Protsch, Paula; Solga, Heike

Article — Published Version

Going across Europe for an apprenticeship? A factorial survey experiment on employers' hiring preferences in Germany

Journal of European Social Policy

Provided in Cooperation with:
WZB Berlin Social Science Center

Suggested Citation: Protsch, Paula; Solga, Heike (2017) : Going across Europe for an apprenticeship? A factorial survey experiment on employers' hiring preferences in Germany, Journal of European Social Policy, ISSN 1461-7269, Sage, London, Vol. 27, Iss. 4, pp. 387-399, https://doi.org/10.1177/0958928717719200

This Version is available at:
https://hdl.handle.net/10419/182562

Article

Journal Of European Social Policy

Going across Europe for an apprenticeship? A factorial survey experiment on employers' hiring preferences in Germany

Journal of European Social Policy
2017, Vol. 27(4) 387–399

DOI: 10.1177/0958928717719200
journals.sagepub.com/home/esp
SAGE

Paula Protsch
WZB Berlin Social Science Centre, Germany

Heike Solga
WZB Berlin Social Science Center, Germany; Freie Universität Berlin, Germany

Abstract
Owing to the recent recession, the German apprenticeship model is once again praised for smoothing out school-to-work transitions. In line with the social policy shift of favouring education as a key means to combat youth unemployment, European Union (EU) recommendations and German national policies encourage young Southern and Eastern EU citizens to apply for apprenticeship training abroad. Yet, young people wanting to go abroad are not only *mobile young people* but also *immigrants*. Given the prevalence of ethnic disparities in the German apprenticeship system, the question arises whether employers would be willing to hire these newcomers. Using a factorial survey experiment, we investigate how employers rate applications from Spanish newcomers compared to those from young immigrant descendants of Spanish origin. The results indicate that newcomers are substantially less preferred than immigrant descendants born in Germany. Employers' expectations about newcomers' language skills and employers' interest in training for their own skilled labour force are key barriers to policies promoting apprenticeships abroad.

Keywords
Apprenticeship abroad, employer preferences, migration, transnational youth policies, vocational education and training

Apprenticeships abroad as social policy

Young people's labour market opportunities in Europe deteriorated enormously during the recent economic downturn, especially in Southern and Eastern Europe. In 2013, youth unemployment was more than

Corresponding author:
Paula Protsch, WZB Berlin Social Science Centre, Research Unit: Skill Formation and Labour Markets, Reichpietschufer 50, 10785 Berlin, Germany.
Email: paula.protsch@wzb.eu

50 percent in Greece and Spain but less than 10 percent in Germany and Austria – countries with a strong firm-based apprenticeship system (European Commission, 2013: 1). Research on previous economic crises, for example, in Spain, revealed that young adults' careers are not only more vulnerable than those of prime-age workers during the crisis but also affected after economic recovery (Verick, 2009). In general, unemployment in early careers potentially leaves long-term 'scars' (Bell and Blanchflower, 2009; Chung et al., 2012; Verick, 2009).

Vastly in line with the idea of the social investment state (Giddens, 2000), the European Union (EU) as well as national governments see participation in education as one key measure to address the problem of youth unemployment and to prevent long-term scars. In this context, apprenticeship systems have become increasingly popular; they are seen as a means to reduce unemployment immediately (e.g. Scarpetta et al., 2010: 24) and, at the same time, to improve young people's skills as a long-term investment (Eichhorst et al., 2013: 16; Scarpetta et al., 2010: 27). Some argue that during the economic downturn, training mobility across countries is more effective than implementing firm-based training programmes in high quantity (and with high quality) in countries that were more severely hit by the economic crisis than others and did not have such a system in the first place (see Faraco Blanco et al., 2015: 10; Scarpetta et al., 2010: 4). Corresponding to this idea, several EU policy initiatives support transnational policies, that is, youth mobility for apprenticeships as a means to combat youth unemployment (Chung et al., 2012; European Commission, 2013).

Prominent examples are the *European Alliance for Apprenticeships* or the *EU Youth Guarantee Recommendation*. The EU initiatives are underpinned by country-level programmes, such as the bilateral German–Spanish government agreement 'on training and employment opportunities for about 5,000 young Spaniards who are supposed to come to Germany until 2017' (Eichhorst et al., 2013: 8). Since 2013, the *MobiPro-EU* programme by the German Federal Ministry of Employment and Social Affairs has supported young Europeans (aged 18–35) interested in moving to Germany to apply for firm-based internships, apprenticeships or, in case of labour shortage in particular occupations, for jobs. *MobiPro-EU* does not provide any employer subsidies but it provides financial resources for participants to top up apprenticeship wages and for travel expenses, additional learning support and participation in German language courses. Each year since 2013, the German Federal Employment Agency has registered more than 3000 apprenticeship applicants with foreign home addresses, most of them from Spain (Bundesagentur für Arbeit (BA), 2014, 2016). Until November 2014, about 7600 young adults – two-thirds are from Spain – participated in *MobiPro-EU*; of these, about 3170 entered into an apprenticeship contract. Presumably, these programmes are one of the reasons why Germany is among the most popular destinations for Spaniards (Arango, 2016: 4f; Faraco Blanco et al., 2015).

In this article, we investigate barriers to transnational social policies aiming at supporting cross-country training mobility. We chose Spain as the country of origin. For EU citizens, apprenticeship mobility is not legally restricted. Yet, contrary to mobility programmes for higher education, for which governments often have full responsibility, policies targeted at cross-country mobility for apprenticeships depend on employers' willingness to provide training places and, finally, on their hiring decisions. We therefore focus on the perspective of employers.

