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ARTICLE



## Micro firms matter. How do they deal with the tension between production and training?

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### ABSTRACT

The primary function of any firm is not to train but to produce goods and services. However, firms in collective skill formation systems, such as those in Switzerland, train apprentices in 'dual' vocational education and training programmes, where the firms become important educational actors. Generally, all training firms are coined by their context and are situated in an area of conflict between production and training. A core contextual factor is firm size, which influences the firm-specific provision of learning opportunities and pedagogical practice. Regarding providing apprenticeships in Switzerland, micro enterprises are highly important because around 40% of all apprentices are trained in firms with fewer than ten employees. Despite their importance, little is known about their everyday challenges. Therefore, we ask the following question: How do micro firms deal with the tension between production and training requirements?

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## Introduction

As Rainbird, Fuller, and Munro (2004) state, the primary function of any workplace (in both the private and public sectors) is not learning but producing goods and services. Similarly, as Culpepper (1999) explains, 'the goal of firms is not to educate youth, the goal of firms is to make money.' These general statements are significant for firms in collective skill formation systems (Busemeyer and Trampusch 2012), such as those in Germany, Austria, and Switzerland, which train apprentices in 'dual' vocational education and training (VET) programmes.

Here, vocational schools, as well as private or public firms, share a joint educational responsibility. Therefore, firms are important educational actors and learning at school and the workplace should be tightly connected. Consequently, the prominent role of firms is a core characteristic of dual VET systems, especially in initial VET, where dual systems significantly differ from school-based training models. So-called training firms, or host companies, are

firms that provide training places on the apprenticeship market, select trainees for apprenticeship positions, and influence trainees' professional socialisation and future careers through the workplace training offered. Training is provided during work, when the apprentices are familiarised with current work processes. Further, apprentices contribute to the companies' productivity during their training while delivering productive work.

This contribution takes a close look at the Swiss case, which has a pronounced dual VET system (for an overview, see Wettstein, Schmid, and Gonon 2017; Gonon 2017). The close link between vocational training and the labour market manifests itself in various ways: Swiss vocational training is strongly oriented to practice (Hoeckel, Field, and Norton Grubb 2009); firms have a central position; and apprentices are immediately confronted with production requirements and training oriented towards 'employability' from the start (Masdonati et al. 2007).

From an international perspective, the percentage of youth that undergoes dual training is the highest in the country (OECD 2014). In Switzerland, after compulsory school and at 16 years old, approximately two-thirds of young people choose one of the 230 different occupations of the VET track, which lasts between two to four years. Most (90%) opt for the dual system: VET programmes in Switzerland usually combine part-time studies at a vocational school and part-time apprenticeships at a host company, with 60–80% of the time spent at the company and 20–40% spent at the vocational school. Practical training at a training firm is supplemented by theoretical classes (vocational and general educational subjects) at the VET school. Further, apprentices are enrolled in inter-company courses, through which they enhance their practical skills.

For every apprenticeship, a training plan defines the competencies a certain occupation requires and the specific educational tasks for each training location (firm, school, and intercompany training) so apprentices can pass the nationwide defined final exam. Host companies are responsible for the workplace training of their specific VET programme. To provide workplace training within an apprenticeship framework, host companies must obtain a permit from the cantonal authority.

Swiss training firms face minimal legal requirements. Workplace trainers in host companies must have a Federal VET Diploma or equivalent qualification besides a minimum of two years' relevant practical experience. In addition, they must complete a 40-hour workplace trainers' course that thematises the following topics: dealing with learners, planning and implementing workplace training, considering individual skills of the learners, learning and instructing, conflict resolution, addiction prevention, and work safety. If accepted, companies recruit apprentices and sign with them an apprenticeship contract.

Generally, all firms are coined by their context and depend on the institutions, norms, and ideas that exist in society (Mikl-Horke 2011). They are work

organisations that shape their employees' lives. Workplaces can take many forms and the different contexts in which the training firms are situated influence the learning opportunities and pedagogical practice they provide. Important contextual factors are the wider political, economic, and social environment, sectoral and organisational characteristics, such as size, ownership, organisational history and culture, and the internal organisation of the labour process (Rainbird, Fuller, and Munro 2004; Unwin et al. 2007). A close investigation into the nature and impact of these contextual factors will allow us to understand why firms adopt different practices and create different learning environments.

