-down by state actors.

Our hypothesis is that, depending on the founding initiative, the action of the network actors is guided by different convention-specific rationalities. In the case of networks initiated by actors from a particular industry or by the participating companies themselves, we expect the need for highly qualified junior staff to be a driving motive behind the pooling of training resources. Action geared to the corporative benefit of having a “qualified workforce” reflects the logic of the industrial convention, which is oriented towards the long term and the securing of expertise. If it was a government agency that initiated the formation of a training network with the objective of generating more training opportunities for young people, we can rather expect civic motives, such as participation or inclusion, to be at work.

Table 2: The four case studies

	Freight Forwarding Network	Public Transport Network
Founding initiative	Trade association (forwarding industry), association of member companies	Two public transport companies
Size	~ 35 member companies ~ 40 apprentices ~ 4 staff members	~ 60 member companies ~ 1,800 apprentices (80% of the training places provided by a state-owned company) ~ 280 staff members
Training offered in/as	1 occupation management assistant in freight forwarding logistics	~ 25 occupations, most importantly: management assistant in public transport
Network objective(s)	Qualified junior staff for the industry	Qualified junior staff for the companies and the industry

¹ The data analysed here are from the research project “Training networks in practice – A multiple case study on the functioning and the demands of a new organisational form of apprenticeship from the perspective of various actors”, financed by the Swiss National Science Foundation (SNF-13DPD3_134855) 6/2011–11/2014. Project managers: Regula Julia Leemann and Christian Imdorf. Project staff: Lorraine Birr, Sandra Da Rin, Rebekka Sagelsdorff and Nicolette Seiterle.

	Region Network	Integration Network
Founding initiative	Cantonal Office for Vocational Education and Orientation, Association for the Promotion of the Regional Economy	Municipal government of a larger city, Centre for Vocational Education and Training
Size	~ 15 member companies ~ 55 apprentices ~ 4 staff members	~ 150 member companies ~ 220 apprentices ~ 20 staff members
Training offered in/as	~ 7 occupations (management assistant, technical occupations)	~ 14 occupations across 4 sectors (e.g., health-care assistant, management assistant, facility maintenance specialist)
Network objective(s)	Training opportunities in the region (peripheral region), labour market integration of young people	Training opportunities for young people with difficulties in finding employment

We selected nine companies from each network according to the following criteria: company size, ownership structure (public or private enterprise), and duration of participation in the network. The aim was to make the sample as heterogeneous as possible. We conducted semi-structured expert interviews with the employees responsible for in-company training in those companies. The interviews lasted between one and two hours each and focused on the companies' motives, expectations and experiences in regard to cooperative VET. In each network four more expert interviews were conducted with representatives of the respective lead agencies to take a closer look at the overall dynamics of the networks and the strategies employed to overcome free-rider problems. All interviews took place on location in 2011 and 2012 and were recorded and transcribed.

Our analysis focused on the interview passages in which the interviewees expressed discontent and criticism regarding the distribution of corporative benefits. We sought to identify conflicts, areas of tension and the actors' own explanations and justifications thereof with the aim of reconstructing the conventions that the actors draw on.

In a second step, the conflict resolution strategies developed by the companies and lead agencies were identified and also interpreted against the backdrop of our theoretical framework.

4.2 Distribution of apprentices over the course of training (rotation principle)

Once they are recruited by the lead agency and assigned to the training companies according to the rotational system, the apprentices can be considered a preliminary corporative benefit. In several conventions, as will be shown below, the quality of an apprentice is rated on the basis of their stage of training (i.e., year of the apprenticeship) and the social attribute of "nationality".

Firstly, according to the rotation principle and in view of the training requirements, the lead agency has to make sure that the apprentices will have become familiar with all aspects relevant to their future occupation by the end of

their training. This means to consider the participating companies' sector- and occupation-specific areas of involvement in the light of the training requirements and to develop an appropriate training schedule. Secondly, the companies, on their part, also make requests and raise demands as to the quality of the apprentices assigned to them. Given the fact that all of the companies involved in a training network cover different – and equally important – aspects of the training profile, the lead agency cannot risk losing individual cooperation partners and is thus under pressure to meet their demands.

