

Bedaso, Fenet Jima; Jirjahn, Uwe; Goerke, Laszlo

**Working Paper**

## Immigrants and trade union membership: Does integration into society and workplace play a moderating role?

IAAEU Discussion Paper Series in Economics, No. 03/2022

**Provided in Cooperation with:**

Institute for Labor Law and Relations in the European Union (IAAEU), University of Trier

*Suggested Citation:* Bedaso, Fenet Jima; Jirjahn, Uwe; Goerke, Laszlo (2022) : Immigrants and trade union membership: Does integration into society and workplace play a moderating role?, IAAEU Discussion Paper Series in Economics, No. 03/2022, University of Trier, Institute for Labour Law and Industrial Relations in the European Union (IAAEU), Trier

This Version is available at:

<https://hdl.handle.net/10419/265261>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



**IAAEU**

Institut für Arbeitsrecht  
und Arbeitsbeziehungen  
in der Europäischen Union

**IAAEU Discussion Paper Series in Economics  
No. 03/2022**

# **Immigrants and Trade Union Membership: Does Integration into Society and Workplace Play a Moderating Role?**

**Fenet Jima Bedaso, Uwe Jirjahn,  
Laszlo Goerke**

**September 2022**

Institute for Labour Law and Industrial Relations in the  
European Union (IAAEU)  
54296 Trier  
[www.iaaeu.de](http://www.iaaeu.de)

## **Immigrants and Trade Union Membership:**

### **Does Integration into Society and Workplace Play a Moderating Role?**

Fenet Jima Bedaso

*University of Trier and IAAEU*

Uwe Jirjahn

*University of Trier, GLO, and IZA*

Laszlo Goerke

*University of Trier, CESifo, GLO, IAAEU, and IZA*

**Abstract:** We hypothesize that incomplete integration into the workplace and society implies that immigrants are less likely to be union members than natives. Incomplete integration makes the usual mechanism for overcoming the collective action problem less effective. Using data from the Socio-Economic Panel, our empirical analysis confirms a unionization gap for first-generation immigrants in Germany. Importantly, the analysis shows that the immigrant-native gap in union membership indeed depends on immigrants' integration into the workplace and society. The gap is smaller for immigrants working in firms with a works council and having social contacts with Germans. Our analysis also confirms that the gap is decreasing in the years since arrival in Germany.

**Keywords:** Union membership, migration, works council, social contacts with natives, years since arrival.

**JEL:** J15, J52, J61

**Acknowledgments:** Thanks are expressed to session participants at the 2022 conference of the Scottish Economic Society, the 2022 conference of the International Association for the Economics of Participation, and the 14<sup>th</sup> International German Socio-Economic User Conference.

**Address for Correspondence:** Uwe Jirjahn, Universität Trier, Lehrstuhl für Arbeitsmarktökonomik, Universitätsring 15, 54286 Trier, Germany, Email: jirjahn@uni-trier.de.

## 1. Introduction

The past decades have witnessed a remarkable increase in the number of migrants making migration an important dimension of globalization. The number of international migrants worldwide was almost 272 million in the year 2019, more than three times the number in the year 1970 (IOM 2019). Nearly two-thirds of the migrants resided in high-income countries. The increase in international migration leads to the question of how immigrants influence the industrial relations systems of the destination countries. This question is particularly relevant given that union density has fallen in many countries (Visser 2019a).

Only a few studies have examined whether there is a link between migration and unionization. Using panel data for the years 1962–1997, Lee (2005) finds that OECD countries with a higher inflow of immigrants experienced a higher decline in union density. While immigration may also affect the unionization of natives (Antón et al., 2022), an obvious reason for this finding could be lower unionization among immigrants. Studies by Gorodzeisky and Richards (2013), Kranendonk and de Beer (2016), and Cools et al. (2021) use employee data from European countries to show that immigrants indeed have a lower likelihood of union membership than natives. These studies give rise to the question of what factors drive the unionization gap between immigrants and natives. While the magnitude of the estimated gap varies to some extent across the few studies, the basic insight is that the lower unionization rate of migrant workers cannot be fully explained by personal characteristics or segregation into specific industries or jobs.

Our study brings a new twist to the topic by hypothesizing that the incomplete integration of migrants into society and the workplace plays a role in the unionization gap. We derive this hypothesis from the collective action problem that unions face in many

countries. Individuals have little incentive to join a union and pay membership dues since the results of collective negotiations are often available to both union members and non-members. The literature suggests that two mechanisms help mitigate the collective action problem. First, unions provide selective services such as legal advice and legal representation only to their members. Second, workers comply with a social custom of union membership; i.e., influences such as peer pressure, solidarity, and social recognition can lead workers to join a union. However, the effectiveness of these mechanisms depends on several preconditions. Selective services are only effective if workers are informed about these services. Social custom is only effective if workers are affected by peer pressure and social recognition. We argue that the incomplete integration of immigrants into a workplace and society diminishes the effectiveness of the mechanisms for overcoming the collective action problem. Incomplete integration implies that immigrants have only insufficient information about the services provided by unions and are less affected by the social pressure or recognition they receive from natives. This suggests that the immigrant-native gap in union membership depends on migrants' integration into society and the workplace. The gap should be greater for those immigrants who are less integrated. It should be smaller for those immigrants who are more integrated into society and the workplace.

