

### 3.2 THE SHORT-TERM LABOUR MARKET EFFECTS OF APPRENTICESHIP TRAINING IN VOCATIONAL SCHOOLS

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The main goal of apprenticeship training is the acquisition of vocation-specific knowledge, but it can also facilitate the employment of fresh graduates. According to the majority of studies examining primarily Western European education systems with a dual structure, apprenticeship training makes it easier for youth – especially youth with less favourable family backgrounds who do not apply for higher education – to enter the labour market (*Breen, 2005, Müller-Shavit, 1998, Wolter-Ryan, 2011*). These studies emphasise mostly the fact that in countries with dual education systems, that is, where school-based theoretical education is combined with practical education conducted at companies, the initial unemployment rate of students in vocational training is lower, and young employees do higher quality work than those in countries with non-dual vocational training. This is attributed to the fact that apprentices, essentially, step into the labour market sooner, and to the fact that it is easier to teach academically less successful youth the skills that are important for the labour market in real workplace conditions. From a public policy perspective, it would be important to know whether it is the early entry or the development of students' skills that leads to these initial differences.

This subchapter summarises the results of *Horn (2014)*, which looked at the effects of Hungarian apprenticeship training using the Tárki–Educatio Life-course Survey on the 2006–2012 period (before the substantial rearrangements of the vocational training system that began in 2011).<sup>1</sup> After the years of initial training, students in vocational schools had to participate in compulsory, practical vocational training, which they could choose to undertake at the school, at training workshops outside of school, or at a company (organised individually or by the school). The primary focus of this study is to seek answers to the following question: do students of vocational schools who spent their practical vocational training at private companies (i.e. apprentices) have better labour market chances in the short term than their companions with similar characteristics who, instead of a company, spent their internship at school (i.e. those who did not take apprenticeships)?

#### Data and methodology

The analysis uses the database of the Life-course Survey of the Tárki Social Research Institute, which followed a sample of 10,022 taken from the population of eighth-grade students in 2006 for six years.<sup>2</sup> These students were surveyed in every year of their school career, plus for an additional two years

<sup>1</sup> During the period examined, the period of general education in typical Hungarian general grammar schools and vocational secondary schools was four years, while vocational schools only provided two years of general education (foundation training) to students, with the next (typically) two years being dedicated to preparation for the chosen vocation. This structure was modified significantly via Act CLXXXVII of 2011, under which the length of training in vocational schools has been decreased to three years, and students receive vocational training already from the 9th grade. In September 2016, former vocational schools were renamed to vocational secondary schools, and former vocational secondary schools were renamed to vocational grammar schools. This paper uses the former names of the schools, effective at the time of data recording.

<sup>2</sup> In the sample, low performing students are over-represented. Both this and panel sampling losses are corrected for by weighing so that the survey can be representative for the entire population.

– in the years of their labour market entry or their further education following the secondary level. The responses contain the monthly data of any regular work carried out during the last school year and in the two years following graduation, thus providing us with a more or less continuous picture of the labour market integration of students. The 2006 scores of the eighth-grade mathematics and reading comprehension tests of the national survey on competences are available for all students participating in the panel survey, as well as data on their school careers and family backgrounds. Making use of the variance between the distribution of company and school based training placements, this subchapter attempts to estimate the effect of an internship spent at a company on initial labour market outcomes. As there was a significant number of students at vocational schools who conducted their internship at the school or at the school's training workshops, comparing similar students provides an opportunity for analysing the labour market effect of an apprenticeship spent at a company instead.

The distribution of training placements at companies among the applicant students was probably not arbitrary: companies could select from among students, in hopes of better labour force (cf. *Bertschy et al*, 2009). The analysis of the Life-course Survey suggests that application to the apprenticeship training was indeed not arbitrary, but was much more related to the characteristics of the local labour market than to the individual characteristics of students.<sup>3</sup> Consequently, the estimates presented below probably provide a good estimate of the labour market effect of the apprenticeship training.

### **The relation of the apprenticeship to employment after graduation**

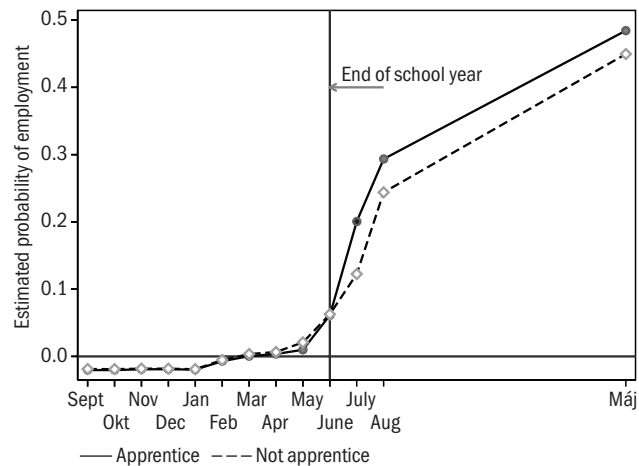
Even though in our analysis we applied various probability models in order to expose an association between the apprenticeship training and employment, there was no statistically significant difference in any of the cases between the employment probabilities of those who did and those who did not spend their internship at a company, one year after graduation. Although there was a minor difference between the students of the two groups, the estimated effect size was only 6 percentage points, and statistically was not significant. And as for students entering the labour market solely (in employment or unemployed), we not only got a statistically not significant result, but the result was less significant from a public policy perspective as well (~3 percentage points).

As can be seen in *Figure 3.2.1*, the probability of employment one year after the completion of school in June is approximately 6 percentage points higher in the case of apprentices compared to those who were not apprentices, but this is not significantly different from zero. Additionally, it has become clear that immediately after the end of the school year, the employment probability of both apprentices and those who did not apprentice increases significantly. Although directly after graduation the employment probability of appren-

<sup>3</sup> The selection between training placements acquired individually versus those organised by the school can be examined in a similar way among apprentices. Results show that although a few individual characteristics do have an effect of minor significance, they disappear when the effect of the local labour market is considered (county × vocational group fixed effects).

tices is slightly higher, this significant difference disappears very quickly, one month after graduation, and the remaining difference continues to decrease.

Figure 3.2.1: The expected employment probability of students of vocational schools, 2011-2012



### The form of apprenticeship training placement and the size of the company

Examining the differences between apprentices and those who did not take apprenticeship on the basis of how the training placement was arranged and the size of the company, we gain insight into the mechanisms behind the correlations as well. Apprentices trained on site at medium and large companies (over 50 employees) who arranged their placements individually were much more likely to find a regular job directly after graduation – in July and August – than their peers with similar individual characteristics, within the same county and vocational group. This strong significant difference, in the case of large companies, can be explained by several factors. From one perspective, it is possible that large companies are much more committed to the training of apprentices than small companies, since they typically take a longer term view and are aware of the fact that their productivity depends substantially on the productivity potential of the local labour force. What contradicts this hypothesis of differing training efficiency by company size is the fact that these differences are not visible in the case of training placements organised by schools. What is much more likely is that within a given industry, the difference is not between training structures, but in selection mechanisms. A plausible explanation is that it was the more motivated vocational school students who applied to large companies on an individual initiative,<sup>4</sup> and the effect of their motivation is also visible in their labour market outcomes later on.

<sup>4</sup> This is also confirmed by the observation that students completing their traineeship at training placements acquired individually are more likely to find a job directly after graduation than apprentices completing their traineeship at placements organised by the school, regardless of company size.

Overall, what is more likely suggested by the data is that in Hungary, there was – even in the very short term – no difference between the labour market success of vocational school students who did and those who did not spend their internship at a company.

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