

## **Regional Effects on Employer-Provided Training: Evidence from Apprenticeship Training in Switzerland**

This paper examines the determinants of firms' willingness to provide training in the context of the dual apprenticeship training system in Switzerland. The willingness of firms to provide training depends on the one hand on firm-related factors such as firm size, the industry and the qualification structure of the workforce. On the other hand external factors are also responsible, such as the availability and quality of potential apprentices, competition from other employers and also training regulations imposed by the state. The paper uses empirically the fact that the Swiss firms which could provide training are exposed to highly different influences from region to region, with the exception of the training regulations, which apply at national level. In Switzerland therefore, in addition to regional demographic differences, there are also considerable regional differences with regard to the education system, which are caused by the strongly federalist system. However, the labor markets in Switzerland, too, demonstrate highly different conditions as a result of both geographical and linguistic boundaries. This regional variance in the basic conditions for firms that could provide training is exploited in this paper in order to be able to examine its impact on the decision to provide training. In addition the paper makes an innovative contribution to the existing literature by dividing Switzerland into regions not according to the political borders but according to the geographical and economic realities.

The paper shows that the academic quality of the school-leavers has, as expected, a significant impact on the training activity of firms. If firms which are potentially willing to provide training have to expect lower-quality apprentices, this has a negative influence of the expected cost-benefit ratio of training, caused firstly by increased expenditure on training and secondly by lower productivity on the part of the apprentices.

However, also the expansion of full-time education institutions, in particular grammar schools, has a significant negative impact on firms' willingness to provide training. The results show that an increase in the rate of school-leavers completing their upper secondary school leaving certificate by 10 percentage points lowers the training probability of firms in a region by 3.8 percentage points. This effect arises because young people who are more academically inclined tend to complete full-time upper-secondary schooling and therefore the average quality of the applicants for apprenticeships in the dual training system declines. As a consequence, firms in regions with a well developed full-time education system provide fewer apprenticeship places because the expected costs of the training are higher.

Furthermore a reduction in the number of applicants for apprenticeships also leads to poorer matching between applicants and firms. It can be seen that a 10 % decrease in the population of young people in a region reduces firms' willingness to provide training by 0.8 percent. This result has a significance for the coming years that should not be underestimated, since the coming years will be characterized by a drop in the number of school-leavers due to demographic factors. This drop will not automatically lead to less strain on the apprenticeship market, as the number of apprenticeships offered will also fall along with the decrease in the number of young people.

In addition to the quantity and quality of the applicants for apprenticeships, the number of local firms in the same industry also has a negative influence on the training behavior of an individual firm because this increases the danger of an apprentice being poached away by

another firm after he/she has completed training. A 10-percent increase in the number of firms leads to a 1.9-percent lower willingness to train in the firms. The danger of poaching is particularly relevant for a firm if the costs of training are not covered during the apprenticeship period. This result clearly underlines once again the importance of a balanced cost-benefit ratio of an apprenticeship programme. If this can be achieved during the apprenticeship period, firms are better protected against losses that can arise when their own apprentices are poached away after they have completed their training.