Our empirical analysis examines the immigrant-native gap in unionization for West Germany. Germany provides an interesting case study. The country is the second top destination for migrants after the United States (IOM 2019) and union density has substantially declined during the last decades (Schnabel 2020). Using data from the German Socio-Economic Panel (SOEP), our estimations show that first-generation

immigrants are less likely to be union members than natives. This result holds in regressions controlling for industry, occupation, and a long list of personal characteristics.

Most importantly, our estimations show that the size of the unionization gap depends on the integration of immigrants. The immigrant-native unionization gap is smaller for those employees working in firms with a works council. This finding supports the notion that works councils are an important institution in helping integrate immigrants into the workplace. Works councils not only support unions in recruiting and retaining members. They also promote solidarity among workers within firms. Thus, the presence of a works council very likely implies that immigrants are better informed about unions and are more responsive to the social pressure and recognition they receive from native coworkers.

Moreover, not only integration into the workplace but also integration into society as a whole plays a role. Social contacts with natives are an important indicator of integration into society. Our estimates show that the unionization gap is smaller for those immigrants who have social contacts with Germans. This suggests that it is important to go beyond the narrow boundaries of the labor market to fully understand the immigrant-native gap in unionization. Finally, the estimates confirm that the unionization gap is decreasing in the years since arrival in Germany. This finding conforms to the notion that integration takes time.

A series of reasons have been discussed for the decline of unionization observed in many countries. Changes in employment regulations, rising earnings inequality, digitalization of work, demographic and sectoral shifts, and the rise of non-standard and flexible work are factors that have very likely contributed to this decline (Checchi et al.

2010, Visser 2019a). Our study suggests that migration and, hence, globalization has played a role, too. However, our study also indicates that the consequences of globalization are not given by nature. Governments and societies have various opportunities of responding to globalization. Our results suggest that the negative consequences of migration for unionization can be mitigated if the host country is able to integrate immigrants into the workplace and society. On the one hand, a more targeted migration policy may attract immigrants with a higher willingness to integrate. On the other hand, it appears to be important to counter prejudices and discrimination by natives. In particular, it may be important to promote institutions that foster the integration of immigrants. Our study suggests that works councils are such an institution. However, works councils are only present in the minority of eligible firms, and they also appear to be an institution in decline (Ellguth and Kohaut 2021). This may call for policy initiatives to strengthen this institution.

The rest of the paper is organized as follows. Section 2 provides the institutional and theoretical background discussion. Section 3 discusses the data and variables. Section 4 provides the empirical results. Section 5 concludes.

## **2. Background Discussion**

### *2.1 Institutional Framework*

Industrial relations in Germany are characterized by a dual structure of employee representation with both works councils and unions (Behrens 2016, Jirjahn 2016, Keller and Kirsch 2015, Silvia 2013). Works councils provide a highly developed mechanism for firm-level codetermination while collective bargaining agreements are usually negotiated between unions and employers' associations on a broad industrial level.

Works councils shall be elected by the workforce of firms with five or more employees. However, their creation depends on the initiative of the firm's workforce. Thus, works councils are not present in all eligible firms. While works councils and unions are formally independent, there are important linkages. Unions provide training and legal expertise for works councils. Works councils in turn help unions recruit new members (Behrens 2009, Jirjahn 2021, Windolf and Haas 1989). They promote norms of mutual solidarity and, hence, increase the reputation effect of belonging to a union. Works councils may also put informal pressure on workers to join a union.

Collective bargaining agreements regulate wage rates and general aspects of the employment contract. The coverage by an agreement does not depend on the decision of the firm's workforce but on the decision of the employer. Typically, firms are covered if they are members of an employers' association (Jirjahn 2022). Employers' associations and unions negotiate collective agreements, usually on a broad industrial level. The share of firms with a firm-level agreement is small.

## *2.2 The Collective Action Problem*

As in many other countries, covered firms in Germany pay the negotiated wage rates to both union members and non-members. Thus, collectively agreed wage rates and working conditions are like public goods. They are non-rival in consumption and exclusion of non-members is not possible. This entails a potential collective action problem. Workers may have little incentive to join a union as they benefit from collective agreements even without a membership. Indeed, the share of workers covered by collective bargaining is much higher than the share of union members. In the year 2018, 54 percent of the workers in the



whole of Germany were covered by collective agreements while union density was only 16.5 percent (Schnabel 2020).

It is usually argued that two broad factors help mitigate or overcome the collective action problem. First, as suggested by the social custom approach, influences such as peer pressure, solidarity, and social recognition may involve incentives to join a union (Booth 1985, Corneo 1995, Naylor and Cripps 1993). This explanation is supported by empirical studies showing that the social background of an individual and the share of other workers who are unionized play a role in the membership decision (Bryson and Davies 2019, Fitzenberger et al. 1999, Goerke and Pannenberg 2004, Schnabel and Wagner 2005, Visser 2002).

