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New Determination of the Value of Vocational and Higher Education? Employees' Educational Choices, Careers and Labour Market Outcomes in Germany

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Abstract

This paper aims to evaluate the adequacy of employees' job requirements compared to their qualification and to identify typical qualification sequences and career paths in the commercial field. The results aim to contribute to the debate on the relevance of vocational qualifications in the labour market, driven by the trends of academisation in some occupational fields. The analyses are carried out based on the data from the follow-up survey to the BIBB/BAUA Employment Survey of 2018. With regard to qualification-adequate employment, the results show sector-specific differences. Overall, qualification adequacy is higher in the tourism and banking sectors than in trade and logistics. The quantitative analysis of typical training sequences in the four sectors also confirms the important significance of professional career paths in trade and logistics.

Keywords

educational choices, vocational and academic career paths, academization

1 Introduction

The results derive from a project, which focuses on the alleged competition between vocational, and higher education. This paper aims to contribute to the debate on the relevance of vocational qualifications in the labour market, driven by the trends of academisation in some occupational fields. The focus of this paper lies on the identification and explanation of typical qualification sequences and career paths. Assuming an influence of the industry on educational pathways a selection of four branches was investigated: the trade, banking, logistics and tourism sectors. They were chosen because all of them provide career paths for academically as well as vocationally qualified employees. Furthermore, the chosen sectors are characterized by different occupational requirements and work environments.

The usability of educational qualifications in the labour market can be estimated by various aspects, such as income, employment status, position etc. Within this project, the companies and the individuals both evaluated the usability of academic and vocational qualifications in comparison. The theoretical background for their choices is formed by rational choice theory (Arrow, 1989; Esser, 1990) as well as the signaling (Spence, 1973) and screening (Stiglitz,



1975) approach. These theoretical approaches try to explain matching processes and recruiting decisions on the labour market.

2 Methodology

In this paper, analyses of educational pathways are carried out based on the data from the follow-up survey to the BIBB/BAUA Employment Survey of 2018. This survey focuses on core employees, which are people who are in paid employment for at least ten hours per week. The samples of the cross-sectional surveys, which have been conducted at intervals of six to seven years since 1979, most recently included about 20,000 participants. The data are representative for all employees in Germany. In addition to information on up to five completed training courses and the sector of the company, which were used for the analyses described here, they also contain information on activities performed, requirements, knowledge, working conditions, mental and physical stress and more (Hall et al. ,2015; Rohrbach-Schmidt/Hall, 2013).

Despite the approximately 20,000 people in the sample, there are unfortunately not enough cases included to allow us to trace the most frequent educational and career paths into a senior specialist or middle management position in all of the four selected sectors. In the 2017/18 survey, the occupations of the sectors range between 424 (tourism) and 1,281 (trade), which corresponds to weighted shares of between 2.9 % and 7.4 % of all employees. In the follow-up survey to the 2017/18 survey, the figures range between 146 (tourism) and 453 (trade).

In the following analyses, the aim is to examine typical training sequences in the chosen sectors, which means they were proportionately most frequently followed. However, the number of cases does not allow these to be considered separately for the four sectors. Hence, a distinction is made between four types of qualification: vocational training, further training, academic training at Bachelor's or diploma (university of applied sciences) level and academic training at Master's level or higher. 77.4 % of the participants in the sample have completed vocational training (school-based or dual) as their first training, equivalent to about 1.3 million employees. Smaller proportions were employed with Master's degrees (5.9 % or 102,000) and Bachelor's degrees (4.5 % or 77,000).

3 Results

3.1 Qualification and level adequacy

The utilisation of learned knowledge and skills can be represented in the employment survey with an indicator that reflects the respondents' subjective assessment of the extent to which the current job (still) has something to do with the last training (table 1). In the field of tourism (22.4%), a roughly average proportion stated that the job corresponds to what the training prepared them for. In the field of banking, the proportion of 32.7 % is clearly above average; here, the (vocational) training courses that prepare for corresponding activities in this field seem to have a good usability. In both sectors (banks 45.0 % and tourism 40.8 %), the proportion of those who still see a relationship to the training in terms of content, but no correspondence is also above average. In trade, the proportions are average overall. In logistics, on the other hand, 53.2 % of those who see no connection between the content of their training and their current occupation predominate. Table 1 shows the usability of the skills and knowledge acquired in training and the fit between the highest level of training completed and the level of training required in the current job.