At least two barriers result from the fact that the success of these policies is dependent on employer participation. First, language skills requirements are known to disadvantage immigrants in the labour market (Heath and Cheung, 2006; Koopmans, 2016; Phalet and Heath, 2010). Concerning apprenticeships, German employers may expect language barriers to keep these youth from succeeding in the firm-based and school-based parts of apprenticeships. So far, we know little about language barriers. Research based on survey data had (if at all) to rely on self-assessed language skills. Field experiments on ethnic discrimination have held language skills constant. The quasi-experimental design of our study enables us to empirically disentangle applicants' language skills from ethnicity. We therefore move beyond previous approaches and investigate the language skills requirements by German employers more directly.

A likely second challenge is that these young Europeans, who are newcomers to Germany, are presumably migrating with the purpose of participating in training only. Thus, employers interested in long-term recruitment may be afraid that they will return to their home countries after completing the apprenticeship. With many German employers currently complaining about recruitment difficulties and quite a number of apprenticeship places remaining vacant – about 37,100 in 2014, for instance (Bundesinstitut für Berufsbildung (BIBB), 2015: 9, 411) – employers might nonetheless benefit from this new applicant pool. Against this backdrop, we study for the first time whether employers' willingness to offer newcomers an apprenticeship place is dependent on their training strategy. Following previous research on firms' participation in apprenticeship training, we differentiate between employers who provide apprenticeship places because they aim at cheaply substituting qualified workers and those whose main motivation is to retain their apprentices as regular employees after the training period.

Since the success of the above mentioned policies for apprenticeships abroad strongly depends on employers' willingness to provide training places and to hire immigrants, we investigate these two barriers. Using a factorial survey experiment, we ask *how German employers would perceive applications from young adults intending to migrate from Spain to Germany compared to applications from Spanish immigrant descendants*.[1] From a social policy perspective, this study enhances our knowledge on the potential success of the EU training-mobility recommendations by pointing at difficulties that are likely to occur. In addition, we will provide new insights on how language skills requirements in interaction with firms' training strategies result in respective hiring preferences.

The German dual apprenticeship system

The German dual apprenticeship system provides vocational education and training at the upper secondary level in more than 300 nationally regulated training occupations. All school leavers are formally eligible to apply for apprenticeships, but employers are free to set their own hiring criteria. The majority of apprentices have obtained the intermediate secondary school degree (*mittlerer Schulabschluss*) as school-leaving certificate and a substantial portion also have the university entrance diploma (*Abitur*). Employers and apprentices conclude a training contract for the duration of the apprenticeship, which is usually about 3 years. As part of the contract, employers pay social security contributions and the apprenticeship wages that are subject to collective bargaining agreements. There are no legal restrictions for recruiting EU citizens for apprenticeships.

Firms provide apprenticeship places on a voluntary basis. Two main reasons for their participation in the dual system can be distinguished (Dietrich and Gerner, 2008; Mohrenweiser and Backes-Gellner, 2010). Some firms employ apprentices, at least in part, to substitute for qualified workers. Here, apprentices are strongly involved in the firms' daily production process, although they still earn the lower apprenticeship wages. Only few of these apprentices are hired as regular employees after completing their apprenticeship. Instead, these firms tend to replace them by new apprentices. This indicates a *production training strategy*. A contrasting employer motivation for providing apprenticeship places is investing in their firm's future skilled labour force. Here, apprenticeships are a major personnel recruitment strategy, and hiring rates of former apprentices are high. This is called the *investment training strategy*. In Germany, the dual system is a major entry labour market because over 50 percent of all school leavers eventually start an apprenticeship (BIBB, 2015: 168), and more than 65 percent of apprenticeship graduates stay with their firm as regular employees at least for some months (Autorengruppe Bildungsberichterstattung, 2014: 290). For a more detailed description of the German dual apprenticeship system, see Protsch and Solga (2016).

Theoretical considerations and hypotheses

Migration research shows that in Germany, second-generation immigrants have lower chances of entering apprenticeships than natives. A number of reasons from the applicant and employer side have

been identified. Typically, immigrants have lower competences than natives, including German reading skills, lower educational attainment and less favourable network resources (Beicht and Granato, 2009: 15, 23; Autorengruppe Bildungsberichterstattung, 2012: 91, 96; Kalter, 2006; Stanat et al., 2010). In addition, employer discrimination against immigrants is assumed to play a substantial role in explaining the disadvantages immigrants face (Beicht and Gei, 2015: 18; Hunkler, 2016; Schneider et al., 2014). Firms' training strategies as a factor that is disadvantaging immigrants have been less studied. Similarly, research on ethnic disparities has focused on settled immigrants and not on people intending to migrate. The latter are, however, of major concern for the abovementioned policies on training mobility.

Given the findings that natives are usually preferred over immigrants, why would we expect employers to prefer Spanish immigrant descendants over newcomers from Spain? First, instructions in the classroom and at the workplace as well as apprenticeship exams are in German; likewise, customer contact and interaction with colleagues might require a certain level of German. Differences in *language skills* could therefore prove to be a major factor influencing the disadvantages confronting newcomers (Heath and Cheung, 2006; Koopmans, 2016; Phalet and Heath, 2010).

Second, employers use educational certificates as hiring criteria in the apprenticeship market (Protsch and Solga, 2015). Moreover, Damelang and Abraham (2016) have shown that employers prefer *German educational certificates over foreign credentials* because the latter have a lower information value, which means higher uncertainty about the actual competences of foreign-degree holders.