Second, unions may increase workers' interest in membership by providing selective services such as legal advice and legal representation only to their members (Blanchflower et al. 1990, Olson 1965). A series of empirical studies for Germany show that members indeed benefit from the selective services provided by unions. These studies suggest that union members are better protected than non-members. Union members are more likely to be successful in labor dispute processes (Berger and Neugart 2011) and are less likely to be dismissed than non-members (Goerke and Pannenberg 2011). Moreover, in case of a dismissal, union members have a higher probability of receiving severance pay (Goerke and Pannenberg 2010).

### *2.3 Immigrants*

However, the mechanisms to overcome the collective action problem depend on several preconditions. The effectiveness of selective incentives requires that workers have sufficient information about the services provided by unions. The effectiveness of social

influences requires that workers are affected by peer pressure and social recognition. This brings us to the specific situation of immigrants.

From a theoretical viewpoint, the specific situation of immigrants makes it less likely that the requirements for overcoming the collective action problem are met. Incomplete information can play a role. As emphasized by the experience good model of union membership, the benefits of membership are ex-ante uncertain and difficult to quantify (Bryson and Gomez 2003, Gomez and Gunderson 2004). This appears to particularly hold true for immigrants. They tend to be on average less familiar with the institutional frameworks of the host country and have less access to the host country's informal information networks than natives. Thus, to the extent immigrants know less about unions and the selective services provided by unions, they will have a lower propensity to become union members.

Further, immigrants may be less affected by those normative influences which typically induce workers to join a union. Research on the consequences of ethnic diversity has shown that social sanctions are more effective within than between ethnic groups (Habyarimana et al. 2007, Miguel et al. 2005). Thus, ethnic diversity is associated with lower levels of public goods provision. The insights obtained from this research may also apply to the decision of immigrants to join a union. To the extent immigrants are outside the typical social networks in the host country and, they are less likely to receive peer pressure or recognition from natives. Moreover, even when immigrants receive pressure and recognition from natives, they may be less responsive to these social influences. A person's responsiveness to others' actions depends on his or her social identity, i.e. the social category the person identifies with (Akerlof and Kranton 2000). Research in social

psychology shows that persons tend to be influenced more by similar or like-minded others (Spears 2021). Thus, to the extent immigrants identify with their home and not with the host country, they will be less responsive to the normative influences of natives.

Altogether, immigrants should have a lower propensity to become union members as the mechanisms which typically help overcome the collective action problem are less effective for this group of workers. Thus, we can state our first hypothesis.

*Hypothesis 1: Immigrants are less likely to be union members than natives.*

The underlying assumption of this hypothesis is that immigrants are on average not fully integrated into society and the workplace. Several reasons for the incomplete integration of immigrants are discussed in the literature. On the one hand, learning the culture and language of the host country may be too costly (Konya 2007, Lazear 1999) or immigrants may have preferences to keep their home country's culture also abroad (Chiswick and Miller 2005). On the other hand, stereotypes and discrimination by natives hinder integration and contribute to the social isolation of immigrants (Constant et al. 2009). Studies for Germany provide evidence of discrimination in the housing and the labor market (Cornelissen and Jirjahn 2012, Dill and Jirjahn 2014, Dill et al. 2015, Kaas and Manger 2011). Attitude surveys confirm that there exist serious xenophobic tendencies in the German society (Bauer et al. 2000, Gang and Rivera-Batiz 1994). There is even evidence of an increase in violence against foreigners after the reunification of East and West Germany (Krueger and Pischke 1997).

Whatever the exact reasons for an incomplete integration of immigrants may be, we are interested in the consequences of incomplete integration for union membership.

Most salient to our topic, the extent of the immigrant-native gap in union membership should depend on the degree to which immigrants are integrated into society and the workplace. Individual immigrants can differ in their degree of integration for several reasons. They may differ in the costs of learning the host country's culture, the preferences for keeping the culture of the home country, and the extent of discrimination and social exclusion they experience. The basic point is that the immigrant-native gap in union membership should be less pronounced for those immigrants who are characterized by a higher degree of integration into society and the workplace. A higher degree of integration means that immigrants have better information about the host country increasing the likelihood that they know about the services provided by unions. A higher degree of integration may also imply that immigrants are more affected by the social influences which lead workers to join a union. Immigrants participate to a larger (albeit probably still incomplete) extent in the typical networks of the host country and, hence, are more likely to receive normative influences from natives to join a union. Immigrants may also be more responsive to these normative influences as they identify to a higher degree with the host country. Against this background, our second hypothesis stresses the moderating role of integration.

*Hypothesis 2: Immigrants' lower propensity to unionize is less pronounced if they are to a higher degree integrated into society and the workplace.*

At issue is how to capture the integration of immigrants in the empirical analysis. Considering that integration takes time, one can use the time since arrival as an indicator. The longer an immigrant lives in the host country the higher the degree of integration.

Empirical studies provide evidence for this view. Casey and Dustmann (2010) show that years since arrival are positively associated with the host-country identification of immigrants. Cools et al. (2021) and Kranendonk and de Beer (2016) find that the immigrant-native gap in union membership is decreasing in the time since arrival. Thus, we can state the first variant of Hypothesis 2.

