

Apprenticeship training in Germany - investment or productivity driven?

The German dual apprenticeship system has come under pressure in recent years because enterprises have not been willing to offer a sufficient number of apprenticeship positions. A large amount of theoretical literature argues that in Germany firms are willing to invest in apprenticeship training, i. e. to incur net costs during the apprenticeship period. This is seen as an important requirement for providing apprenticeships in several occupations at all. Due to the specific German institutional situation, firms have the opportunity to recoup the net costs after apprentices have gained their qualification if they stay in the firm. Important arguments for the opportunity of firms to recoup their net costs incurred during the apprenticeship period are a large share of apprentices staying in the firms after the apprenticeship period, the market power of firms and information asymmetries that allow firms to pay a wage below productivity for “home-grown” skilled employees. It might be therefore argued that the gap on the apprenticeship market could be reduced if more German firms were willing to incur net apprenticeship costs (an indication of investment orientation) instead of trying to cover the training costs already during the time before the apprentice has gained his or her qualification (an indication of productivity orientation).

Until now no objective evidence has been available on the investment versus productivity orientation of German firms when it comes to their decision to provide apprenticeships. So far only the net costs of specific training occupations have been calculated on the basis of a limited number of interviews with managers on specific occupations. In these interviews, training firms were asked directly about their costs and benefits while non-training firms had to indicate their potential costs and benefits. This approach is, however, prone to measurement error.

A more reliable assessment of the net costs incurred during apprenticeship training might be achieved by estimating the costs and benefits on the basis of representative firm profit regressions. This paper therefore investigates for the first time whether German enterprises do indeed incur net costs on average during the apprenticeship period, including data from firms with and without apprentices. This is done by calculating whether the impact of (an increase in) the share of apprentices on contemporary net revenues minus wage costs is negative. A positive contemporaneous impact of the share of apprentices or the change in this share is interpreted as productivity orientation. If an increase in the share of apprentices decreases contemporaneous profits per employee (and increases lagged profits per employee), this is interpreted as investment orientation.

This paper uses the representative linked employer-employee panel data of the IAB (LIAB) and takes into account possible endogeneity of apprenticeship training intensity and unobserved heterogeneity in the profit estimation by employing panel system GMM methods. An increase in the share of apprentices in the years 1997-2003 had neither a contemporary nor a lagged effect on profits per employee. This is interpreted as a first indication that most establishments in Germany indeed do not invest more in apprentices during the apprenticeship period than the apprentices’ productivity effect. This evidence is in contrast to previous studies for Germany that indicate net costs for most occupations. Future research will have to show whether this result is genuine or a result of a mixture of occupations with net costs and other occupations with net benefits during the apprenticeship period.