We will especially deal with firm size as a core contextual factor because a specificity of the Swiss VET system is the high involvement of micro firms with fewer than ten employees, which train approximately 40% of all apprentices. While VET produces public good, participant firms are usually confronted with a conflict between production and training. Therefore, this article addresses the following research question: How do micro firms, which are important educational actors in the Swiss VET system, deal with the tension between production and training?

Our study is an in-depth investigation into learning sites at micro firms. We use qualitative case studies to identify the challenges of everyday training practices concerning the training of youth in the context of economic pressure and legal requirements. In particular, we are interested in the varied strategies micro firms use to fulfil their training mission. The paper is structured as follows. In the next section, we present the current state of literature regarding small and micro firms and workplace training. Next, we explain our methodological approach. Subsequently, we present our empirical case studies and, finally, provide a conclusion.

### **Small firms matter**

In many countries, small firms are highly relevant in providing workplaces and employ a significant portion of the workforce (Billett 2001; Bishop 2015; Granovetter 1984). Therefore, even in highly developed economies, firms must not be automatically identified as giant corporations, because small and medium-sized firms and family companies play a considerable role in employing the workforce (Swedberg 2003).

Over thirty years ago, Granovetter (1984) criticised the absenteeism of studies on small firms in organisational and economic sociology, which focus mostly on large and complex organisations. The assumed 'normality of the large firm paradigm' (Bishop 2017, 517) still exists. Consequently, academic research investigating professional learning and small firms' daily practices is still rare (Bishop 2017; Kelliher and Reindl 2009).

Generally, as firm size increases, the organisational structure becomes complex, layers of management are introduced, roles become differentiated and

specialised, and relationships between individuals and functions become increasingly formal (Bishop 2012; Kotey and Folker 2007). In contrast, formal bureaucratic structures tend to be less frequent in small firms. Simple organisational structures are defined as including direct supervision as the prime coordinating mechanism, which results in the phenomenon that all major decisions come from the centre (Mintzberg 1983). In very small organisations, such as micro firms, ownership and management is often merged and creates a flat, one-person centred organisational structure. The centralised organisational control remains firmly with owner-managers who, in the majority, prefer informal, 'gut feeling' management styles (Kelliher and Reindl 2009).

Because small enterprises typically have a low ability to control their organisational environment, external market instabilities have a large impact. Studies investigating the everyday reality of small businesses indicate internal resource constraints, minimal environmental power, and an owner-centred culture (Kelliher and Reindl 2009). Small businesses tend to be focused on day-to-day survival, face high levels of uncertainty, constant financial problems, long hours, and relatively poor material rewards. They are more cost sensitive than large employers and have comparatively more problems in bearing increases in wages, social policy, and job training (Culpepper 2007). Consequently, their operation mode might be termed as an organisational 'culture of survival' (Curran 1990, 135).

Regarding the influence of firm size on education and training, cleavages between small and large employers have already been identified (Ashton et al. 2008; Martin 2000; Thelen 2004). Large firms are more likely to have separate training facilities and tend to keep apprentices out of the production process for a longer time, to have attractive internal labour markets for investing significant sums per apprentice, train firm-specific skills in-house, and have a higher retention rate for apprentices they train. In comparison, small firms are likely to provide fewer learning and career opportunities.

Further, there is some evidence of different recruitment opportunities. Better-educated school leavers prefer large firms because of the attractive career prospects and fringe benefits (Wagner 1999). Contrarily, small firms and, especially, micro firms recruit in weaker segments and experience marginal labour markets because they cannot offer the same prospects as large firms (Kelliher and Reindl 2009). Their recruitment procedures often involve the personal network of the owner-manager, which comprises family members, friends, relatives, neighbours, etc. (Curran and Blackburn 2001; Matlay 1999)

### **The organisation of workplace training in small and micro firms**

Independent of their size, all training firms have experienced tension between production and training, meaning tension between an organisational culture of productivity versus education, between the short-term priority of getting

the job done and the long-term priority of recognising and supporting workers as learners, concomitant with providing adequate resources (Fuller and Unwin 2010). With apprenticeship training, this can be identified regarding the importance that is attached to the apprentice as a worker (focussing on short-term efficiency) versus a learner (focussing on developing a highly capable workforce) (Eraut 2004).

