



## JUGEND – BILDUNG – ARBEIT

Wie Raum und Herkunft die Integration in Bildung  
und Beruf strukturieren  
(JuBilA)



**ABSTRACT  
BAND**

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# Session 1

## **S1-B: Transitions into VET: Space and Origins (Chair: Brigitte Schels)**

*Zeit: Donnerstag, 20.04.2023, 10.45 - 12.15 Uhr  
Ort: Amerika-Zimmer*

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### **Place of residence does matter for educational integration: The relevance of spatial contexts for refugees' transition to VET in Germany**

Franziska Meyer, Oliver Winkler (Martin-Luther-Universität Halle-Wittenberg)

### **Regional differences in digitalization and their impact on young people's status attainment in vocational education and training (VET)**

Jonas Detemple (Bundesinstitut für Berufsbildung, BIBB/Universität Bamberg), Helen Hickmann (Bundesinstitut für Berufsbildung, BIBB), Alexandra Wicht (Bundesinstitut für Berufsbildung, BIBB/Universität Siegen), Per Kropp (Institut für Arbeitsmarkt und Berufsforschung, IAB), Barbara Schwengler (Institut für Arbeitsmarkt und Berufsforschung, IAB)

### **Trial and Error in Higher Education: Does withdrawal from a bachelor's program harm young people in the search for an apprenticeship?**

Andrea Forster, Martin Neugebauer (Freie Universität Berlin)

## S1-B: 2 Regional differences in digitalization and their impact on young people's status attainment in vocational education and training (VET)

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### Motivation and research question

Technological change has led to far-reaching structural changes in the labor market, e.g., increased demand for highly skilled labor (Acemoglu, 2002). It can be assumed that the spread of digitalization is shaped by societal and regional structures and barriers. Moreover, digitalization has often been associated with general labor market outcomes, but its specific impact on vocational education and training (VET) remains unclear. Against this background, we ask whether the level of digitalization in the region affects young people's status attainment in VET.

### Theoretical framework

The theory of skill biased technological change describes a rising demand for highly skilled workers as a result of technological progress (Acemoglu, 2002) and has been tested empirically for different countries using a variety of indicators for automation, innovation, or digitalization (Acemoglu & Restrepo, 2020; Frey & Osborne, 2017).

Following rational choice theory, young people self-select into occupations to maximize their utility, considering external factors and their individual cost-benefit assessment. There is evidence that regional occupational structure influences job aspirations, transitions, and access to the VET system, e.g. by providing opportunity structures that influence the probability of success (Flohr, Menze & Protsch, 2020; Hillmert et al., 2017).

Occupational attainment within the German VET system strongly depends on school leaving certificates (Beicht and Walden, 2018). However, following job competition theory (Thurow, 1975), the growing supply of high-skill occupations and VET positions using digital technologies could lead to a change in companies' hiring practices toward recruiting people with lower educational qualifications, if the most qualified people are not enough to fill the vacancies. Moreover, school leavers with higher educational qualifications are more likely to attend tertiary education and are, on average, more spatially mobile (Granato et al., 2015). Regional differences concerning digitalization should therefore especially influence school-to-VET transitions of people with medium and low school leaving certificates.

Moreover, the German labor market is highly segregated by gender (Charles & Bradley, 2009). Typically male-dominated technical occupations (Thébaud & Charles, 2018) with relatively high use of digital technologies appear to be more affected by digitalization (Spitz-Oener, 2006). For this reason, we expect the impact of regional digitalization to be stronger for men's status attainment in VET.

### Data and Methods

This study focuses on young people's transition from secondary school to VET, using longitudinal data from the National Educational Panel Study (NEPS; Blossfeld & Roßbach, 2019). The sample consists of school-leaving cohorts from 2010 to 2020 (N = 7,649). We merged this data with a newly developed indicator of regional digitalization at the level of German districts (NUTS-3) which is based on administrative data sources (Federal Statistical Office, TÜV Rheinland, EU Klems, the Federal Office for Building and Regional Planning, and the German Economic Institute).

We capture the attained socioeconomic status of the VET position as a metric variable indicated by the occupation coded with the latest International Socio-Economic Index of Occupational Status (ISEI). Using confirmatory factor analysis (CFA), we identified regional digitalization as a latent factor. The following indicators were used to estimate factor scores: share of households with broadband coverage, share of German website domains per capita, average IT-capital of firms, share of employees in scientific IT and service occupations, and registration of digitalization patents.

We applied general linear models with cluster-robust standard errors at the level of training market regions (Kosfeld & Werner, 2012) to predict status attainment among youth entering VET. To analyze heterogeneities in the associations between status attainment and regional digitalization by education and gender, we estimated interaction effects. We applied multiple imputations to deal with missing values in covariates.

## Main findings

In line with our theoretical expectations, the multivariate results show a positive association between digitalization and status attainment in VET, with more precise predictions for urban districts. While females attain a higher VET status on average and independently of regional digitalization, males are more likely to close this gender gap in regions with higher levels of digitalization. The situation is similar with education: in highly digitalized regions, young people with an intermediate school leaving certificate attain just as high a VET position as young people with a university entrance certificate. However, digitalization plays a less decisive role for young people with lower levels of education. Young people with a university entrance qualification end up in VET occupations with a higher socioeconomic status anyway, regardless of regional digitalization.

## Conclusion

Regional digitalization marks a new fault line of social inequality in the transition from school to VET. At the same time, it has the potential to mitigate existing social inequalities in this transition in terms of gender and education. However, the disadvantage of young people with low levels of education persists regardless of digitalization.

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