In all four networks under study, our interviewees from the lead agency and the training companies mentioned situations of conflict about the apprentices' placements that emerged over the course of their training.

4.2.1 Distribution according to stage of apprenticeship

Some companies make participation in the network conditional upon receiving only apprentices that are at an advanced stage of their training. As one interviewee put it:

“At the beginning, I had it all, literally everyone who was sent according to the training schedule. But because I really need my apprentice, well, for me they are really one of my workers [...] we finally decided that I really only get second- or third-year [apprentices]. Because I really do rely on their assistance.” (Person responsible for in-company training, Region Network)

Advanced-level apprentices are more attractive to the training companies as they no longer require basic training, are already to some extent familiar with the trade, spend less time at vocational school² and are therefore more productive at the workplace. In addition, advanced-level apprentices also require less time and effort expended in supervision and training.

Companies that manage to receive only these advanced apprentices will derive disproportionate benefits both in terms of the logic of the industrial convention (workforce efficiency and investment in supervision) and the order of justice associated with the market convention (cost-benefit ratio). However, the cooperative training model only works as long as other companies are willing to accept a higher number of first-year apprentices and abstain from demanding their share of more experienced trainees, which creates a free-rider situation.

The person responsible for in-company training in a department of the state-owned company in the Public Transport Network explicitly states: “And, of course, there also is a relatively high number of free riders.” Referring to another department in the large company, he criticises that said department offered many ‘specialised’ places for final-year apprentices without being able to offer the post-training employment required by the model of specialised training paths.³ His own

² In the Swiss dual VET system, the time spent at vocational school (Berufsfachschule) varies according to the year of training. Early in the apprenticeship, when trainees are not yet very productive on the job, the amount of time spent at vocational school is greater and becomes less as training progresses.

³ Final-year training places are grouped into roughly a dozen of so-called “specialised training paths” (*Schwerpunktausbildung*). The companies can tailor this training to their specific needs and, upon completion of training, retain their former apprentices without any long familiarisation period (see also, 4.3.3).

department, on the other hand, is in high demand of qualified staff and able to offer post-training employment. However, since their particular field of work is less attractive, they face difficulties in recruiting qualified junior staff as the advanced apprentices prefer applying for a final year with the other department.

Free-rider situations are also observed by the individual responsible for in-company training in the Freight Forwarding Network, as quoted below. This interviewee is aware of the fact that cooperative training only works if those free-riding companies also take in apprentices and therefore is ready to accept this disadvantage for his own company (“plague”) so as not to put the network model at risk (“cholera”).

“But that’s difficult in our business. Because there are certain training companies that say, either I get a third-year apprentice or I won’t train anyone at all. [...] And for [person in charge of VET at the lead agency] or for us as a network, that’s choosing between plague and cholera.”
(Person responsible for in-company training, Freight Forwarding Network)

This person responsible for in-company training displays solidarity with the lead agency and is willing to put the collective interest – maintaining the network and high-quality cooperative training opportunities for the industry – over the interests of individual companies, which are rooted in the industrial and market conventions. His attitude reflects the order of justice of the civic convention.

However, as the interview continued, it became apparent that the fact that certain other companies take in only advanced-level apprentices and thus disproportionately profit from the network model evokes some degree of discontent with the lead agency’s mode of handling the situation. The interviewee suggest an even distribution of apprentices, with each company being assigned an equal share of apprentices at all levels of training, adding that it was the lead agency’s responsibility to enforce this. “That there perhaps be a fairer distribution. Maybe that we simply manage to introduce a structure that can’t really be criticised.” According to civic rationality, justice is served when all companies participating in the network can equally benefit from the apprentices’ continuously growing skills. Equivalence is assessed against the measure of “equal treatment”, and the reality test is the planning of apprentice assignments to the network companies, which could no longer be subject to criticism if equal treatment were applied.

