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Closure Through Occupational Standardization? Testing a Central Assumption of Occupational Closure

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Presentation

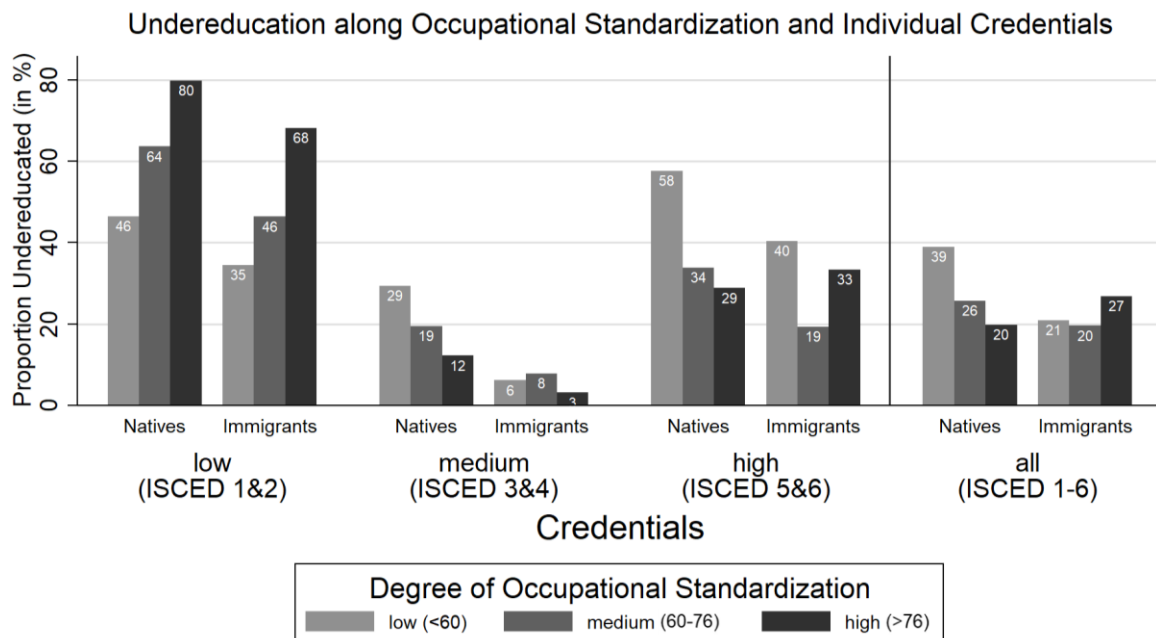
Scholars repeatedly find evidence that occupations play a key role in the explanation of wage inequalities (e.g. Bol and Weeden 2014; Drange and Helland 2019). Part of this is education-related, since employees are allocated into occupational positions based on their educational credentials, which are in turn rewarded differently. But furthermore, credentials also differ in terms of their degree of standardization, i.e. the extent to which they are comparable across time and space (Abraham, Damelang and Schulz 2011). As example, this differentiates standardized credentials from workplace-specific certificates. Neo-Weberian theorists argue that standardized credentials are a central mean to ensure advantages for employees within occupations (see Weeden 2002). This “occupational closure” works mainly through the restriction of labor supply for certain occupational positions to those with relevant credentials. This works either because only certificate holders have the relevant skill set or employers simply just believe that this is the case (see Weeden 2002, p. 61 f.). Hence, it is assumed that occupational standardization makes it more difficult for employees to access higher positions without the necessary certificates. Although the concept of occupational closure is well established, this central assumption has never been directly tested. Consequently, this paper investigates if the standardization of occupations reduces the vertical mobility of employees without respective credentials. This is done by analyzing the effect of standardized credentials within occupations on the probability of getting into higher positions without higher credentials, i.e. the probability of being undereducated.

To check for potential context-sensitivity, first generation immigrants with foreign credentials are analyzed separately. The German labor market is very unique in an international comparison, since formal vocational education below the academic level is prevalent and standardized in many occupations (e.g. Abraham, Damelang, and Schulz 2011). Immigrants from third-country states may have little to no opportunities to acquire comparable vocational degrees in their home countries. If employers recognize the fact that

immigrants often were not able to obtain comparable credentials, occupational closure should be less pronounced among lower educated immigrants (e.g. Schaeffer et al. 2015).

Empirical analyses are carried out to test the influence of occupational standardization on individual undereducation. On the individual level (L1), 15,241 interviews (13,470 natives and 1,951 immigrants) from the German Socio-Economic Panel Study (SOEP) are used. Immigrants, who were younger than 18 years at migration or completed (additional) education in Germany at the time of the interview, are excluded. The dependent variable “undereducation” is constructed from the educational requirements of respondent’s occupational positions (job analysis method, e.g. Hartog 2000) and respondent’s educational credentials (ISCED 2011). An undereducation is defined as having lower credentials than usually required for an occupational position. Several demographic and workplace-related variables are controlled on the individual level. On the occupational level (L2), all 36 non-military occupational groups of the German Classification of Occupations (KldB 2010) are exploited. For the core independent variable of occupational standardization, a weighted indicator¹ on standardized credentials within occupations constructed by Vicari (2014) is used, which relies on in-depth information from the German Federal Employment Agency. The unemployment rate and the share of foreigners within occupations are controlled to rule out alternative explanations for the empirical findings. Finally, separate linear multilevel probability models for natives and immigrants are estimated with robust standard errors clustered on the occupational level.