*Hypothesis 2a: Immigrants' lower propensity to unionize is less pronounced the longer they live in the host country.*

Of course, the time since arrival is only a crude indicator of integration. Some immigrants may be integrated into society already after a short time while others may not be integrated even after living many years in the host country. This calls for a more direct indicator of integration into society. Social contacts with natives are such an indicator. Contacts with natives mean that an immigrant is to a larger degree inside the social networks of the host society and, hence, has better access to information about the host country (Putnam 2000). Empirical studies for Germany support this view. Immigrants having contacts with Germans experience greater labor market success than those without such contacts (Kanas et al. 2011, Kanas et al. 2012). Moreover, social contacts with natives not only provide better access to information but also contribute to a sense of belonging and foster host-country identification (De Vroome et al. 2011, Nesdale 2002). These considerations lead to our second variant of Hypothesis 2.

*Hypothesis 2b: Immigrants' lower propensity to unionize is less pronounced if they have contacts with natives.*

Not only integration into society in general, but also integration into the workplace, in particular, should play a role in the union membership of immigrants. This brings us to the influence of works councils. As explained in Section 2.1, works councils help unions recruit and retain members. Moreover, they play an important role in increasing solidarity among workers and reducing inequality within firms (Jirjahn and Kraft 2007, 2010). This also has consequences for immigrants' workplace integration. Schmidt and Müller (2021) provide case study evidence that works councils help integrate immigrants into the workplace. Workplace integration of immigrants is fostered by promoting collegiality and by universal rules for all workers, including the active and passive right to elect works councils. In a similar vein, Ryan and Turner (2021) show in a European context that worker participation fosters pluralistic democratic values and contributes to positive attitudes toward immigration. Thus, we can formulate the third variant of Hypothesis 2.

*Hypothesis 2c: Immigrants' lower propensity to unionize is less pronounced if a works council is present in the firm.*

### **3. Data and Variables**

#### *3.1 Data Set*

Our empirical analysis uses data from the SOEP to test the hypotheses. The SOEP is a large representative longitudinal survey of private households in Germany (Goebel et al., 2019). The survey is administered by the German Economic Institute (DIW). Infratest Sozialforschung, a professional survey and opinion institute, conducts face-to-face interviews. Routine socio-economic and demographic questions are asked annually. Different 'special' topic questions appear in specific waves.

Our basic analysis is based on the waves 2001, 2011, and 2019 of the SOEP. These waves provide information on union membership, social contacts, and the presence of a works council. The estimation sample consists of part-time and full-time employees aged 16–65 in the private and the public sector. The analysis focuses on West Germany (including Berlin) as the number of immigrants in the East German subsample of the SOEP is very small. We exclude managers from the analysis as managers are usually not union members. We also exclude those public sector employees who are civil servants. Only German citizens can become civil servants.

### *3.2 Variables*

Table 1 provides definitions and descriptive statistics of the variables. The dependent variable is a dummy equal to one if the employee is a union member. In the main part of the empirical analysis, we compare first-generation immigrants and natives to examine the gap in unionization. Thus, our key explanatory variable is a dummy equal to one if the employee is a first-generation immigrant.<sup>1</sup> It equals zero if the employee is a native. As a matter of comparison, we will also provide estimates comparing second-generation immigrants and natives. In that case, we use a dummy equal to one if the employee is a second-generation immigrant. The dummy equals zero if the employee is a native.

Our theoretical considerations suggest that the relationship between immigrants and union membership is heterogeneous and depends on immigrants' integration into society and the workplace. We include a variable for the number of years an immigrant resides in Germany. This variable takes into account that immigrants differ in their experience with the host country. As the variable specifically refers to immigrants, it is set equal to zero if the employee is a native.

Furthermore, we include an ordered variable of whether a migrant visited Germans in their home or was visited by Germans during the last year: 0 = the migrant did not visit Germans *and* was not visited by Germans; 1 = the migrant either visited Germans *or* was visited by Germans; 2 = the migrant visited Germans *and* was visited by Germans. The variable takes into account that immigrants can differ in their contacts with natives and, hence, in their integration into society. As this variable specifically accounts for heterogeneity among immigrants, we set it equal to zero if the employee is a native.

Nonunion worker representation is captured by a dummy equal to one if a works council is present in the firm the employee works for. As stressed in Section 2.1, works councils are not present in all eligible firms. This allows comparing employees in firms with and without a works council. Importantly, we also include an interaction variable for immigrants and works council presence to account for heterogeneity in workplace integration among immigrants. As suggested by our theoretical considerations, immigrants should be to a larger extent integrated into the workplace if a works council is present.

In a robustness check, we will also take into account that immigrants can differ in the experience they had with unions in their countries of origin. This experience may influence the propensity to unionize in the host country (Cools et al. 2021, Kranendonk and de Ber 2016). Thus, we will use information from Visser's (2019b) ICTWSS database and additionally include a variable for the unionization rate in the migrant's country of origin; the variable is set equal to zero if the employee is a native.<sup>2</sup> However, the influence of this variable is ambiguous from a theoretical viewpoint. On the one hand, higher unionization in the origin country may positively influence the propensity to become a union member in the host country if migrants trust unions to represent their interests. On the other hand,



specifically, unions in autocratic and less developed countries are often either a mere shell for the state or a repressed organization that it is dangerous to be associated with (Cooke and Wood 2021, Horwitz and Cooke 2020). Such negative experience may imply a negative influence of origin country unionization on union membership in the host country.