However, as we may add from a more distant perspective, this would require that all companies participating in the training network base action on civic rationality. In this case, criticism would be unnecessary and the distribution of apprentices among the companies would not evoke (manifest or latent) conflicts.

4.2.2 Distribution along the lines of ‘Swiss’ or ‘foreigner’

In our interviews with persons employees for in-company training, it also became apparent that some companies more or less explicitly ask for a ‘Swiss’ apprentice and hold a rather critical view of those considered ‘foreigners’, especially of south eastern European origin. This preference for a “Swiss boy” is illustrated by the interviewee responsible for in-company training of a company in the Region Network, which offers training in technical trades. Dissatisfied with the assignment of apprentices to his company, he states:

*“And we don’t necessarily have those we’d like best. A Swiss boy that we could first test a while by way of an extended trial apprenticeship.”
(Person responsible for in-company training, Region Network)*

Our interviews with the lead agency representatives confirm this result. Some companies are reluctant to train young people who are labelled “foreign[ers]”. The managing director of the lead agency of the Integration Network point out that he knows perfectly well to which company he could not send apprentices “with black skin” or “a headscarf” He adds that for the sake of the network’s mission to provide training opportunities also for socially disadvantaged youths, other companies are willing to accept apprentices who are difficult to place.

“To these companies, it doesn’t matter much. They simply want a young person who functions. Which of course is a good thing because we can sell them also Muslims and blacks and everything.” (Lead agency representative, Integration Network)

Guided by civic rationality, these companies are also ready to take in additional apprentices out of turn if necessary, for instance, if apprentices have to be transferred due to conflicts at the scheduled company that threaten the continuation of their apprenticeship.

In the cases just described, a free-rider problem results from the fact that pursuing a ‘Swiss’ only strategy promises higher individual benefits along the lines of an industrial, market or domestic logic, at least if training youths labelled “foreign” is expected to create problems in terms of efficiency, costs versus benefits or fitting into the company setting. Efficiency problems occur, for instance, when apprentices with insufficient German language skills require a higher level of attention and support in performing their school- or work-related tasks. Moreover, as several company representatives responsible for in-house training pointed out, there is the potential risk that these apprentices fail their final exams. In the industrial convention’s long-term rationale of creating a qualified workforce, this amounts to a bad investment.

One of the interviewees responsible for in-company training in the Freight Forwarding Network described how the contact with customers can be affected by a lack of language proficiency, which indicates that the quality of the apprentices is assessed on the basis of criteria belonging to the market convention.

“When they [...] have to communicate about insured events, damages and the like, you really need letters that are properly written. In customer care [...], if you write letters with fifteen mistakes in just three sentences, then this doesn’t go down well [with our customers].” (Person responsible for in-company training, Freight Forwarding Network)

Employing youths who are labelled as “foreign” can also cause opposition and tensions among the rest of the workforce, which is explained by not fitting in along the lines of the company’s domestic convention (Imdorf and Leemann 2012; Lendaro and Imdorf 2012). At the same time, the networks have to recruit their apprentices from a socially heterogeneous group of young people and train apprentices with different social attributes and educational backgrounds for the simple fact that this heterogeneity represents demographic reality. Here again, the network is only sustainable if some of the participating companies are willing to

accept potential risks and base action on a different order of justice. And once again, we find that some persons responsible for in-company training are guided by civic motives in offering training opportunities specifically to those disadvantaged youths. It can even be that a company explicitly asks for these apprentices – which offers an emotional benefit instead of creating a free-rider problem.

“Well, let me put it this way [...] somehow my heart beats for those kids whose lives aren’t that easy [...] who, for whatever reason, didn’t take such a straight path, during their schooling or because of their background in general. They are particularly close to my heart and that’s why I keep saying, ‘I have room for many.’” (Person responsible for in-company training, Integration Network)

In Switzerland, there is some degree of social pressure on companies and businesses to engage in dual VET and offer training opportunities for the young generation. Their customers, among others, are attentive to their training activities, and they must account for their efforts in this area, for instance, by placing a sticker informing incoming customers that the business provides such training. Participating in a training network offers companies the opportunity to engage in dual VET but leaves the training of ‘difficult’ apprentices to the other network participants. In this way, they gain a positive image as training companies taking part in a progressive model of VET without having to equally invest in achieving significant worth in terms of the convention of fame. This would constitute yet another potential free-rider problem, for which we did not find any immediate evidence though.