Third, as mentioned above, firms pursue different strategies with their participation in apprenticeship training. Employers who follow an *investment training strategy* and thus typically plan to hire their apprentices as regular employees after the training period should be more likely to show a higher preference for immigrant descendants compared to newcomers than employers following the *production strategy*. The former might fear that newcomers will return to Spain upon completing their apprenticeship if the economic situation improves. This assumption matches the goal of EU training policies, which envisage training abroad (e.g. in Germany) as individual skill enhancement and an investment in a skilled labour force to support the home country's economy.

These theoretical considerations result in the following hypotheses. Since immigrant descendants are native German speakers, newcomers are likely to be less preferred by employers if their level of German is substantially lower (*Hypothesis 1*). Moreover, newcomers should receive lower employer ratings if they have foreign educational certificates (*Hypothesis 2*). If newcomers have instead obtained German school-leaving certificates (at a 'German school abroad') and hence are also fluent in German, we expect them to be the favoured applicants among the newcomers. Yet, relative to immigrant descendants, their chances should vary by firms' training strategy: whereas firms pursuing a training production strategy are expected to not differentiate between immigrant descendants and fluent German-speaking newcomers, firms with an investment strategy are expected to have a preference for the former (*Hypothesis 3*).

In this respect, gender differences can be expected. Evidence based on survey data suggests that young women face difficulties when applying for apprenticeship places in certain (mainly male-dominated) occupations (Beicht and Walden, 2015). One explanation for this finding is that employers (statistically) discriminate against women (Aigner and Cain, 1977). They might, for instance, expect women to have a lower future labour market attachment than equally qualified men because of family responsibilities. In Germany, where female employment, in particular full-time employment, is rather low compared to other Western countries (Dieckhoff et al., 2015), gendered assumptions on labour market participation are indeed very likely. We will therefore consider potential gender differences related to *Hypothesis 3*.

In contrast to what we have argued so far, some theoretical arguments suggest that newcomers might receive *at least equal* employer ratings compared to immigrant descendants. Newcomers might compensate for poorer German language skills and employers' uncertainty about foreign educational certificates

Table 1. Vignette-level independent variables and controls.

Vignette dimension	Levels
Sex	1 Male; 2 Female; varied between respondents only
Immigrant group (Origin and language skills)	1. Immigrant descendant: Applicant born and raised in Germany; Family comes from Spain; Mother tongues: German and Spanish. 2. Newcomers: Applicant from Spain, wants to come to Germany – differentiated by a. fluent German speaker, applicant went to a 'German school abroad' in Spain. b. intermediate speaker, applicant had German classes in school plus an intensive language course. c. basic speaker, applicant had German classes in school.
Level and type of education	1. Intermediate secondary school degree 2. Upper secondary school degree (university entrance diploma) 3. School-based vocational training/technical occupation 4. School-based vocational training/sales & accounting occupation 5. Bachelor's degree/engineering 6. Bachelor's degree/business economics
Potential social integration	1. [yes] Relatives live in town; 2 [no] No information
Additional income	1. [yes] Applicant will apply for financial assistance to top up wage; 2. [no] No information

by having higher levels of education than the typical applicants in Germany. For our study, this educational compensation could be particularly relevant because the typical applicant in Germany has an intermediate secondary school degree and newcomers from Spain often have higher educational attainment than immigrant descendants (Faraco Blanco et al., 2015: 14; Seibert and Wapler, 2012).

Data and methods

Survey and experimental design

We designed a factorial survey experiment that was integrated into an employer panel survey in 2014 (the *BIBB Training Panel 2014*, doi: 10.7803/371.14.1.2.10, see Gerhards et al., 2016). This survey is representative of all firms that are located in Germany with at least one employee. We jointly refer to the respondents as 'employers'. They are company owners, managing directors or employees involved in human resource activities. In our analysis, we only include firms participating in the dual apprenticeship system. Factorial survey experiments, also called vignette studies, have been extensively applied in research on social judgements (Jasso, 2006; Wallander, 2009) and more recently in research on employer preferences (Damelang and Abraham, 2016; Di Stasio, 2014; Humburg and van der Velden, 2015).

In a computer-assisted interview mode, respondents were shown a note introducing the vignettes as short tabular descriptions of fictitious young people who submitted written applications for an apprenticeship in the firm's occupation with the highest number of apprentices. Hence, the vignettes (applicant profiles) were always rated with a specific, well-known occupation in mind; 136 different occupations were reported. The vignettes differ in a number of dimensions with multiple levels each (see Table 1). Sets of five vignettes were randomly assigned to employers who were asked how likely the particular applicant is to be invited to their firm for a follow-up selection stage, which usually is an employment test or job interview (Protsch and Solga, 2015). Respondents could differentiate their ratings on a 10-point scale from 1 (very unlikely) to 10 (very likely). Participation in the experiment was very high. Only three respondents rated none of the vignettes, and very few have missing values on single vignettes. Our analytical sample consists of 3289 vignette ratings by 661 employers (see online appendix for more information).