The dataset allows including a rich set of standard control variables. Variables for full-time employment, actual working hours, tenure, income, firm size, occupation, industry, and public versus private sector employment capture work-related characteristics. Variable for the years of unemployment experience and the years of work experience take into account the person's work history. Furthermore, we include variables for years of schooling, age, gender, marital status, and party preferences to control for the socio-demographic background. Dummy variables for the federal state and the year of observation are also included.

## **4. Results**

### *4.1 Initial Estimates*

Table 2 shows the initial regression results. The determinants of trade union membership are estimated by using a random effects logit model.<sup>3</sup> The random effects logit accounts for cross-period correlation of employee-specific error terms. Furthermore, we cluster the standard errors at the employee level. The initial regressions aim at identifying the average immigrant-native unionization gap conditioning on the control variables. In this initial step, we do not consider moderating factors and, hence, possible heterogeneity of the unionization gap across immigrants.

Column (1) shows a regression with the combined sample of first-generation immigrants and natives. Many of the controls take significant coefficients of the expected

sign. The presence of a works council is a positive determinant of union membership. This confirms that works councils play an important role in recruiting union members. Tenure, firm size, and income are also positive determinants. Furthermore, men are more likely to be union members. Preferences for the social democratic party are positively and preferences for a conservative party are negatively associated with union membership. The relationship between education and union membership is inverse U-shaped. Employees with about 11 years of education have the highest probability of being union members. Finally, having a full-time job is a positive determinant whereas the number of actual working hours emerges as a negative determinant.

Most salient to our topic, first-generation immigrants are significantly less likely to be union members than natives. This finding provides support for Hypothesis 1. An immigrant has an almost 11 percentage point lower probability of being a union member than a native. Taking into account that 18 percent of employees in our sample are union members, this gap between first-generation immigrants and natives is quantitatively quite substantial.

Column (2) shows a regression with the combined sample of second-generation immigrants and natives. The regression largely repeats the pattern of results on the control variables. Importantly, the variable for second-generation immigrants does not emerge as a significant determinant of union membership. Thus, our analysis provides evidence of a unionization gap for first-generation immigrants, but not for second-generation immigrants. These findings for Germany fit those provided by Cools et al. (2021) for Norway.

In what follows we focus on the unionization gap of first-generation immigrants and analyze this gap in more detail. The gap we have identified so far should be interpreted as an average gap between first-generation immigrants and natives. The gap can depend on moderating circumstances and, hence, is very likely to be heterogeneous. As suggested by our theoretical considerations, an immigrant's integration into society and the workplace should influence the extent of the unionization gap.

#### *4.2 Integration into Society and Workplace*

Using the combined sample of first-generation immigrants and natives, Table 3 shows regressions that additionally include variables for the years in Germany, for contacts with natives, and the interaction of immigrants and works councils. Control variables are included, but are suppressed to save space.

Regression (1) does not account for the unionization rate in the country of origin. By contrast, as a check of robustness, regression (2) includes a variable for this unionization rate. The variable takes a significantly negative coefficient. This finding conforms to the Norwegian experience (Cools et al. 2021). Most importantly, controlling for the unionization rate in the immigrant's country of origin does not change our key results.

The variable for first-generation immigrants continues to take a significantly negative coefficient. Compared to our initial regression, the magnitude of the coefficient has roughly quadrupled. The coefficient can be interpreted as reflecting the base gap in unionization. This base gap is moderated by an immigrant's integration into society and the workplace. Indeed, all three moderating variables for an immigrant's integration take significant coefficients of the expected sign and, hence, provide support for the hypothesis

that integration makes the mechanisms for overcoming the collective action problem more effective.

The variable for the years in Germany emerges with a significantly positive coefficient. Thus, the years in Germany mitigate the negative base effect that is given by the coefficient of the immigrant variable. Or put differently, the immigrant-native gap in unionization is decreasing in the years an immigrant has lived in Germany. This finding supports Hypothesis 2a. The longer an immigrant has lived in the host country the higher the likelihood that he or she is informed about the services unions provide. The immigrant may also show a stronger host country identification and, hence, may be more responsive to the normative influences (peer pressure or social recognition) of natives. Altogether the moderating role of the years since arrival in Germany confirms that integration into the host country often takes time.

Nonetheless, it is important to note that the years since arrival in the host country are only an imperfect indicator of integration. Some immigrants may be integrated into society within a relatively short time. Others may not be integrated even after living for a long time in the host country. Thus, additional indicators which can capture integration more directly should also play a moderating role in the unionization gap.

Indeed, the variable for social contacts with natives takes a significantly positive coefficient. Thus, contacts with natives mitigate the negative base effects that are given by the coefficient of the immigrant variable. Put somewhat differently, the immigrant-native gap in unionization is smaller for immigrants who have contacts with Germans. The finding supports Hypothesis 2b and, hence, suggests that the integration of immigrants into society reduces the unionization gap. Contacts with Germans mean that an immigrant is to a larger

extent inside the social networks of the host society. This implies that the immigrant has better access to information, receives more normative influences from natives, and is likely to be more responsive to these influences.