However, strategies that deal with this conflict vary according to company size and the specific industry, as well as the individual firm's training tradition and the space it gives to the formative activity (Bahl et al. 2012). Indeed, firms can invest more or fewer resources (financial, human, time) in training, which is once again influenced by the particular organisational context. Therefore, on a continuum of production versus training, some companies are more positioned towards production than training while others are in the middle (Moreau 2003).

In dual VET systems, workplace trainers are important educational actors because they are responsible for acquiring practical skills in the workplace in a nationwide defined apprenticeship scheme. They should be closely connected to the apprentice, conduct daily training, and are regarded as being experts on learning and training in the workplace, as well as on the 'local knowledge' of work processes, tasks, and functions (Grollmann 2010). However, firms also differ in range and capabilities of the staff that fulfil this specific pedagogic role (Unwin et al. 2007). Because large companies witness a large division of labour, full-time workplace trainers often delegate daily training tasks to other colleagues and supervise them. In small firms, relatively few people are involved in training because firms cannot afford any full-time educational staff.

Research indicates that most workplace trainers provide training as a sideline further to their productive tasks (Bahl 2013). Time for workplace training is often fragmented and there is little official recognition for their mostly informal training (Besozzi, Perrenoud, and Lamamra 2017). Because workplace trainers must fulfil educational and profit-oriented tasks simultaneously, they need to deal with a role conflict daily (Bahl 2013). Additionally, while they are situated between the education and employment system, workplace trainers need to balance the legislator, company, and apprentices' interests. They must adhere to curriculum requirements so learners may acquire professional qualifications, train well-qualified and loyal co-workers for the firm, and meet the individual needs of the young people. Rising productivity requirements put workplace trainers under additional pressure.

Given the evidence of micro firms' resource poverty, which leads them to work under strict time, financial, and expertise constraints, it seems likely that the tension between production and training is aggravated in their daily practice: 'Time or lack thereof, is a particular concern in the micro-firm environment, where the owner is likely to be responsible for all aspects of the business operation' (Kelliher and Reint 2009, 526).

Concerning workplace trainers' educational role, micro firms also show organisational specificities. The owner-manager often assumes the workplace trainer role. Small firms often show low levels of formal training provision and are less likely to have internal training plans and budgets for the provision of training (Bishop 2015, 2012). Moreover, the identified predominant intuitive management style of small business owners results mostly in informal evaluation of current and future training needs, mainly based on personal expectations (Bishop 2008; Matlay 1999). Therefore, small firms are less active in formal training offers, arrange their workplace training so it goes along with daily work or when there are pauses in production, and invest less in apprenticeships (Billett 2001; Wagner 1999).

In these organisational contexts, informal situated learning predominantly occurs, such as learning by doing, by trial and error, or by tapping into peer networks. Small firms are more concentrated on experiential, work-based learning and less on formal, off-the-job training: 'Small business learns "through doing", with the focus on current or real issues in the workplace, and through social networks – learning from other business people' (Dawe and Nguyen 2007, 7).

Characteristics inherent in these small organisations, such as limited resources, favour a learning approach where skills are predominantly developed in the daily business in response to the firm's short-term needs. As Bishop (2017) reports, a distinctive quality of the small firm in contrast to the large firm learning environment is the learner's exposure to a wider range of work tasks, a wider variety of new and challenging responsibilities, and more freedom and flexibility to shape the learning pathway.

Yet, not much is known about the everyday challenges micro firms meet when fulfilling their double mission of production and training in dual VET systems. Therefore, we investigate the following research question: How do micro firms, which are important educational actors in the Swiss VET system, deal with the tension of production and training? In particular, we are interested in the various strategies micro firms use to fulfil their training mission and the consequences they face.

## Methodology

We explored our research question by analysing micro firms to capture accounts of 'everyday' workplace learning and the varied strategies used to deal with this tension. We chose micro firms because they represent the predominant organisational structure that offers workplace training in the VET track for young people in Switzerland.