Table 1

Relationship between current occupation and most recent training by sector

	Sector (shares in %)				
	Trade	Logistics	Banks	Tourism	Total
Activity corresponds to what the training prepares for	24.0	17.7	32.7	22.4	23.1
Activity is related to training	34.5	29.1	45.0	40.8	35.1
Activity has nothing to do with training	41.5	53.2	22.3	36.8	41.8

Note: Source: BIBB/BAUA EMPLOYMENT SURVEY 2018 with follow-up survey, weighted, own calculations.

For upper professional and middle management positions (see Table 2), the case numbers are only of limited significance, especially for employees with advanced training. In the even more highly occupied cells, there is a preponderance of those who state that their training prepares them appropriately for the job. In comparison, only an average number of university graduates perceive this to be the case; the proportion of those who state that they are "only" related is above average here (both for Bachelor and Master qualifications). Overall, most of the employees in the commercial professions (44.6 %) state that their training is related to their jobs.

Table 2

Content fit for professionals and managers

	Dual or school-based vocational training	Advanced training	Bachelor, university of applied science diploma	Master, university training	Total
Activity corresponds to what the training prepares for	20	15	10	28	73
	25.5	29.0	13.0	32.6	100.0
	18.1	54.8	25.4	28.8	27.9
Activity is related to training	45	17	21	44	127
	39.8	10.5	15.1	34.6	100.0
	45.1	31.7	47.2	48.8	44.6
Activity has nothing to do with training	35	6	18	18	77
	52.6	7.3	14.3	25.8	100.0
	36.7	13.6	27.5	22.4	27.5
Total	100	38	49	90	277
	39.3	14.8	14.3	31.6	100.0
	100.0	100.0	100.0	100.0	100.0

Note. Source: BIBB/BAUA EMPLOYMENT SURVEY 2018 with follow-up survey, weighted, own calculations; italic: cells with *n* under 20.

The formal fit or level adequacy provides information about possible differences between the highest qualification of an employed person and the job requirements. Both are subjective statements, one about the training completed, which can be assigned to a qualification level, and one about the training usually required, which are assigned to the same levels. Table 3 compares the training completed with the training required. The differentiated levels are "semi-skilled/unskilled", "vocationally trained" - this includes dual and school-based training, "further trained" - this includes regulated further training and "academically trained" - whereby this category no longer distinguishes between Bachelor's and Master's degrees, all academic degrees are included here

Table 3
Level adequacy

		Qualification (Shares in %)	Requirements (Shares in %)			Academi- cally trained
			Semi-skilled/ unskilled	Vocationally trained	Further trained	
Trade	Semi-skilled/unskilled	12.2	61.8	37.8	0.0	0.5
	Vocationally trained	69.2	23.4	73.7	1.4	1.5
	Further trained	5.1	15.5	55.5		1.4
	Academically trained	13.6	23.9	27.7	3.9	44.5
Logistics	Semi-skilled/unskilled	12.9	68.2	31.0	0.4	0.4
	Vocationally trained	69.9	36.5	57.5	4.5	1.5
	Further trained	5.0	12.0	47.6		7.9
	Academically trained	12.3	21.5	23.9	3.0	51.6
Banks	Semi-skilled/unskilled	3.7		48.8	0.0	18.3
	Vocationally trained	50.3	3.5	82.6	3.8	10.1
	Further trained	15.4	0.8	69.9		17.0
	Academically trained	30.7	2.4	27.9	12.0	57.7
Tourism	Semi-skilled/unskilled	22.0	73.0	27.0	0.0	0.0
	Vocationally trained	59.8	31.8	65.2	1.5	18.5
	Further trained	5.3	5.9	66.6	21.2	8.6
	Academically trained	12.9	48.1	31.9	1.5	18.5
Total	Semi-skilled/unskilled	8.9	59.1	31.7	3.6	5.6
	Vocationally trained	55.6	17.7	73.1	4.7	4.4
	Further trained	7.6	5.1	51.9	34.4	8.6
	Academically trained	27.9	7.1	14.6	3.7	75.0

Note. Source: BIBB/BAUA EMPLOYMENT SURVEY 2018 with follow-up survey, weighted, own calculations; grey: values for cells with up to 20 respondents.