Factorial surveys may not compare to randomised field experiments (such as audit studies) in which

subjects are not aware that their behaviour and decisions are observed and which are often regarded as the methodological gold standard. Factorial survey designs facilitate, however, the consideration of multiple theoretically important dimensions simultaneously and they have several advantages over item-based questioning. When the right population is targeted (in our study, firms providing apprenticeship places), factorial surveys allow for an experimental investigation of preferences with relatively high external validity (Hainmueller et al., 2015). In addition, high internal validity can be achieved because respondents are randomly assigned to evaluate a set of vignettes describing individuals or scenarios that systematically vary on certain dimensions (Auspurg and Hinz, 2015). In our study, characteristics of fictitious applicants are varied to test their effect on employer ratings. This allows for disentangling factors that are often confounded in reality. For our research question, it is important to disentangle the effects of immigrant status and fluency in German – an endeavour that can hardly be accomplished by other approaches. Furthermore, vignette studies enable one to 'expand reality' to situations that do not (yet) frequently occur (Auspurg and Hinz, 2015: 10). As the integration of newcomers into the German apprenticeship system and labour market increases, the situation of assessing applications by newcomers might soon become part of everyday business. Moreover, in our study, we have tried to be as realistic as possible. We therefore asked employers how likely it is that they would *invite* an applicant to the next step in the hiring process – based on the information provided in the vignettes – and did not ask them how likely it is they would *hire* the applicants. Hiring decisions are based on several steps, including job interviews. That said, our findings may still be biased by social desirability to a certain extent resulting in higher ratings than employers would give in reality. In that case, our results would display a rather conservative measure of employer preferences concerning newcomers.

Variables and estimation method

The employer ratings differentiated on the 10-point scale define our *dependent variable*. Since the entire scale was substantially used, we are confident in treating the ratings as a metric variable (see Figure A1, online appendix). The different dimensions and the information given by the introductory note constitute the *independent variables and controls at the vignette level*.

The introductory note states that all applicants submitted cover letters and curriculum vitae (CVs), received good grades according to their educational certificates, were at least 18 years old (the legal age in Germany) and of Spanish origin. Furthermore, all applicants were unmarried. Applicant profiles were varied by sex, level and type of education, and immigrant group (see Table 1 for an overview). We differentiated whether the vignette person was an immigrant descendant with Spanish and German as mother tongues or a newcomer intending to move to Germany if the application was successful. Within the group of newcomers, the level of German takes on three different values: fluent, intermediate and basic speaker. The fluent German-speaking newcomers were operationalised as young people who went to a 'German school abroad' in Spain. Accordingly, they obtained German school-leaving certificates, which are based on the same standards and curricula as certificates granted by schools located in Germany (Federal Foreign Office, 2016; Kultusministerkonferenz (KMK), 2016). Thus, we can investigate whether newcomers who are fluent speakers of German and have an equivalent educational certificate are equally as favoured as immigrant descendants but we cannot strictly disentangle the effects of little knowledge of German and foreign certificates. As vignette-level controls, we varied the amount of financial resources potentially available to the applicant to top up the apprenticeship wage and the potential level of social integration, indicated by whether relatives live in town. Both factors are assumed to reduce the risk that employers are concerned about the higher likelihood of newcomers dropping out before completing their apprenticeship programme.

At the firm level, we measure firms' training strategy by their hiring behaviour in the previous year, that is, the percentage of apprenticeship graduates hired as regular employees.[2] We define firms that hired 75 percent and more as having an investment

training strategy and those that hired fewer or none as having a production strategy. The latter category includes firms with no apprenticeship graduate in the relevant year, which can be understood as an indication of little overall training commitment. We re-estimated our analyses with other hiring cut-off points (70, 80 and 85 percent). As these rendered very similar results, we only report the estimates for the 75 percent cut-off.

We also consider region (East and West Germany), and whether the respective apprenticeship occupation is male-dominated. Occupations were classified as male-dominated if, according to official statistics, at least 70 percent of apprentices are male (BIBB, 2016).

Table A1 (online appendix) displays descriptive statistics of all vignette-level and firm-level variables. Table A2 (online appendix) shows that correlations between vignette dimensions and firm-level variables are negligible, confirming the successful randomisation of vignette sets. Thus, the firm-level characteristics are not confounded with applicant characteristics, as would be the case in regular survey data. Accordingly, the estimates differ only minimally between regression models including and excluding firm-level variables or firm fixed-effects (see Table 2). To account for the nested data structure (i.e. each respondent rated five vignettes), we estimated linear multi-level regression models. All findings discussed are based on linear random-intercept models including all control variables.

Findings

As Table 2 shows, newcomers are on average significantly less likely to be invited for follow-up selection stages than immigrant descendants. Better German language skills, however, reduce this gap in employer ratings. According to the regression coefficients, the average ratings for fluent German-speaking newcomers are 0.5 points lower compared to immigrant descendants, but they are 1.7 and 2.2 points lower for newcomers with intermediate or basic levels of German, respectively. Hence, even those with intermediate German skills who studied German as a foreign language in school and did an additional intensive language course are at a considerable disadvantage (see also Figure A1, online appendix). The negative effects of intermediate and basic German skills are substantial; they are, for example, much larger than the effects of the vignette dimension on applicants' education. Therefore, *Hypothesis 1*, predicting that depending on their level of German, newcomers are less preferred than immigrant descendants, is strongly supported.

Figure 1 presents estimates for immigrant groups differentiated by educational attainment (see Table A3, online appendix for the model). Immigrant descendants with intermediate school degrees – the most typical educational attainment level apprentices in Germany have – on average receive the highest ratings (they are the reference group). Within each education group, ratings between immigrant descendants and fluent German-speaking newcomers with German school-leaving certificates differ less than the ratings between the latter and newcomers with fewer German skills. This seems to corroborate *Hypothesis 2*. Yet, we are unable to strictly distinguish within the group of newcomers whether it is the level of German or the foreign educational certificate that makes the difference. Moreover, newcomers in general, including those with higher educational attainment, receive lower ratings. Hence, newcomers are not able to compensate for other negatively presumed characteristics by higher educational attainment.