Finally, both the works council variable and the variable for the interaction of immigrants and works councils emerge with significantly positive coefficients. Thus, while the presence of a works council increases the likelihood of union membership for both natives and immigrants, the influence of a works council presence on union membership is stronger for immigrants than for natives. This implies that the presence of a works council reduces the immigrant-native unionization gap and, hence, supports Hypothesis 2c. Works councils not only help unions recruit members. They also foster notions of solidarity and fairness within the workplace. Solidarity and fairness contribute to a greater workplace integration of immigrants. Greater workplace integration can explain why the influence of works council presence on union membership is particularly strong for immigrants.

Let us use the marginal effects of regression (2) for a quantitative evaluation of the influences. In order to illustrate the sole influence of the years in Germany, we first consider immigrants who have no visits with Germans and work for a firm where no works council is present. A relatively fresh immigrant with 5 years since arrival in Germany has a 38 percentage point lower likelihood of unionization than a native ( $-0.404 + 0.004 \times 5 + 0.074 \times 0 + 0.188 \times 0 = -0.384$ ). An immigrant with 15 years since arrival has a 34 percentage point lower and an immigrant with 25 years since arrival has a 30 percentage point lower likelihood of being a union member. Thus, while the unionization gap is decreasing in the years since arrival, it remains large even after many years in Germany when there are no visits with Germans and no works council is present in the workplace. This again shows

that years since arrival are only a very imperfect indicator of integration. By contrast, the other two indicators of integration into society and the workplace play a quantitatively quite important role. If an immigrant with 25 years since arrival visits Germans and is visited by Germans, the unionization gap amounts to less than 16 percentage points ( $-0.404 + 0.004 \times 25 + 0.074 \times 2 + 0.188 \times 0 = -0.156$ ). If the immigrant instead works in a firm with a works council, the gap is less than 12 percentage points ( $-0.404 + 0.004 \times 25 + 0.074 \times 0 + 0.188 \times 1 = -0.116$ ). Thus, integration into society and the workplace substantially reduce the unionization gap. If an immigrant both has visits with Germans and works in a firm with a works council, he or she has with 3 percentage points an even slightly higher likelihood of unionization than a native.

## 5. Conclusions

In many countries, concerns about the insufficient integration of immigrants play a prominent role in the political discussion. Our study sheds light on an aspect that has received little attention so far. Insufficient integration of immigrants can also affect the industrial relations system of a country. Our theoretical consideration suggests that the incomplete integration of immigrants makes the usual mechanisms for overcoming the collective action problem of workers less effective. Incomplete integration implies that immigrants have less information about the selective services provided by unions and are less influenced by social pressure or recognition from natives. As a consequence, immigrants should be less likely to join a union than natives. Clearly, immigrants can differ in the extent they are integrated into the host country. Thus, the unionization gap should be greater for immigrants who are less integrated and smaller for immigrants who are more integrated into society and the workplace. Our empirical analysis confirms a unionization

gap for first-generation immigrants in Germany and shows that the magnitude of the gap indeed depends on an immigrant's integration into society and the workplace. The gap is smaller if an immigrant has lived for a longer time in Germany, has contacts with Germans, and works for a firm where a works council is present.

Altogether, our study suggests that improving the integration of immigrants can contribute to the stability of the industrial relations system of a host country. This has to be seen particularly against the background that industrial relations systems in many countries face a series of challenges and unionization is often in decline (OECD 2017). Thus, the factors that influence the integration of immigrants are important from an industrial relations perspective. A widely held view is that some immigrants have insufficient willingness to integrate into the host country. To the extent such a view corresponds to facts, a more targeted migration policy would be required. Such migration policy should aim at attracting immigrants who are willing and able to integrate into the host country. However, discrimination by natives is also a factor hampering the integration of immigrants. This calls for measures that help overcome prejudices and foster equal treatment. Our results indicate that works councils play an important role in the workplace integration of immigrants by promoting solidarity and fairness among employees. However, our results on the influence of social contacts with Germans also show that not only workplace integration but also integration into society as a whole plays a role in the unionization gap of immigrants. Future research could fruitfully expand the analysis and examine if factors such as residential segregation and discrimination in the housing market affect immigrants' unionization.

**Declaration of Conflicting Interests**

The author declares that there is no conflict of interest.

**Funding Acknowledgements**

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.