Figure 1: Descriptive Results



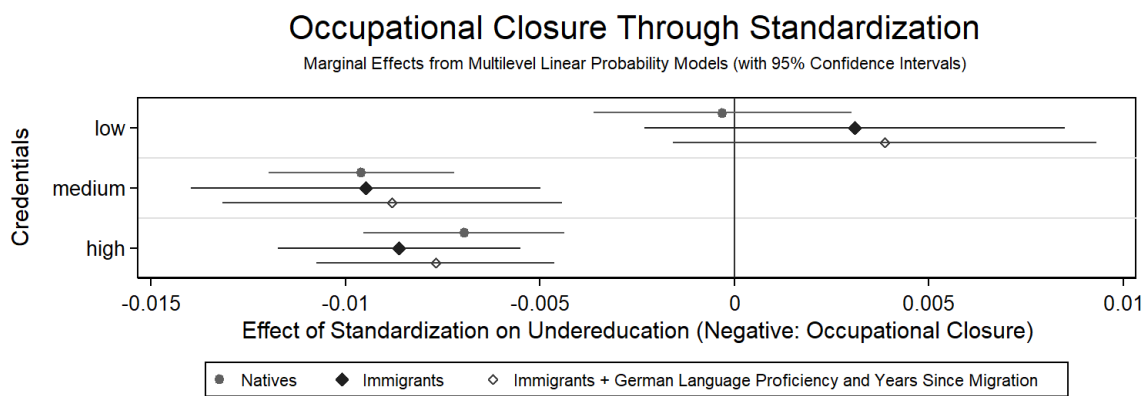
Source: SOEP v.34, weighted, own calculations.

Descriptive results displayed in figure 1 show the individual undereducation for occupational groups of varying degrees of standardization. For natives with medium or high credentials,

¹ Indicator (0-1) multiplied by 100 for the analyses.

the undereducation is clearly lower in highly standardized occupations compared to occupations with low standardization. For immigrants with comparable credentials, undereducation rates are somewhat lower in standardized occupations, but the results are less pronounced compared to natives. Contrary to expectations, the undereducation does not decline but instead rises with higher degrees of standardization for those with low formal credentials. These employees are twice as often undereducated in highly standardized occupations than in barely standardized ones. Since this effect may be due to the fact that some occupations are missing the lowest requirement level in the utilized classification of occupations, the results were checked for robustness based on the employee’s self-assessed requirements of their tasks (results not shown). The rates of the self-assessed undereducation are lower among the lower educated compared to the classification-based measurement. However, the undereducation rates based on the self-assessment do also rise with the standardization of occupations.

Figure 2: Results from Multivariate Analysis



Source: SOEP v.34, cluster-robust SEs, unweighted, own calculations.

Notes: On the individual level controlled for sex, age, age², employment status (full-time, part-time, marginal employment), working class (blue-color, white-color, civil servant), tenure, tenure², firm size (4 categories), public sector, East Germany and survey year; on the occupational level controlled for unemployment rate and share of foreigners (both also interacted with individual credentials).

In Figure 2, marginal effects of occupational standardization controlled for individual characteristics and competing influences on the occupational level are displayed. These analyses reveal that natives and immigrants with medium and high credentials face a closure effect within occupations. Even though descriptive results were less clear for immigrants, their probability of being undereducated declines with higher degrees of standardization. Furthermore, these results hold even when controlling for German language proficiency and years since migration. A ten percent rise in the degree of standardization results in a seven to nine percentage points decrease in the probability of being undereducated. This speaks in favor of the theoretical assumption that standardization closes occupations. In contrast, even when controlling for competing influences, no negative effect of standardization can be found for those with low credentials. But an increasing probability of being undereducated, as seen in the descriptives, doesn’t show up when controlling for individual and occupational characteristics. Overall, the effects of standardization are about the same for natives and immigrants. All results hold for various model specifications (logistic, joint models for both

groups, more detailed occupations) and can even be reproduced with another dataset (German Microcensus (MZ)).

To summarize, the standardization of credentials has a closing effect within occupations for employees with medium and high credentials. Contrary to expectations, employees with low credentials do not face such an effect. When they access highly standardized occupations, they are not less likely to be employed on higher positions. From an individual perspective of those with low credentials, highly standardized occupations are as closed as low standardized occupations. Of course, this doesn't have to mean that certificate holders are becoming a minority within highly standardized occupations. Employees with low credentials may still be an exception within these occupations, whereby advantages for those employed in standardized occupations could still to be ensured. However, different inflow strengths of employees with low credentials in different occupations were not analyzed. Future research should analyze how such an increasing access affects the advantages of all employees of an occupation.

With respect to the closure effects between natives and immigrants, no significant differences were found. Even though standardized vocational education systems rarely exists outside Germany and most of the relevant skills are informally acquired on the job, there is no robust evidence that employers take this into account. At least, immigrants with foreign credentials do not seem to face an additional disadvantage within occupations due to standardization. However, immigrants with foreign credentials are less likely to access standardized occupations in the first place (results not shown). Therefore, occupational closure seems to work additionally via restricted access to occupational groups for immigrants, rather than solely through positioning within occupations. Even though there is some evidence from factorial surveys with respect to immigrants' limited access to occupations (e.g. Damelang et al. 2019), future research should take the standardization as an additional hurdle into account.

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