Figure 1 also reveals that the fluent German-speaking newcomers – who graduated from a German school in Spain and are therefore usually very fluent in German – are rated lower than immigrant descendants with the same level of education. They have attained German school-leaving certificates, therefore employers' uncertainty about foreign qualifications as an explanation for the newcomer disadvantage – as expected in *Hypothesis 2* – should apply less to this applicant type. Thus, at least for this group, it seems likely that the disadvantage is mostly related to the firms' training strategy. Firms with a high hiring rate are assumed to follow an investment strategy with their apprenticeship training and thus to prefer immigrant descendants because newcomers might return to their home country after apprenticeship completion (*Hypothesis 3*). Since these firms may also be more reluctant to hire women, we analyse employer ratings by immigrant group and vignette

Table 2. Determinants of employer ratings of applicants: linear multi-level models.

Vignette-level variables	Fixed-effects		Random-intercept			
	Model 1		Model 2		Model 3	
	Coeff.	se	Coeff.	se	Coeff.	se
Immigrant group (ref. immigrant descendant)						
Newcomer, German: fluent	−0.53***	0.10	−0.52***	0.10	−0.52***	0.10
Newcomer, German: intermediate	−1.73***	0.11	−1.73***	0.11	−1.73***	0.11
Newcomer, German: basic	−2.16***	0.11	−2.16***	0.11	−2.16***	0.11
Education type and level (ref. intermediate school degree)						
Upper secondary school degree	−0.35**	0.14	−0.36***	0.14	−0.35**	0.14
School-based training/technical occupation	−0.07	0.14	−0.10	0.14	−0.10	0.14
School-based training/sales & accounting occupation	−0.25*	0.14	−0.26*	0.14	−0.26*	0.14
Bachelor's degree/engineering	−0.98***	0.14	−0.99***	0.14	−0.99***	0.14
Bachelor's degree/business economics	−1.05***	0.14	−1.06***	0.14	−1.06***	0.14
Gender (ref. male)	–	–	−0.74***	0.17	−0.68***	0.17
Relatives live in town (ref. no information)	0.09	0.08	0.10	0.08	0.11	0.08
Additional financial support (ref. no information)	−0.21***	0.08	−0.20**	0.08	−0.20**	0.08
Firm-level variables						
Male-dominated occupation (ref. non male-dominated)					−0.22	0.19
East Germany (ref. West Germany)					0.46**	0.19
Economic sector (ref. agric., production, construction)						
Sales, maintenance, business support and other services					0.56***	0.21
Public sector, education, medical and care					−0.05	0.27
Firm size (ref. 1 to 19 employees)						
20–99 employees					0.09	0.24
100–199 employees					0.28	0.28
200 and more employees					0.33	0.22
High post-apprenticeship hiring rate (ref. no/low hiring rate)					0.20	0.19
Constant	6.74***	0.12	7.85***	0.29	6.81***	0.45
Log likelihood	−6911.05		−7791.6		−7811.9	
sd_employer	2.188		1.920		1.890	
sd_vignette	2.218		2.217		2.218	
Rho	0.493		0.429		0.421	

Source: BIBB Training Panel 2014 (doi: 10.7803/371.14.1.2.10), authors' own calculations.
se = standard error; *p < 0.1; **p < 0.05; ***p < 0.01.
Dependent variable *employer ratings* is measured from 1 (very unlikely) to 10 (very likely) that applicants are invited for a follow-up selection stage. East Germany includes Berlin. Number of observations: 3289 (vignettes); 661 (employers).

persons' gender differentiated by the firms' training strategy. Figure 2 illustrates the interaction models (male immigrant descendants are the reference group; see Table A4, online appendix).

In both types of firms, newcomers receive lower ratings than immigrant descendants. Yet, *Hypothesis 3* is confirmed for *male* applicants because ratings by firms with lower hiring rates do not differ significantly

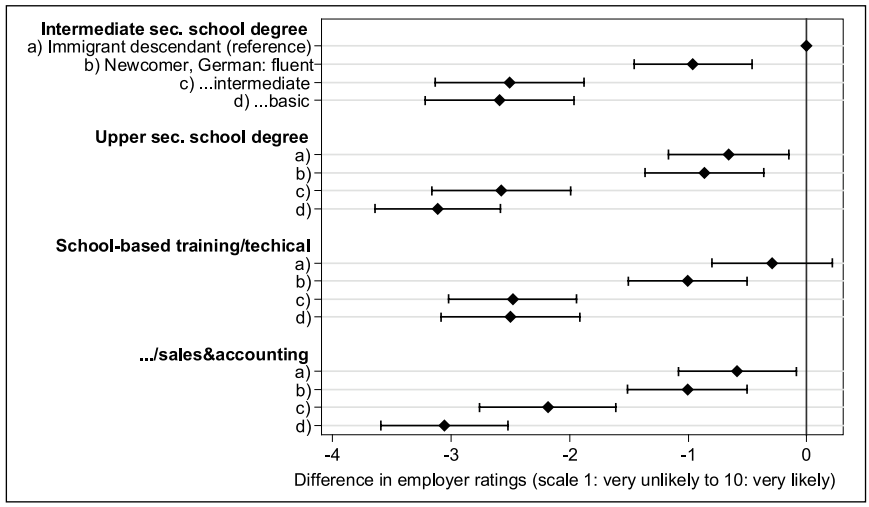

Figure 1. Interaction of applicants' immigrant group and education.
Source: BIBB Training Panel 2014 (doi: 10.7803/371.14.1.2.10), authors' own calculations.
Regression coefficients and 95 percent confidence intervals; linear random-intercept model; estimates based on Table A3, online appendix.