4.2.3 Strategies to solve distribution problems

One strategy to prevent or mitigate free-rider problems related to the distribution of apprentices according to their year of training consists in grading the companies’ financial contributions to the network depending on the stage of training of the apprentices received. The more advanced the apprentice, the higher the costs. This has two elements: the fees for the support services provided by the lead agency are structured such that the rates are highest during the final year of training, and, just as in the traditional VET system, advanced-level apprentices are also paid more than novices. This cost structure reduces the financial burden on companies that take in first-year apprentices and raises the costs for those that opt for their advanced-level counterparts. The Freight Forwarding Network is not the only training network in Switzerland that has adopted such a strategy, as confirmed by the nation-wide evaluation survey (BBT 2008, p. 19). In a theoretical perspective, this approach to solving the problem of free riding is guided by a market-oriented order of justice. The ‘purchase value’ of a third-year apprentice is increased and that of a first-year apprentice is reduced.

The Region Network has now begun to more strongly involve the companies in the process of selecting apprentices – a strategy aimed at creating a greater readiness to also accept those bearing the label of ‘foreigner’. In a joint effort, the lead agency and the companies have revised the selection procedure, including the introduction of an additional step in the form of a trial apprenticeship. During this in-company trial period, the applicants are subjected to a series of reality tests, and the lead agency bases the employment decision on the results of this on-the-job assessment. This problem-solving strategy represents a compromise between the

civic and the market logic. The former practice criticised by some companies according to which the lead agency had simply assigned the apprentices to their company placements has now been replaced by a scheme in which the companies have a say (civic convention) in the 'purchase' of apprentices (market convention). The companies participate in determining and testing the quality of potential apprentices and thus gain a more realistic picture of the quality of the applicants in the recruitment pool.

In accepting applicants who are considered to be 'foreign', the Integration Network takes into account the number of companies in the network that are willing to train these youths. Being offered an apprenticeship is already informed by considerations about who can be sent to which company. The most likely options are small and medium-sized businesses that have a social commitment, state-owned companies, which have a certain obligation to contribute to social integration, and large international players whose corporate culture is geared towards diversity. As part of this strategy, the lead agency seeks to bring more of these companies on board. For instance, a recently launched project has explicitly approached companies that have senior staff of immigrant background and do not yet offer VET to encourage them to become involved in providing such training. The idea is that, due to their own migration experience, these senior staff members are more inclined to accept apprentices who are labelled as 'foreigners'.

All the above examples of problem-solving strategies are based on the civic convention, sometimes by making a compromise with the market convention. The lead agency counts on the social commitment of the network companies but also has to consider market realities; i.e., it can only hire as many 'foreign' apprentices as the market is ready to absorb on the demand side.

4.3 Post-training recruitment and employment

Free-rider problems also emerge in the event that the companies participating in the network do not all have the same opportunity to hire the newly graduated apprentices or due to staff poaching by competitors from outside the network. Conflicts arising from the issue of post-training recruitment were discovered particularly in the Public Transport Network and the Freight Forwarding Network, which are the two networks initiated by economic actors from the industry in an effort to train their own junior staff. This confirms our initial hypothesis that the founding initiative is a significant factor (see 4.1). The following sections will present internal and external free-rider problems in post-training recruitment that were identified primarily in these two training networks.

4.3.1 Intra-network recruitment of apprenticeship graduates

As a consequence of the rotation system, the apprentices become familiar with different companies. Hence, they are less likely to develop strong company loyalty than those trained in the traditional single-employer VET model. The companies become rivals in the competition for the fresh graduates, giving rise to the crucial question of who is better at recruiting.