According to Müller and Schweri (2012), nearly every fifth firm in Switzerland trained at least one apprentice (year 2008, 18.4%). However, this training activity is unevenly distributed according to firm size. The Swiss VET system relies heavily on the participation of small and medium-sized

companies. Around 70% of the learners were trained in micro and small firms (with less than 50 employees). Among them, approximately 40% were trained in micro firms with fewer than ten employees. Therefore, in Switzerland, micro firms contribute highly to dual vocational training.

To answer our research question of how micro firms deal with the tension between production and training and to identify a maximum variation of strategies, we chose a research design of qualitative comparative case studies (Merriam 2009; Patton 2005). The aim of case study research is to conduct an in-depth analysis of the phenomenon in question, with the focus on understanding it from the participants' perspective (Harrison et al. 2017). It is aimed at providing a comprehensive holistic description that improves understanding of the phenomena. Therefore, qualitative inquiry focuses typically on relatively small and purposefully selected samples (Patton 2005).

Because micro firms are a population that is difficult to access, we selected the firms using snowball sampling via suggestions from different associations. We found eight cases as a basis to provide a rich description regarding our research purpose. As there are no rules for sample size in qualitative inquiry, we followed Lincoln and Guba (1985) recommendation to terminate the sampling when redundancy or saturation was achieved, meaning when no new information was forthcoming from new sampled units. The following Table 1 shows a more detailed description of the micro firms.

Micro firms are small organisations with a flat, one-person-centred organisational structure, where the owner-manager is responsible for the organisational practices and often also acts as workplace trainer in person. Therefore, they are experts regarding our research question and their privileged point of view is crucial (Bogner, Littig, and Menz 2009).

Through conducting semi-structured interviews with owner-workplace trainers in micro firms, we analysed their accounts of everyday workplace training within their firms, including the challenges, strategies, and consequences. Questions concerned information about the micro firm, the trajectories of the respondents, their motivation to train apprentices, how they conduct daily workplace training, and their experience in training apprentices. The

**Table 1.** Overview of the micro firms.

Case Number	Micro firm	Number of employees	Number of apprentices	Occupation trained	Experience in workplace training of the owner-manager
1	Butcher's shop	5	1	Butcher	22 years
2	Car garage	9	2	Car mechanic	35 years
3	Clothes shop	4	1	Salesman	9 years
4	Hairdressing	2	1	Hairdresser	7 years
5	Hairdressing	4	2	Hairdresser	15 years
6	Multimedia shop	5	3	Salesman, computer expert	12 years
7	Painter's shop	6	1	Painter	8 years
8	Painter's shop	5	1	Painter	Over 20 years

interviews lasted between 32 and 88 min. The interviews were conducted comprehensively (Rogel 2004), were fully transcribed, and were subjected to thematic content analysis (Bardin 1986; Blanchet and Gotman 2001). Overall, this resulted in 153 pages of transcriptions. Transcription and thematic coding was completed using NVivo software.

In the second phase, we purposefully used maximum variation sampling (Patton 2005). This kind of sampling allows for capturing variations and for describing common themes that cut across variations. Thus, maximum variation sampling specifically focuses on variations and not – as with the case of a typical case sampling strategy – of illustrating what is typical, normal, or average.

Purposeful sampling is the selection of information-rich and illuminative cases that offer useful manifestations of the phenomenon of interest (Patton 2005). From information-rich cases, we can learn considerably about the purpose of our research question. Therefore, we purposefully selected three information-rich (cases 2, 4 and 7: car mechanic, hairdressing, and painting) out of the eight cases for in-depth analysis. The selection criterion for identifying different practices of dealing with the tension of production and training in micro firms was their maximum heterogeneity in realising workplace training regarding conscious time set apart for training.

In the following, we present the in-depth analysis of the three selected micro firms and identify their different strategies of dealing with the tension between production and training, which allows for identifying maximum variation and its consequences. Whereas all the cases focused highly on productivity, one case (painting) realised workplace training directly while the apprentice worked productively. In contrast, another case (car mechanic) invested substantial time on conscious workplace training outside of daily work. The case of a micro firm in hairdressing lies between these two identified strategies. Although these cases are all micro firms, they apply different strategies to deal with the tension between production and training within the context of economic pressure and legal requirements and, accordingly, face different consequences with their chosen strategies.