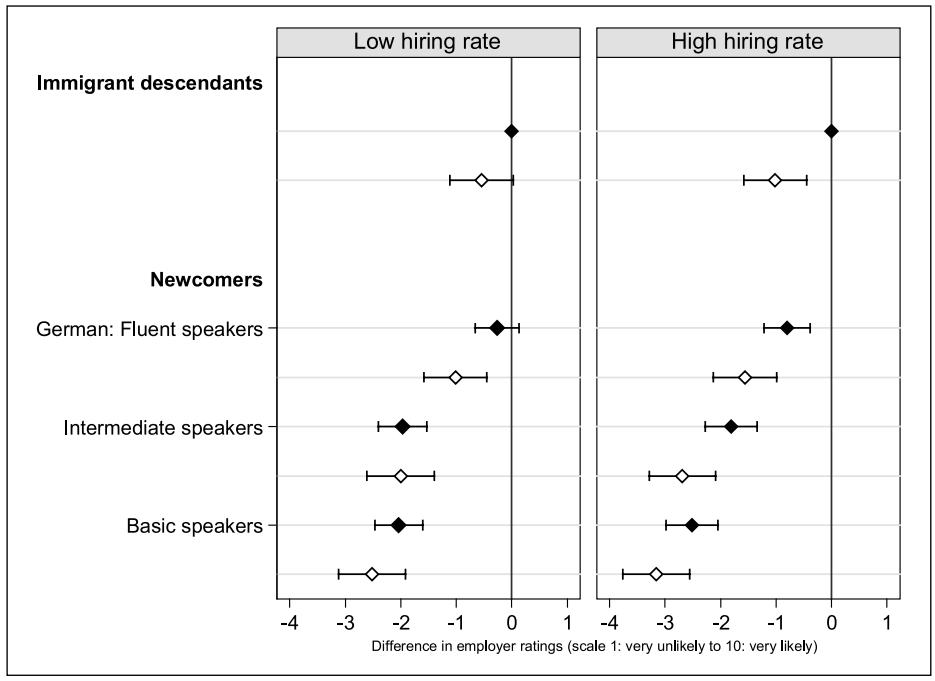

Figure 2. Interaction of applicants' immigrant group and gender by firms' post-apprenticeship hiring rate.
Source: BIBB Training Panel 2014 (doi: 10.7803/371.14.1.2.10), authors' own calculations.
◆: male applicants; ◇: female applicants.
Regression coefficients and 95 percent confidence intervals; reference category: male immigrant descendants; linear random-intercept models; estimates based on Table A4, online appendix.

for male immigrant descendants and male fluent German-speaking newcomers, whereas ratings by investment-strategy firms (with higher hiring rates) do. By contrast, all employers, regardless of their firms' training strategy, rate male newcomers with intermediate or basic German language skills significantly lower than male immigrant descendants.

Similarly, employers rate *female* applicants lower than male applicants – regardless of their training strategy (see also Table 2). This gender difference is more pronounced in firms pursuing an investment strategy. For women, we again see a clear-cut difference between fluent German-speaking newcomers and those with lower levels of German. Compared to female immigrant descendants, however, female fluent German-speaking newcomers receive significantly lower ratings by firms with both production and investment training strategy. We did not find significant interaction effects of immigrant group and gender (see Table A4, online appendix). In other words, the female newcomers' disadvantage is twofold, due to being women and newcomers. Investment-strategy firms seem to prefer male over female immigrant descendants and newcomers. Although the difference is smaller, production-strategy firms still prefer male applicants. Perhaps they expect more women to drop out even during the apprenticeship. An alternative explanation is that employers discriminate against women because they believe that they do not fit into their team.[3]

Conclusion

Current EU and national social policies that aim at combating youth unemployment owing to the 2007 financial crisis and its economic repercussion focus on apprenticeship training in general and youth training mobility in particular. These programmes follow the idea of educational investment as a means of improving employability, also known as the *social investment state* approach (Giddens, 2000: 73). The investment state's assumptions about the returns to education at the societal level – namely, that higher skill resources will generate (high-skill) employment and thereby eventually reduce income inequality and poverty risks – are, however, strongly criticised (compare Crouch et al., 1999; Solga, 2014). In our study, we did not investigate whether this criticism is justified but rather looked at barriers to this education-investment orientation of EU social policies.

As the success of these policy measures depends on employers' voluntary participation, we investigated how German employers perceive applicants from another EU country, namely, Spain. Using a factorial survey experiment integrated into a representative employer survey, we compared the chances of newcomers from Spain to be invited for follow-up selection stages in apprenticeship hiring processes to those of Spanish immigrant descendants. The overall finding is that newcomers are clearly disadvantaged. With respect to apprenticeship mobility as social policy, our results suggest that employers are least in favour of applicants lacking German language skills. Policy makers are aware of this, as EU recommendations and programmes strongly encourage participants to take language courses before moving to their target countries. Yet according to our study, some employers even rated newcomers who studied German as a foreign language in school and took an additional intensive language course considerably lower than immigrant descendants. It is doubtful whether employers' language skills requirements can be met solely by attending German courses. In this respect, it seems to be important to open the debate about the level of German that would be necessary for successful participation in apprenticeships.

Another major barrier is employers' motivation to provide training. Especially, firms using apprenticeship as an investment strategy for their own workforce seem to be rather reluctant to hire newcomers – even if they are fluent German speakers and have obtained a German school-leaving certificate. This factor limits the influence of political actors on 'apprenticeships abroad'.