Potential network partners are concerned that participating in the rotation system could lead them to lose qualified junior staff to other companies in the training network and thus decide against participating in this model of cooperative VET. This is why the lead agency of the Freight Forwarding Network offers a second training model without rotation as an alternative route. In this latter model,

the companies acquire the lead agency's services only for apprentice recruitment and certain assistance for these recruits, while the apprentices are employed by the company and undergo their entire training there.

The state-owned company and another large firm in the Public Transport Network perceive the system of company-switching as a threat to their own efforts in junior staff development since it could encourage intra-network poaching.

“When they [the apprentices] also go to other companies, then it's easy for them [the companies] [...], for instance, to lure those who make a good impression with higher post-training salaries or with slightly better working conditions. That's of course a bit more difficult once they have left [our company].” (Person responsible for in-company training, state-owned company, Public Transport Network)

The resulting free-rider problems are complex, as the interviews with lead agency representatives as well as with individuals responsible for in-company training in the Public Transport Network indicated. The interviewee quoted above referred to the fact that, unlike in the traditional VET setting, the apprentices get to know a whole range of different companies. Compared to the traditional scenario in which qualified youngsters enter the labour market only after the completion of training, the network model pits the participating companies more obviously against one another in their competition for apprenticeship graduates. Unequal bargaining power, such as one company being able to offer more attractive salaries than another, becomes a problem for the cooperative training model.

The large state-owned company's discontent with the new competitive situation is better understood within the wider context of the network membership regulations. In accordance with the civic order of justice, the Swiss Confederation (as the sole shareholder) has required the company to bring its full capacity to bear – i.e., its many training places, broad expertise and large financial resources – in contributing to the network so as to serve the common good of “public transport” as a whole. In our interviewee's opinion, this leads to a mismatch between the resources contributed by his company and the share of the corporative benefits it receives in return. Arguing within the market logic, he criticised that, being a large enterprise, his own company makes disproportionately high investments in training apprentices (costs, efforts) but retains far too few graduates in return (benefits, returns on investment), whereas particularly the small businesses within the network benefit from lower training costs and innovations by his company.

“In this sense [we are] rivals in post-training recruitment – precisely. Over the course of the training, the distribution is obvious: we are at the giving end [...], and we take too little afterwards.” (Person responsible for in-company training, state-owned company, Public Transport Network)

These tensions arise due to the fact that the state-owned company has to reconcile two conflicting orders of justice. Fully owned by the Swiss Confederation, the company is subject to political governance and required to give priority to the collective interest (Summermatter 2012). However, since the liberalisation of rail traffic and its conversion to a special stock (limited) corporation, the company has also become a private enterprise that is committed to market logic and assesses the distribution of the corporative benefits along those lines.

The aforementioned “luring salaries” offered by other network companies are not the only reason for discontent. Some offer training places that are also far more attractive and provide a wider range of experiences than others. The rotation system has the effect that the apprentices are able to compare. Some companies may “seem a bit old-fashioned and dusty”, while others are more appealing to young people and promise more varied tasks. Some of these attractive companies are associated with leisure and travelling, foreign countries and adventure, and thus possess qualities belonging to the convention of inspiration. Others are appealing because of their well-known name, which gives them significant worth in the convention of fame.

“Apprentices who complete their entire training from beginning [to end] at [company X] know [company X] and will stay with [company X] afterwards.⁴ But if someone has been at an airport or with a railway operator in the mountains or some place of that kind, it’s as clear as daylight that they’ll be mightily impressed and we’ll have lost them.”
(Person responsible for in-company training, Public Transport Network)

Free-rider problems in post-training recruitment also arise from the above-described uneven distribution of apprentices who are at different stages of training (4.2.1). Companies that train mainly final-year apprentices are in a better position to retain them by offering post-training employment before or once they have graduated. Some companies in the Region Network, for instance, demand that the lead agency send them third-year apprentices in the technical occupations – with the intention of keeping these youths for the fourth (and final) year of training and, hopefully, also after its completion. Accessing the jointly trained junior staff pool thus becomes more difficult for those companies that receive a larger number of apprenticeship novices.