### **Strategy A: train yourself (learning site in painting)**

The first case of dealing with the tension between production and training in micro firms is a painters' shop. Its training strategy tries to maximise the apprentice's productivity within daily work. The interviewed person owns the business together with his partner. The business has existed for ten years and has six employees. Apprentices have been trained for the past eight years. However, no one within the firm has completed the formally required workplace trainer's education. Besides the provision of apprenticeship positions, the business offers internships for young people in difficult personal situations, preparing them for future apprenticeships. At the time

of the interview, the company was training one apprentice. Former apprentices were refugees or members of the extended family.

Regarding the content of his workplace training, the interviewee stated it is important the apprentice works accurately and cleanly. Whereas he regards rough painting as being relatively easy, he stated it was the precision of the finish that satisfies customers the most. Mentioning his apprenticeship in a small company where he has good memories, he stated his provision of workplace training is influenced by the experiences he witnessed during his own apprenticeship. There, he could paint from the first year onwards and, after the second year, he was also allowed to plaster. His workplace trainer did not want him to plaster in the first year because of the heavy work involved, which sometimes included carrying a weight of about 40 kg. However, he could always participate actively at work.

He explained the focus of workplace training in his firm in the following way:

For me, a good workplace trainer is someone who takes the time to explain things and also to show them and then, most of all, let the apprentice do it. And then when it's applied, letting him do the work on his own... a painted wall or whatever. And then, we check it and show the apprentice the mistakes he had made. Then, we leave him alone to redo the work correctly.

In his perspective, the best way to conduct workplace training is to let the apprentice do the work and, if they make a mistake, correct it and explain the fault patiently. In the first two to three months of the apprenticeship, the apprentice is mostly observing and the different tools need to be explained to them. After this, the apprentice is given some responsibility to do some work on their own. When asked how much time he spends on daily workplace training, the interviewee answered:

It's hard to say how long, cos if I take this example, if I leave him for a day, let's say... One day recently we left the apprentice in a basement, to repaint the basement. So I leave him on his own! There's someone else on the site doing some work elsewhere. So, we leave him to it! Then, after he's finished, he comes up to me and he says "I've finished", and we check it. If it's not right, I might get him to re-do it. So it's hard to say how long you train, you train him for, cos he trains himself, in a way! Because he learns from his mistakes by himself!

Reflecting on his own apprenticeship twenty years before, he perceives an increase of time constraints. In his perspective, there is much more cost pressure and stress in his daily work. Consequently, it has become difficult to train apprentices, as everything needs to be done quickly. Therefore, there is less time available to provide explanations to the apprentice. He exemplified the differences to former times as follows:

I feel the difference. We used to have much more time. Well, for example, we leave an apprentice to paint a bedroom, and if it's not done well we redo it later! We've already got to finish it quickly! So, instead of letting the apprentice paint a whole room, he can maybe just do one wall, and then the painter does the other three.

In summary, the strategy of the first case of workplace training in a painter's shop can be labelled as *'train yourself'*, as the training is delegated to the learner. While working productively, the learner can make mistakes, learn from them, and then redo the task. However, although the training strategy is highly focused on productivity, because of rising costs and time pressure, the strategy's application is increasingly restricted. Actively allowing for mistakes and, by extension, doing the same work several times is costly.

### **Strategy B: time filler (learning site in hairdressing)**

The second case is a learning site in hairdressing. Compared to the first case, this business' training strategy focuses more on conscious workplace training. The hairdresser works independently and has no fixed working hours. She rents her infrastructure in a hairdresser's shop and pays a share of her revenue to the landlord. Besides her, three other hairdressers work at the same place, but she was the only workplace trainer. She has worked as a hairdresser for 25 years. Although she has trained apprentices for seven years, she has not completed the formal workplace trainer's course required by law. The interviewee stated she has only trained foreigners who are often sent to her by the local school.