## References

- Akerlof, G.A. and R.E. Kranton. 2000. "Economics and Identity," *Quarterly Journal of Economics* CXV: 715 – 753.
- Allen, Douglas W. 2007. "The Effect on Divorce of Legislated Net-Wealth Transfers," *Journal of Law, Economics and Organization* 23: 580 – 597.
- Antón, J.I., R. Böheim and R. Winter-Ebmer. 2022. "The Effect of Migration on Unionization in Austria," *Empirical Economics*, Forthcoming.
- Bauer, T., M. Lofstrom and K.F. Zimmermann. 2000. "Immigration Policy, Assimilation of Immigrants, and Natives' Sentiments towards Immigrants: Evidence from 12 OECD Countries," *Swedish Economic Policy Review* 7: 11 – 53.
- Behrens, M. 2009. "Still Married after All These Years? Union Organizing and the Role of Works Councils in German Industrial Relations," *Industrial and Labor Relations Review* 63: 275 – 93.
- Behrens, M. 2016. "Employment Relations in Germany," in: I. Artus et al., eds., *Developments in German Industrial Relations*, Cambridge Scholars Publishing: 1 – 30.
- Berger, H. and M. Neugart. 2011. "How German Labor Courts Decide: An Econometric Case Study," *German Economic Review* 13: 56 – 70.
- Bishop, John H. and Ferran Mane. 2001. "The Impacts of Minimum Competency Exam Graduation Requirements on High School Graduation, College Attendance, and Early Labor Market Success," *Labour Economics* 8: 203 – 222.
- Blanchflower, D.G., R. Crouchley, S. Estrin, and A.J. Oswald. 1990. "Unemployment and the Demand for Unions," NBER Working Paper No. 3251, Cambridge, MA.
- Booth, A. 1985. "The Free Rider Problem and a Social Custom Model of Trade Union Membership," *Quarterly Journal of Economics* 100: 253 – 261.
- Bryson, A. and R. Davies. 2019. "Family, Place and the Intergenerational Transmission of Union Membership," *British Journal of Industrial Relations* 57: 624 – 650.
- Bryson, A. and R. Gomez. 2003. "Buying into Union Membership: Unionisation as an Experience Good in Britain, Canada and the US" in H. Gospel and S. Wood (eds.), *Representing Workers: Union Recognition and Membership in Britain*. London: Routledge.
- Casey, T. and C. Dustmann. 2010. "Immigrants' Identity, Economic Outcomes, and the Transmission of Identity across Generations," *Economic Journal* 120: F31 – F51.
- Checchi, D., J. Visser and H.G. van de Werfhorst. 2010. "Inequality and Union Membership: The Influence of Relative Earnings and Inequality Attitudes," *British Journal of Industrial Relations* 48: 84 – 108.
- Chiswick, B.R. and P.W. Miller. 2005. "Do Enclaves Matter in Immigrant Adjustment?" *City and Community* 4: 5 – 35.

- Constant, A., M. Kahanec and K.F. Zimmermann. 2009. "Attitudes towards Immigrants, Other Integration Barriers, and Their Veracity," *International Journal of Manpower* 30: 5 – 14.
- Cooke, F.L. and G. Wood 2021. "Labor-Management Relations in Autocratic Regimes," in K.F. Zimmermann (ed.), *Handbook of Labor, Human Resources and Population Economics*, Springer, Cham, Forthcoming.
- Cools, S., H. Finseraas and M. Bergli Rasmussen. 2021. "The Immigrant-Native Gap in Union Membership: A Question of Time, Sorting or Culture?" *Labour* 35: 24 – 51.
- Cornelißen, T. and U. Jirjahn. 2012. "September 11<sup>th</sup> and the Earnings of Muslims in Germany – The Moderating Role of Education and Firm Size," *Journal of Economic Behavior and Organization* 81: 490 – 504.
- Corneo, G. 1995. "Social Custom, Management Opposition and Trade Union Membership," *European Economic Review* 39: 275 – 292.
- De Vroome, M. Coenders, F. van Tubergen and M. Verkuyten. 2011. "Economic Participation and National Self-Identification of Refugees in the Netherlands," *International Migration Review* 45: 615 – 638.
- Dill, V. and U. Jirjahn. 2014. "Ethnic Residential Segregation and Immigrants' Perceptions of Discrimination in West Germany," *Urban Studies* 51: 3330 – 3347.
- Dill, V. and U. Jirjahn. 2016. "Foreign Owners and Perceived Job Insecurity in Germany: Evidence from Matched Employer-Employee Data," *International Journal of Manpower* 37: 1286 – 1303.
- Dill, V., U. Jirjahn and G. Tsertsvadze. 2015. "Residential Segregation and Immigrants' Satisfaction with the Neighborhood in Germany," *Social Science Quarterly* 96: 354 – 368.
- Ellguth, P. and S. Kohaut. 2021. "Tarifbindung und betriebliche Interessenvertretung: Aktuelle Ergebnisse aus dem IAB Betriebspanel 2020," *WSI Mitteilungen* 74: 306 – 314.
- Frant, Howard. 1991. "Specifying a Model of State Policy Intervention," *American Political Science Review* 85: 571 – 573.
- Fitzenberger, B., I. Haggenev and M. Ernst. 1999. "Wer ist noch Mitglied in Gewerkschaften? Eine Panelanalyse für Westdeutschland," *Zeitschrift für Wirtschafts- und Sozialwissenschaften* 119: 223 – 263.
- Gang, I.N. and F.L. Rivera-Batiz. 1994. "Unemployment and Attitudes towards Foreigners in Germany," in *Economic Consequences of Immigration to Germany*, edited by G. Steinmann and R. Ulrich, Physica Verlag: 121 – 154.
- Goebel, J., M.M. Grabka, S. Liebig, M. Kroh, D. Richter, C. Schröder and J. Schupp. 2019. "The German Socio-Economic Panel Study (SOEP)," *Journal of Economics and Statistics* 239: 345 – 360.