Moreover, training final-year apprentices entails advantages in terms of identifying the most suitable candidates for post-training employment. The company can subject them to a series of reality tests and select the graduates with the best results: for instance, in terms of (i) their fit with the team and the corporate culture as well as their readiness to integrate into the existing hierarchies and norms (domestic convention), (ii) their dealing with customers and handling of resources (market convention), (iii) their efficiency, expertise and care in performing their work (industrial convention) or (iv) with regard to their motivation and commitment (convention of inspiration).

In the last example of a free-rider problem in intra-network recruitment of apprenticeship graduates, the interviewee of a company participating in the Public Transport Network draws his criticism on the convention of fame. He feels threatened by the state-owned corporation’s behaviour and accused the large firm of increasingly trying to move itself into the limelight of the network’s public relations activities, which have so far been “neutral” in this respect – the effect being that his own company is virtually disappearing from the public radar and thus losing its appeal to apprenticeship graduates. The lead agency grants a far higher level of visibility to one company than to the other network partners.⁵ It has,

⁴ This part of the quote refers to the traditional single-employer VET model (“X” stands for the company name). The second part then refers to the network model.

⁵ Granting the state-owned corporation a higher level of visibility was the lead agency’s response to the above-described problem of this company complaining about the

for instance, launched a new advertising campaign that no longer includes the logos of all network member companies but only that of the large state-owned corporation.

4.3.2 Poaching from outside the network

On the issue of post-training recruitment, the person responsible for in-company training in a company involved in the Public Transport Network explained that there usually was no competition for graduates among the network members. He believed the working conditions in the industry to be the main reason for apprenticeship graduates to leave his company. This was confirmed by other persons responsible for in-company training both in the Public Transport and the Freight Forwarding Network. There is a certain pull effect from other sectors:

“But please take a look at the figures in the freight forwarding community, how many graduates we have. And how many of them we lose to banks, insurance companies, you name it, trade and retailing, manufacturing. I think we train at least one third [of our apprentices] for other sectors.”
(Person responsible for in-company training, Freight Forwarding Network)

Both networks provide high-quality training for management assistants. The graduates, however, are enticed away by the banking and insurance sector, which feature more attractive conditions in terms of working hours and remuneration. Road building companies also offer higher pay and thus manage to recruit the Public Transport Network’s graduates in railway track construction. Such external free riding hinges on the network members investing in the training of junior staff and companies from other sectors and industries reaping the rewards. Moreover, there are free-riding companies from the network members’ own industries that do not participate in the cooperative training efforts but woo their graduates [instead].

On the other hand, the network companies do not necessarily intend to retain their apprentices immediately after graduation since there are not always suitable vacancies to fill – but they are nonetheless convinced that the training network is an important factor in addressing their industry’s staff development problem in the long term. This is why retaining the graduates in the industry matters. Developing a skilled labour pool with a sense of loyalty to the industry will thus also help the network companies meet their own future demands for qualified staff. A statement made by the person responsible for in-company training in an aviation company in the Public Transport Network illustrates this perspective. With regard to the graduates, he said:

“I don’t mind if they go to [aviation company X] or to [aviation company Y] or to [aviation company Z]. But please stay in aviation and don’t leave for insurancing. That’s the main thing. In Switzerland, aviation is such a small biotope.” (Person responsible for in-company training, aviation company, Public Transport Network)

mismatch between its investments in training and the low graduate retention rate. We thus have an example of a problem-solving strategy that creates new problems among the network members. On the perpetual dynamics of problem, solution strategy and new problem, see Leemann and Imdorf 2015.

The strategy pursued by external free riders is to meet their demands for qualified junior staff through the short-term “buying” of manpower in the labour market. They act and invest on the rational basis of the market convention and lure the network-trained young specialists with more attractive job offers. This poses a threat to the network’s own efforts of staff development – which are in line with the industrial convention – and to the long-term “making” of manpower by way of inter-firm cooperation (Sydow and Möllering 2009; Thévenot 2001, 412).