Asking the hairdresser about the style of her workplace training, she listed the following activities: receiving clients, answering the telephone, suitable behaviour with clients, doing hairstyles, cutting, and brushing. For her, two tasks are especially important to increase customer loyalty. The first is receiving the clients, which includes smiling, talking, and creating a welcoming atmosphere so clients feel at home. Second, she attaches high importance on training the correct method of shampooing and head massages. She believes this is also the key to customers returning.

Regarding the organisation of workplace training, the hairdresser reported that she invests approximately one hour daily into workplace training, although segmented occasionally into intervals of some minutes. In her perspective, spending time with her apprentice is highly important:

I think time will be the most important thing for the apprentice. Because it's true, it's difficult to get the time, but you have to take it. The little bit of time you get, 5, 10 minutes here – 'Right, I'll show you something; right, let's do this; let's do the inventory; right, we'll do a reception exercise; right, let's do...'

Because the hairdresser works independently, she can decide when to leave the shop. Therefore, she decides whether she wants to invest her spare time on the apprentice or on other activities:

You can't just say 'oh I've got half an hour so I'll quickly do this...' Yeah, you can go and do the shopping, but there's other stuff to do. So, for me this afternoon, for example, I don't have anyone at the end of the day, if I see there's nothing to do she'll be contacting her social network, and we'll do a model.

Therefore, when there are no customers, she asks the apprentice to contact her network of family, friends, and acquaintances and, then, to do 'a model':

So, whenever we have a free moment, we get models. Last week we did one, and also the week before, but we don't always do it regularly. If it's a quiet period, we bring in models and make the most of it. We use the training head, we do braids, you see, we do all the work there's normally a demand for. She also does it for clients, she's done colouring, she's done blow drying, so you're going forward all the time. Whenever we have some time, we get models in and make the most of it. But it's not a regular thing, it's hard to do it every week. There are weeks at the end of the month when you can't do it, the middle of the month is ideal.

As the youngest apprentices are only 15 years old, the employment protection law for young people is relevant for her workplace training. It stipulates the maximum number of working hours and breaks during a working day. As the hairdresser indicated, the permanent time constraints in her daily business also result in conflicts with the labour law:

She'll take an hour off when possible but, other than that, she's got her whole apprenticeship going forward. It's give and take. There are times when I should give her breaks, but there are some days when it's just not possible for me to do so.

This lack of compliance with the labour law is perceived as a problem if the state inspector visits the company. The inspector has the task of approving apprenticeship contracts, as well as counselling trainers and monitoring the training firms. The inspector tries to resolve conflicts, for example, if a training firm deviates from the law or if learners are unable to meet the requirements of the apprenticeship. In particular situations, he may terminate an apprenticeship or withdraw the permit from the training company. As the interviewee stated:

So it's true that on the days when I have the inspector round I never know how it's going to be, because I've got a particular timetable with her. But she's still got time for herself. It's an agreement we've got between us (laughs). So I tell her, 'the day when the inspector comes, you be sure to tell them you get all your breaks!'

In asking the workplace trainer what she needed to fulfil her training tasks, she declared that she does not have enough time: 'I don't think I'll ever have enough time. I'm always worried that by the time the three years are up she won't have finished everything'. She refers to the nationally defined training plans for hairdressers where all the activities are defined that an apprentice needs to show at the final exam. With this admission, she questions her ability to train all the required practical competencies within three years.

To summarise, the second case of a workplace trainer in hairdressing shows clearly the tension between production and training, as well as problems of adherence to state rules, such as allowing the apprentice the required breaks. The strategy to solve this tension can be labelled as a '*time filler*' because conscious workplace training only occurs in the rare cases where there are no

customers. Although the trainer shows a high commitment and instructs in her spare time, she fears not being able to train all the required practical competencies.

### **Strategy C: compulsory extra tuition (learning site in car mechanics)**

The third case is a learning site in car mechanics. This micro firm installed a training regime that focuses highly on workplace training outside of daily work. The workplace trainer is the owner of a garage in the countryside, which he inherited from his father. He employs nine employees, among them two apprentices. He reflects on a trainers' experience of 35 years, where he trained more than ten apprentices. He also completed the formally requested training as a workplace trainer. He recruits his apprentices mostly in his local environment (for example from the village and customers' children).