The results show high rates of fit for the levels of both vocationally and academically trained. For example, of the 55.6 % who are vocationally trained, 73.1 % work in a job that also requires this level. Among the academically trained, the fit corresponds to 75.0 %. Where the number of cases allows for a representation of the fits, there are certainly deviations from the cross-sectoral distribution of all employees. For example, in all four sectors, the proportion of academically trained workers who fit is lower than the average. For those with vocational training, there is an average frequency of matching in the trade sector. In the logistics and tourism sectors, employees with such training tend to be overqualified, i.e. employed in jobs for which no training is required (36.5 % and 31.8 % respectively). In the banking sector, on the other hand, the fit for those with vocational training is above average at 82.6 %. In the logistics and trade sectors, employees appear to be employed below their qualifications (fields highlighted in green in each case).

3.2 Training sequences

For the trade sector, the 2018 survey reveals "typical" training sequences as shown in Figure 1. Almost nine out of ten (89%) of the respondents working here start with vocational training. The proportion of entrants with academic training is rather low at just over 11 %. Interestingly, in 16 % of the cases of those with vocational training, a further vocational training follows as a second training, 5 % follow a further vocational training, a similar number (4 %) a BA degree. Overall, the vocational qualification pathway seems to be used frequently in the trade sector.

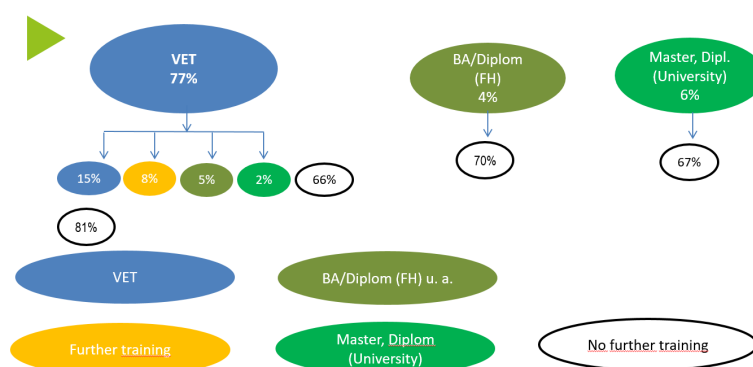
The results regarding the most frequent training paths in the banking sector show that the financial services sector has the highest proportion of academics overall compared to the other

sectors, but at the same time advanced training is of above-average importance. While the proportion of those who start with vocational training is similarly high as in the trade sector (81 % here, 89 % there), there is a clear difference in the banks in that there are higher proportions of people who start with a bachelor's degree or comparable degree (9 %) or another academic degree (10 %).

The high proportion of people who have completed upgrading training after initial vocational training (20%) in comparison to the rest of the sector once again underlines the relevance of (regulated) further training in this sector. On the other hand, the results can be interpreted to mean that in the banking sector academic and vocational training paths could be more or less on an equal footing. 9 % of the employed persons with entry-level vocational qualifications completed a Bachelor's degree or comparable training following their initial vocational training. To some extent, this points to complementarities in the employment of people with different educational backgrounds.

For a better classification of the sector specific results presented, the comparison with cross-sectoral training sequences illustrates how much the sectors examined here differ in part (Figure 1). For example, in all sectors the proportion of those who start with academic training above the bachelor's level is 6 %. About three out of four start their careers in these sectors with vocational training.

Figure 1
Cross-sectoral training sequences



Note. Source: BIBB/BAuA Employment survey 2018, weighted, own calculations; Sectors: Retail and Trade, Finance, Tourism, Logistic.

4 Conclusion

With regard to qualification-adequate employment, the analysis of the Employment Survey data 2018 shows sector-specific differences. Overall, qualification adequacy is higher in the tourism and banking sectors than in trade and logistics. With regard to level adequacy, the analyses show that it is more likely that academically qualified employees have problems with the fit (i.e. work below their qualification level) than vocationally qualified have. This applies to trade, logistics and the financial sector in comparison to reference values of the overall economy (note: in the tourism sector, the insufficient number of cases does not allow any statements on this).

The quantitative analysis of typical training sequences in the four sectors also confirms the important significance of professional career paths in trade and logistics sectors. For the financial sector, professional career paths with a high importance of sector-specific advanced training and at the same time academic qualification paths are significant in order to reach an upper specialist or middle management position.

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Biographical notes

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