4.3.3 Solving the problems of post-training recruitment

The lead agency of the Freight Forwarding Network keeps an eye on the possibility of unfair competition between the member companies and manages the distribution of corporative benefits in a proactive way. Companies looking for a trained expert can get in touch with the lead agency.

“There is kind of an unwritten agreement that the member companies then will be sent near-graduates. Because, at some point, there has to be a return on investment. And I do appreciate that it works that way.”
(Person responsible for in-company training, Freight Forwarding Network)

The lead agency will send either a fresh graduate or a final-year apprentice whom the company can even test by offering a taster day before hiring them. Since there is hardly a situation in which all companies simultaneously have the same staffing demands, collisions of interest and shortages are rare.

In addition, the network companies and the lead agency join forces to exert their influence at the trade-association level and fix the starting salaries for graduates to prevent intra-sector poaching. Companies that are not member of the training network restraint in pursuing the network-trained graduates as they are closely monitored by the trade association. The lead agency itself sends graduates only to network member companies and does not give their names to companies outside the network.

Hence, the lead agency employs various strategies to ensure that all member companies participate in the corporative benefits and to protect these benefits against external interests. To exclude competitors from other industries, the agency also seeks to encourage sector loyalty among the apprentices, who are already required to demonstrate that their choice of occupation is motivated by their interest in and commitment to the freight forwarding industry when applying for the apprenticeship.

By offering training programs featuring great variety, the rotation system then gives apprentices the opportunity to become familiar with different corporate cultures and seeks to spark their enthusiasm for the international nature of working in the industry so as to encourage a long-term commitment.

“What I’ve noted personally is that the apprentices really stay in the industry. Because once they’ve been infected with, let’s call it the forwarding bug [laughter], they can’t easily get rid of it anymore.”
(Person responsible for in-company training, Freight Forwarding Network)

This idea of “infecting” (vaccinating) the apprentices with the “industry bug” to immunise them against competing job offers from outside the industry relies on the power of the convention of inspiration. The same strategy is employed in the Public Transport Network when looking for highly motivated youths who “burn for railroading”. In this particular case, network training has to follow the objective of strengthening the apprentices’ emotional ties to both the company and the industry since drawing on the market order of justice by offering higher pay is not possible.

“By necessity, we would rather have to tie the apprentices to [company name] EMOTIONALLY because we cannot compete with the external market when it comes to wages. [...] That we spark their enthusiasm for [company name], for [subsector], [...] the wide range of services we offer, the great variety of tasks that characterises work in our business.”
(Person responsible for in-company training, Public Transport Network)

The lead agency of the Public Transport Network urges the member companies to offer follow-up employment and sign contracts some time prior to the final exam, as potential employers from outside the network keep asking the agency for the names of new graduates, especially in the technical field. Unlike its counterpart in the Freight Forwarding Network, this lead agency feels obliged to reveal the names of graduates unless they have not received a job offer from a network company.

In an attempt to regulate the dynamics of post-training recruitment, in the Public Transport Network a new system, guided by market logic, has been implemented for the third year of training. There now is an open application process for third-year training places, in which the latter are grouped into a dozen of so-called “specialised training paths”. The apprentices have to apply for those places towards the end of their second year (two applications per person), and the companies then make their choice. The same market logic is also behind the introduction of a job fair for final-year apprentices, an event at which the companies present themselves to the near-graduates.

The state-owned corporation also relies on the domestic convention in its attempts to counterbalance the described disadvantages in post-training recruitment. To establish and strengthen company loyalty among the apprentices, this company holds a special welcome event, sends birthday and Christmas greeting cards, and a small gift if, for instance, an apprentice has had an accident. Being the most important network member, the company also used its bargaining power vis-à-vis the lead agency to push for a new advertising campaign (4.3.1) – a move that falls into the domain of the convention of fame.