Referring to the style of workplace training at his garage, he mentioned practical crafts, as well as soft skills, such as working cleanly, organisation, dealing with customers and being polite, answering the phone, not touching the client's car with dirty hands, keeping the tools clean, not smoking in the workshop, and wearing appropriate attire.

Regarding workplace training, he could not estimate the amount of time spent on daily training, stating that it depends on specific tasks the apprentice must fulfil. Whereas the tasks are easier in the first year of the apprenticeship, the difficulty gradually increases until the third year, where the apprentice must work like a professional, although less quickly. In a typical training procedure, certain tasks are delegated to the apprentice and, occasionally, the workplace trainer controls the task's progress. If the apprentice has a problem or does something wrong, the trainer stays with them and demonstrates how to do the task properly:

So, what happens, for instance, is we give him a job to do, which should last two hours. From time to time, we check how he's getting on, or if there's a problem he calls us over and we correct what he's doing, because he's also got to learn to work on his own. Because at the end of the apprenticeship, he's meant to go to a workplace where he'll be working on his own. So you follow what he's doing, no way he's just going to doss around or spend all day sweeping up. So he's got a job to do, with results to achieve.

The owner has also installed obligatory extra tuition for the apprentice, which is aligned with time constraints regarding the tension between production and training. As a principle, the apprentice needs to come every Saturday morning from nine to twelve and to do a weekly retrospective. If he has already completed the homework from the vocational school, the owner checks if it is correct. If the apprentice does not understand something, the owner tries to help:

If there's things he's not understood, as far as possible, cos there's also things that... you see, but everything on the practical side, even automotive theory, we talk about it and I also give him jobs in areas where he's not managing so well, then see what he does and then, correct it.

Explaining this kind of obligatory extra training, the owner stated: 'So why does he come along on Saturday mornings? Because I'm a bit quieter on Saturday mornings, so I can give him my Saturday morning and spend a bit of time with him'. In addition, he referred to another possibility of extra tuition during the lunch break, where another worker is available to explain certain things.

However, this regime of workplace training collides with the labour law. As the owner admitted, the extra tuition on Saturday morning is illegal:

It's quite funny because, at the beginning, when I put that in the contract, I had to delete it. Because the law says this is illegal, I've no right to make an apprentice turn up on Saturday mornings. So I said to them, it's simple: 'See if I take you on as an apprentice, it's personal. Saturday mornings, you're there from nine to twelve. Because I'll want to talk with you about what we've done during the week, the things that aren't right, and then... explain things and so on.' So now we do it internally. But it's still a shame, because when you want to do something good the law says, 'no, you don't have the right to do that'.

The owner explained the motivation for his extra commitment, which also requires more time from him:

Cos I'm not training someone just for them to stay still, that would be pointless. I don't have time to waste. So I'm happy to give some of my time as long as that time's being used for something. So when he passes an exam I'll be happy. It makes sense, it's satisfying. But if he doesn't care and then he doesn't pass... That'd be demotivating.

This third case of workplace training shows tension between production and training, as well as problems of adhering to state rules. Compared to the case in hairdressing, the training time set outside the daily business is even more pronounced. It is regularly an entire Saturday morning providing conscious workplace training, even including supporting homework from school. It underlines the high engagement of the owner to set aside training time in which there are fewer customers around. This strategy can be labelled as '*compulsory extra tuition*'. However, it remains clearly outside the labour law regarding the maximum working hours for an apprentice and, therefore, collides with state regulations.

## Discussion

A commonality of the presented cases, which differ regarding time set consciously apart for workplace training, is that they all face high tension between production and training. This is indicated in perceived time constraints and

results in favour of production at the expense of workplace training. However, the cases show a variation of solutions for this dilemma. The three cases allocated varying space to the formative activity, which indicates that owner-manager personalities and attitudes have a large impact on micro firms' organisational training.