All that said, from an individual perspective, moving to Germany for an apprenticeship might still be beneficial for young Southern and Eastern Europeans as compared to remaining in poor economic conditions in their home country. We show that newcomers are less preferred than immigrant descendants, but they do have realistic chances of being invited for employment tests or job interviews.

As contribution to migration research, our study demonstrates that employer preferences also differ for immigrants of the same ethnic origin depending on the country in which they were born and socialised. Thus, immigration generations are still important – even when newcomers are better educated than immigrant descendants and are fluent speakers of the foreign language.

Some limitations of our study need to be mentioned. We could only *indirectly* measure firms' training strategy by looking at how many of their former apprentices were hired. More direct information based on employers' self-assessed training strategy was not available. Moreover, in certain industries (sometimes only within certain federal states), social partner agreements require firms to hire their apprentices as employees for at least a period of 6–12 months, unless there is any misconduct or low achievement by the apprentices. We are unable to differentiate whether the firms in our sample are subject to these specific agreements or to collective agreements in general, despite pursuing a training production strategy. Yet, we are confident that the 75 percent cut-off point of how many apprentices were hired is high enough to be a good approximation for the firm-level strategies. Moreover, we controlled for economic sector, firm size and whether the firm is located in East or West Germany.

Furthermore, we only looked at Spanish immigrants applying in Germany. To investigate within-group differences for other countries of origin, including non-EU countries, would be interesting – especially given the current inflow of refugees to Europe. Finally, although the factorial survey approach allows studying employer preferences with less bias than item-based questioning in surveys, we cannot rule out that our findings are still positively biased, and actual employer decisions would differ. We can, however, conclude that our estimate of the newcomer disadvantage is conservative.

Acknowledgements

We thank Dorothea Kübler and Julia Schmid for the collaboration in the project 'Recruitment behavior in vocational training and labor markets'. We are especially grateful to the team of the BIBB Training Panel at the Federal Institute for Vocational Education and Training for the opportunity to integrate our factorial survey experiment into the 2014 wave and to Katrin Auspurg who consulted us in designing the experiment and did the d-efficient vignette sampling.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

Supplementary Material

The online appendix tables are available online.

Notes

1. Comparing natives with immigrants is not the focus here. The factorial survey design needed for such a comparison would have required either too large a sample of employers or the deletion of another dimension to be considered, such as applicants' gender.
2. Information for earlier years was not available to us.
3. Differentiating the analysis by the occupations' gender domination (see Table A5, online appendix) shows that the gender difference is only significant within the male-dominated occupations – indicating that employer discrimination in male-dominated occupations is a likely explanation.

References

Aigner, D.J. and Cain, G.G. (1977) 'Statistical Theories of Discrimination in Labor Markets', *Industrial and Labor Relations Review* 30: 175–87.

Arango, J. (2016) *Spain: New Emigration Policies Needed for an Emerging Diaspora*. Washington, DC: Migration Policy Institute.

Auspurg, K. and Hinz, T. (2015) *Factorial Survey Experiments*. Thousand Oaks, CA: Sage.

Autorengruppe Bildungsberichterstattung (2012) *Bildung in Deutschland*. Bielefeld: Bertelsmann Verlag.

Autorengruppe Bildungsberichterstattung (2014) *Bildung in Deutschland*. Bielefeld: Bertelsmann Verlag.

Beicht, U. and Gei, J. (2015) *Ausbildungschancen junger Migranten und Migrantinnen unterschiedlicher Herkunftsregionen*. BIBB Report 3/2015. Bonn: BIBB.

Beicht, U. and Granato, M. (2009) *Übergänge in eine berufliche Ausbildung*. WIS0 Diskurs, September. Bonn: Friedrich Ebert Stiftung.

Beicht, U. and Walden, G. (2015) 'Unterschiedliche Berufsinteressen als Einflussfaktor für die Einmündungschancen in betriebliche Ausbildung?', *Journal of Labour Market Research* 48: 325–46.

Bell, D.N.F. and Blanchflower, D.G. (2009) *What Should Be Done about Rising Unemployment in the OECD?* IZA Discussion Paper No. 4455. Bonn: IZA.

Bundesagentur für Arbeit (BA) (2014) *Der Ausbildungsmarkt in Deutschland. Jahresbilanz zum Abschluss des Berufsberatungsjahres 2013/2014*. Nürnberg: BA.

Bundesagentur für Arbeit (BA) (2016) *Der Ausbildungsmarkt in Deutschland. Jahresbilanz zum Abschluss des Berufsberatungsjahres 2014/2015*. Nürnberg: BA.

Bundesinstitut für Berufsbildung (BIBB) (2015) *BIBB Datenreport 2015*. Bonn: BIBB.

Bundesinstitut für Berufsbildung (BIBB) (2016) *Auszubildenden-Daten der Berufsbildungsstatistik 31.12* (Datensystem Auszubildende). Bonn: BIBB.

Chung, H., Bekker, S. and Houwing, H. (2012) 'Young People and the Post-Recession Labour Market in the Context of Europe 2020', *Transfer* 18(3): 301–17.

Crouch, C., Finegold, D. and Sako, M. (1999) *Are Skills the Answer?* New York: Oxford University Press.

Damelang, A. and Abraham, M. (2016) 'You Can Take Some of It with You! A Vignette Study on the Acceptance of Foreign Vocational Certificates and Ethnic Inequality in the German Labor Market', *Zeitschrift für Soziologie* 45: 91–106.