Moreover, the lead agency has now reacted to the state-owned corporation’s persistent criticism of the existent rotation system and decided to introduce a new model specifically tailored to the large firms in the network. A “primary training company” is determined at the beginning of the apprenticeship where the apprentices will spend the first semester as well as the final year of their training. This move also relies on the vigour of the domestic order of justice, since the prolonged stay at just one company is ultimately bound to weaken the rotation system.

5 Summary and conclusion

Based on four case studies of training networks in Switzerland, we have tried to understand why this model – albeit being a promising form of dual VET – is taking

hold rather slowly in terms of prevalence and degree of institutionalisation. Our focus was on identifying potential free-rider problems that result from mismatches between the resources contributed to the network by the individual member companies and their returns in the form of access to an equitable share of the corporative benefits.

The most significant corporative benefit are the apprentices, who are recruited and jointly trained to meet the future skilled labour demands of the participating companies and the industry as a whole. With this in mind, we analysed, firstly, the rotational assignment of apprentices to the companies over the course of training and, secondly, the companies' opportunities for post-training retention or recruitment. Our analytical approach was informed by the theoretical framework of the sociology of conventions. Conventions refer to historically evolved, competing and mutually conflicting logics of action and orders of justice. Our assumption was that the actors in the training networks draw on different conventions (industrial, market, civic and domestic convention, convention of fame, convention of inspiration) in their efforts to co-ordinate their training activities and assess the quality of contributed resources and distributed benefits, which ultimately leads to free-rider problems. As a consequence, they have to look for compromises between the conventions to solve conflicts accruing from these free-rider problems and to uphold the training network.

In our study, we addressed two main questions: (1) Which particular constellations draw criticism because of single actors disproportionately profiting from the training network and its corporative benefits, that is, by contributing fewer resources than benefits reaped (free-rider problem)? (2) How do the lead agency and the companies within the network try to address these free-rider problems? What are their solution strategies?

Our key finding is that the rotation system according to which the apprentices move from one company to another over the course of their training creates various free-rider constellations in distributing the corporative benefits, both during the training itself and after its completion. An important issue during the training is the heterogeneity of the apprentices due to their different levels of advancement and different social attributes. The lead agency is challenged with a 'fair' distribution of this socially structured corporative benefit among the network companies. At the same time, the participating companies differ in size and profile, and thus also in terms of their significance for the network-based training scheme. Some are better able to assert their interests than others, which further nourishes imbalances. The assessment of whether the distribution of the corporative benefit in the form of "apprentices" is fair or not ultimately depends on the convention upon which a company relies in evaluating the quality of the young people sent by the lead agency.

Once the training is completed, the network member companies become rivals in recruiting the graduates. Another threat is poaching, in other words, employment offers by external competitors. Free-rider problems arise from the fact that the companies and industries are heterogeneous, i.e., they have different qualities when viewed from the angle of the different conventions: they vary in terms of the resources they can contribute and the means they have to recruit graduates or convince them to stay. In addition, we identified situations where a lead agency has privileged certain companies and grant them advantages in demonstrating their qualities because of their significance for the network as a whole. The graduates base their post-training job decision upon their own assessment of different

qualities. If a company has too little significant worth in one of the relevant conventions, its resource contributions will be rated as insufficient and its access to the collectively generated cooperative benefits will be limited.

The strategies to solve the distribution problem during and after the training period consist in efforts to attain a higher level of fairness or to balance inequities related to one convention by means of offering compensation or an investment in another convention. The lead agency plays a key role in moderating the different demands for fairness and justice. It must address the various complaints about injustices and mismatches, and develop solutions to prevent (important) member companies from leaving the training network. However, since the network is always simultaneously faced with different and competing logics of action and orders of justice, these solutions are inevitably compromises between different conventions and thus tentative and not very durable.

To sum up, we believe that the slow dissemination and hesitant acceptance of the Swiss training network model can be explained by the free-rider problems associated with the rotation system and the perpetual dynamics of conflict and compromise that it involves.

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