The strategy of the first case (painter) can be labelled as a time-saving 'train yourself' strategy, meaning apprentices learn from their mistakes while doing productive work. However, rising cost pressure reduces the training time of doing and redoing. The strategy in the second case (hairdresser) can be labelled as a 'time filler' strategy, which indicates conscious workplace training is done at rare times when there are no customers around. It shows the high personal engagement of the hairdresser but, in consequence, results in difficult planning and realisation of workplace training and insecurity in whether the workplace training aims would be achieved by the end of the apprenticeship. The strategy of the third case (car mechanic), which can be labelled as the 'obligatory extra tuition' strategy, further reinforces this phenomenon, as conscious workplace training was done on Saturday mornings. Here, too, the owner showed high engagement, dealing not only with practical training but also providing homework support. However, this training strategy lies clearly outside the law. To conclude, a further commonality in this maximum variation sampling is that all of the strategies have their shortcomings. Every training strategy faces different problematic consequences that underline the strong tension workplace trainers in micro firms face. This is also true for the 'time filler' strategy, which was the most chosen strategy in the overall sample of eight micro firms.

Problems adhering to state rules were also reported in each case. While the training strategy of the car mechanic lies clearly outside the labour law, the rhythm of daily business of the hairdresser's case collides with the youth protection law regarding breaks. Further, the hairdresser and the painter did not complete a workplace trainers' course, which is a regulatory necessity for training apprentices. Therefore, regarding the three presented cases of micro firms, it seems not only to be a twofold tension between production and training but a threefold one. In addition to the first dilemma, there is a governance problem, i.e. the adherence to the youth protection (working time) and VET law (i.e. suitable qualification, such as completing the workplace trainers' course).

The implications of our findings to the broader literature on firms and workplace training are as follows. First, small and micro firms are relevant in providing apprenticeships, at least in Switzerland, and show specificities, such as resource poverty and a learning approach that favours firms' short-term needs. Consistent with the presented state of the art, our results showed high tension between production and training. However, the cases also show a variation of solutions for this dilemma. Therefore, it could be interesting to further investigate whether there are even more strategies in the micro firm

setting of dual VET systems beyond the three elaborated ones and to focus on possible explanations of variation.

Second, existing literature focuses on the tension between production and training. In our study, we showed that every depicted training strategy faces different problematic consequences. In contrast to firms that only train on the job or provide internships, micro firms in dual VET systems face specificities of the organisational environment because apprenticeship training is regulated by a national legal VET framework and youth protection law. Consequently, a theme that emerged from the data was that the legal framework might put micro firms under additional pressure. Therefore, the cases not only showed twofold but *threefold tension* between production, training, and compliance with legal requirements.

Third, although micro firms are important educational actors, academic research investigating micro firms' daily training practices in dual VET systems is still a neglected perspective in VET research and needs to be further investigated.

## Conclusion

This contribution addressed the following research question: How do micro firms deal with the tension between production and training? Based on a research design of qualitative comparative case studies, we identified the everyday challenges micro firms face and a maximum variation of strategies and consequences micro firms use to fulfil their training mission. Accordingly, we identified three strategies that differ concerning the time set apart for workplace training and their consequences. All strategies have their shortcomings and face different problematic consequences. Further, we discussed the implications of our results for the broader literature on workplace training (focussing on micro firms in dual VET systems, on varying their workplace training, identifying a threefold tension).

Our results also have policy implications. From a comparative perspective, dual VET systems have been regarded as successful in creating clear paths for the transition from school to work, resulting in comparatively low youth unemployment rates (Finegold 1999). Micro firms are especially important for youth integration into the labour market. Compared to large firms, they typically recruit apprentices in weaker segments because they cannot offer attractive positions and career opportunities.

If a high percentage of small firms train within a VET system, there is an advantage. As they tend to recruit in a weaker segment, they accomplish important integration. However, owing to their operation mode, it is difficult to regulate these firms and stipulate high pedagogical requirements, as they voluntarily decide whether to provide training. If fewer small firms train, costs to the public sector will increase, as the transition into the labour market for

young people with low school performance results will be made increasingly difficult. Therefore, state authorities might not insist that micro firms comply in every respect with the law. Moreover, it might be a challenge if future labour markets need higher qualifications because small employers are expected to oppose measures intended to increase general education within the VET framework or to support their apprentices to pursue further training (Culpepper 2007). Therefore, dual VET systems need to carefully balance legal regulations, supervision, and firms' voluntary training.

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