

# VOX

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## Vocational education facilitates entry into the labour market but hurts employment at older ages

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*Does vocational education have advantages over general education? This column presents new evidence suggesting that when economies change rapidly and the full life-cycle is taken into perspective, this advantage comes at the disadvantage of reduced employment opportunities in old age.*

Responding in part to the economic downturn, the European Commission (2010) recently issued the Bruges Communiqué that called for enhanced vocational education and training (VET). It argued: “If Europe is to maintain its position as the strongest exporter of industrial products in the world, it must have world class VET. In the knowledge society, vocational skills and competences are just as important as academic skills and competences.” Little existing evidence, however, addresses the full implications of this policy conclusion, leaving doubts about whether this idea is leading Europe in the right direction.

### **Education type and life-cycle employment opportunities in rapidly changing conditions**

Countries differ substantially in the orientation of their education programmes. Some countries, in particular in Europe, stress vocational education that develops specific job-related skills in order to prepare students to work in specific occupations. Other countries, like the US, emphasise general education that provides students with broad knowledge and basic skills in mathematics and communication, and serves as the foundation for further learning on the job.

The EU perspective on VET is particularly interesting given the suggestion by Krueger and Kumar (2004) that the slower long-term growth of European economies compared to the US may, in fact, be the result of Europe’s greater reliance on vocational education as opposed to more general education. Firms would be slower to adopt new technologies when it is more costly because their

workers with more vocational education are less able to use them.

A complementary perspective is found on the labour market side of the issue. Virtually all discussion of vocational education emphasises its potential advantages in easing entry into the labour market by youth (e.g. Ryan 2001). But there is the other end of the market. If people receive skills that are finely tuned to employment opportunities, they might not be particularly prepared to adjust to new technologies. Thus, with higher growth rates and faster technological and structural change, people with vocational training may be more likely to be out of the labour market later in the life cycle.

## **New international evidence**

The absence of empirical analysis on this important question is understandable.

- First, in most countries there are noticeable differences between those entering into vocational education and those pursuing general education.
- Second, since many countries place vocational education within a general, country-wide arrangement, understanding its overall effect requires looking across countries.
- Third, there are huge measurement problems, because what is vocational education in one country might not look much like that in another.

In recent research we turn to international comparisons to test the proposition that the life-cycle impact of vocational education might be quite different from that observed at entry into the labour market (Hanushek et al. 2011). We rely on unique data on labour-market experiences of people at different ages and in different countries collected in the mid-1990s as part of an OECD-sponsored venture. The International Adult Literacy Survey (IALS) provides survey data for 18 countries, with information on some 15,000 workers between the ages of 16 and 65. This permits us to compare the life-cycle employment patterns of people with different educational backgrounds.

Our general strategy is to compare, within each country, the relative employment rates of old and young people with general education to those for people with vocational education. A key element of this “difference-in-differences” approach is confirming that today’s old people provide a good proxy for what today’s youth will look like in a few decades. For this, the IALS data are particularly useful because we have individual assessments of mathematics and reading skills that are valued in the labour markets, along with a variety of family background factors that might influence educational paths of students. We also know how the overall reliance on general and vocational education in a country has changed

over time. Among other things, the data allow us to match each individual with vocational education to an individual with general education who is observationally comparable in terms of tested skills, family background, age, and years of education.

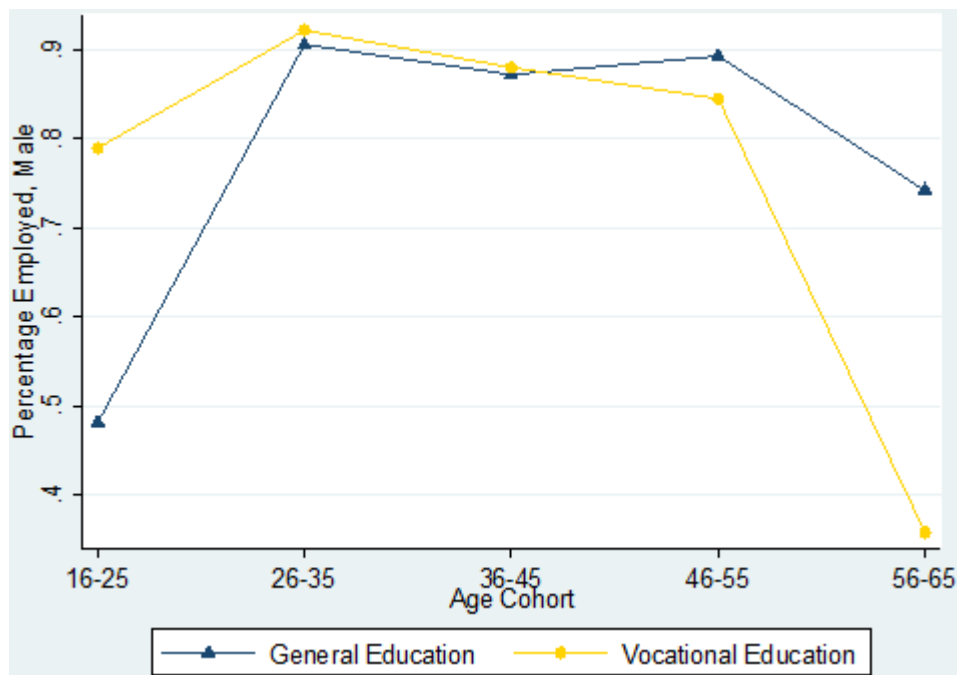
## **Over the life-cycle, the advantage of vocational education turns into a disadvantage**

When we go to the data, we indeed find clear evidence that the initial labour-market advantage of vocational relative to general education decreases with age. There is a trade-off between short-term benefits and long-term costs of vocational education. The skills generated by vocational education appear to facilitate the transition into the labour market but later on become obsolete at a faster rate. Within the general evidence, two findings stand out.

- First, the pattern of reduced employment with age for those with vocational education holds across the sampled countries.
- Second, this pattern is more significant as countries enter into more intensive programmes involving greater reliance on training in businesses as opposed to schools.

Across all of our sampled countries, employment rates are higher for youth with vocational education, but this turns around by the age of 50. The employment patterns are most pronounced in the “apprenticeship countries” with combined school and work-based education programmes (Denmark, Germany, and Switzerland in our data) and least noticeable in the countries with no formal system of vocational education such as the United States. The figure displays the employment patterns for the three “apprenticeship countries,” and the lower employment at older ages is very apparent.

**Figure 1.** Life-Cycle Employment by Education Type in “Apprenticeship Countries”



*Notes:* "Apprenticeship countries" are Denmark, Germany, and Switzerland. Data from the International Adult Literacy Survey (IALS). Source: Hanushek, Woessmann, and Zhang (2011).

The employment patterns do not, however, answer all of the questions. Is the advantage of the early employment sufficient to make up for the later period of less employment for those with vocational education? An overall answer comes from comparing the life-time earnings of those with vocational and general education. When we calculate present values of earnings (discounted at 3%) for a young person, we find that lifetime earnings in vocational education are larger in Switzerland, but lower in Denmark and Germany.

Interestingly, Denmark and Germany had noticeably higher growth rates of their economies over the past half-century compared to Switzerland. This comparison is consistent with the idea that those with general education are more adaptable to changed economic demands.

## In dynamic economies, policy needs to consider the full life-cycle

These calculations do not give a full benefit-cost picture for either the government or the individual, because they neglect the stream of retirement and social safety-net funds. But, they do offer some caution about policies that concentrate just on the current employment situation and that ignore the dynamics of growing economies.

## References

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