Dieckhoff, M., Gash, V. and Steiber, N. (2015) 'Measuring the Effect of Institutional Change on Gender Inequality in the Labour Market', *Research in Social Stratification and Mobility* 39: 59–75.

Dietrich, H. and Gerner, H.D. (2008) 'Betriebliches Ausbildungsverhalten und Geschäftserwartungen', *Sozialer Fortschritt* 57(4): 87–93.

Di Stasio, V (2014) 'Education as Signal of Trainability', *European Sociological Review* 30: 796–809.

Eichhorst, W., Hinte, V. and Rinne, U. (2013) *Youth Unemployment in Europe*. IZA Policy Paper No. 65. Bonn: IZA.

European Commission (2013) 'Memo: EU Measures to Tackle Youth Unemployment', 28 May, Brussels, available at http://europa.eu/rapid/press-release_MEMO-13-464_en.htm.

Faraco Blanco, C., Kraußlach, M., Montero Lange, M. and Pfeffer-Hoffmann, C. (2015) *Die Auswirkungen der Wirtschaftskrise auf die Innereuropäische Arbeitsmigration am Beispiel der neuen spanischen Migration nach Deutschland*. Working Paper der Forschungsförderung 0002/2015. Düsseldorf: Hans-Böckler-Stiftung.

Federal Foreign Office (2016) German Schools Abroad, available at http://www.make-it-in-germany.com/en/for-qualified-professionals/training-learning/school-system-abroad/german-schools-abroad.

Gerhards, C., Mohr, S. and Troltsch, K. (2016) *BIBB Training Panel – An Establishment Panel on Training and Competence Development 2014* (Research Data Center at BIBB). Bonn: Federal Institute for Vocational Education and Training.

Giddens, A. (2000) *The Third Way and Its Critics*. Cambridge: Polity Press.

Hainmueller, J., Hangartner, D. and Yamamoto, T. (2015) 'Validating Vignette and Conjoint Survey Experiments against Real-World Behavior', *Proceedings of the National Academy of Sciences of the United States of America* 112(8): 2395–400.

Heath, A. and Cheung, S.Y. (2006) *Ethnic Penalties in the Labour Market*. Leeds: Crown Copyright, available at http://webarchive.nationalarchives.gov.uk/20130128102031/http://statistics.dwp.gov.uk/asd/asd5/rports2005-2006/rrep341.pdf.

Humburg, M. and van der Velden, R. (2015) 'Skills and the Graduate Recruitment Process', *Economics of Education Review* 49: 24–41.

Hunkler, C. (2016) 'Ethnische Unterschiede beim Zugang zu beruflicher Ausbildung' in C. Diehl, C. Hunkler and C. Kristin (eds) *Ethnische Ungleichheiten im Bildungsverlauf*, pp. 597–641. Wiesbaden: Springer VS.

Jasso, G. (2006) 'Factorial Survey Methods for Studying Beliefs and Judgments', *Sociological Methods & Research* 34: 334–423.

Kalter, F. (2006) 'Auf der Suche nach einer Erklärung für die spezifischen Arbeitsmarktnachteile Jugendlicher türkischer Herkunft', *Zeitschrift für Soziologie* 35: 144–60.

Koopmans, R. (2016) 'Does Assimilation Work?', *Journal of Ethnic and Migration Studies* 42: 197–216.

Kultusministerkonferenz (KMK) (2016) Die deutschen Auslandsschulen, available at https://www.kmk.org/de/themen/auslandsschulen.html.

Mohrenweiser, J. and Backes-Gellner, U. (2010) 'Apprenticeship Training: For Investment or Substitution?', *International Journal of Manpower* 31: 545–62.

Phalet, K. and Heath, A. (2010) 'From Ethnic Boundaries to Ethnic Penalties', *American Behavioral Scientist* 53: 1824–50.

Protsch, P. and Solga, H. (2015) 'How Employers Use Signals of Cognitive and Noncognitive Skills at Labour Market Entry: Insights from Field Experiments', *European Sociological Review* 31(5): 521–32.

Protsch, P. and Solga, H. (2016) 'The Social Stratification of the German VET System', *Journal of Education and Work* 29(2): 637–61.

Scarpetta, S., Sonnet, A. and Manfredi, T. (2010) *Rising Youth Unemployment during the Crisis*. Paris: OECD.

Schneider, J., Yemane, R. and Weinmann, M. (2014) Diskriminierung am Ausbildungsmarkt, available at http://www.boschstiftung.de/content/language1/downloads/Studie_Diskriminierung_am_Ausbildungsmarkt.pdf.

Seibert, H. and Wapler, R. (2012) *Zuwanderung nach Deutschland*. IAB-Kurzbericht 21/2012. Nürnberg: Institut für Arbeitsmarkt- und Berufsforschung.

Solga, H. (2014) 'Education, Economic Inequality, and the Promises of the Social Investment State', *Socio-Economic Review* 12: 269–97.

Stanat, P., Rauch, D. and Segeritz, M. (2010) 'Schülerinnen und Schüler mit Migrationshintergrund', in E. Klieme, C. Artelt, J. Hartig, N. Jude, O. Köller, M. Prenzel, et al. (eds) *PISA 2009: Bilanz nach einem Jahrzehnt*, pp. 200–30. Münster: Waxmann.

Verick, S. (2009) *Who Is Hit Hardest during a Financial Crisis?* IZA Discussion Paper No. 4359. Bonn: IZA.

Wallander, L. (2009) 25 Years of Factorial Surveys in Sociology. *Social Science Research* 38: 505–20.