- Goerke, L. and M. Pannenberg. 2004. "Norm-Based Trade Union Membership: Evidence from Germany," *German Economic Review* 5: 481 – 504.
- Goerke, L. and M. Pannenberg. 2010. "An Economic Analysis of Dismissal Legislation: Determinants of Severance Pay in West Germany," *International Review of Law and Economics* 30: 71 – 85.
- Goerke, L. and M. Pannenberg. 2011. "Trade Union Membership and Dismissal," *Labour Economics* 18: 810 – 821.
- Gomez, R. and M. Gunderson. 2004. "The Experience Good Model of Trade Union Membership," in P.V. Wunnava (ed.), *The Changing Role of Unions: New Forms of Representation*. London: Routledge.
- Gorodzeisky, A. and A. Richards. 2013. "Trade Unions and Migrant Workers in Western Europe," *European Journal of Industrial Relations* 19: 239 – 254.
- Greene, William. 2010. "Testing Hypotheses about Interaction Terms in Nonlinear Models," *Economics Letters* 107: 291 – 296.
- Habyarimana, J., M. Humphreys, D.N. Posner and J.M. Weinstein. 2007. "Why Does Ethnic Diversity Undermine Public Goods Provision?" *American Political Science Review* 101: 709 – 725.
- Horwitz, F.M. and F.L. Cooke. 2020. "Labor-Management Relations in Emerging Economies and Developing Countries," in K.F. Zimmermann (ed.), *Handbook of Labor, Human Resources and Population Economics*, Springer, Cham, Forthcoming.
- International Organization for Migration (IOM). 2019. *World Migration Report 2020*. Geneva.
- Jirjahn, U. 2016. "The Contribution of Labour Economics to the Analysis of Unions and Collective Bargaining in Germany," in: I. Artus et al., eds., *Developments in German Industrial Relations*, Cambridge Scholars Publishing: 187 – 220.
- Jirjahn, U. 2021. "Foreign Ownership and Intra-Firm Union Density in Germany," *Economic and Industrial Democracy* 42: 1052 – 1079.
- Jirjahn, U. 2022. "Membership in Employers' Associations and Collective Bargaining Coverage in Germany," *Economic and Industrial Democracy*, Forthcoming.
- Jirjahn, U. and K. Kraft. 2007. "Intra-Firm Wage Dispersion and Firm Performance – Is There a Uniform Relationship?" *Kyklos* 60: 231 – 253.
- Jirjahn, U. and K. Kraft. 2010. "Teamwork and Intra-Firm Wage Dispersion among Blue-Collar Workers," *Scottish Journal of Political Economy* 57: 404 – 429.
- Kaas, L. and C. Manger. 2011. "Ethnic Discrimination in Germany's Labour Market: A Field Experiment," *German Economic Review* 13: 1 – 20.

- Kanas, A., B.R. Chiswick, T. Van der Lippe and F. van Tubergen. 2012. "Social Contacts and the Economic Performance of Immigrants in Germany," *International Migration Review* 46: 680 – 709.
- Kanas, A., F. van Tubergen and T. Van der Lippe. 2011. "The Role of Social Contacts in the Employment Status of Immigrants," *International Sociology* 26: 95 – 122.
- Keller, B. and A. Kirsch. 2015. "Employment Relations in Germany," in G. Bamber, R.D. Lansbury, N. Wailes, and C.F. Wright, eds., *International and Comparative Employment Relations: National Regulation and Global Changes*, 6<sup>th</sup> edition, London, Sage: 179 – 207.
- Konya, I. 2007. "Optimal Immigration and Cultural Assimilation," *Journal of Labor Economics* 25: 367 – 391.
- Kranendonk, M. and P. de Beer. 2016. "What Explains the Union Membership Gap between Migrants and Natives?" *British Journal of Industrial Relations* 54: 846 – 869.
- Krueger, A.B. and Pischke, J.S. 1997. "A Statistical Analysis of Crime against Foreigners in Unified Germany," *Journal of Human Resources* 32: 182 – 209.
- Lazear, E.P. 1999. "Culture and Language," *Journal of Political Economy* 107: S95 – S126.
- Lee, C.S. 2005. "International Migration, Deindustrialization and Union Decline in 16 Affluent OECD Countries, 1962-1997," *Social Forces* 84: 71 – 88.
- Miguel, E. and M.K. Gugerty 2005. "Ethnic Diversity, Social Sanctions, and Public Goods in Kenya," *Journal of Public Economics* 89: 2325 – 2368.
- Naylor, R. and M. Cripps. 1993. "An Economic Theory of the Open Shop Trade Union," *European Economic Review* 37: 1599 – 1620.
- Nesdale, D. 2002. "Acculturation Attitudes and the Ethnic and Host-Country Identification of Immigrants," *Journal of Applied Psychology* 32: 1488 – 1507.
- OECD. 2017. *OECD Employment Outlook 2017*. OECD Publishing Paris.
- Olson, M. 1965. *The Logic of Collective Action*. Cambridge: Harvard University Press.
- Putnam, R.D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Ryan, L. and T. Turner. 2021. "Does Work Socialization Matter? Worker Engagement in Political Activities, Attachment to Democracy and Openness to Immigration," *Industrial Relations Journal* 52: 125 – 144.
- Schmidt, W. and A. Müller. 2021. "Workplace Universalism and the Integration of Migrant Workers and Refugees in Germany," *Industrial Relations Journal* 52: 154 – 160.
- Schnabel, C. 2020. "Union Membership and Collective Bargaining: Trends and Determinants," in K.F. Zimmermann (ed.), *Handbook of Labor, Human Resources and Population Economics*, Springer, Cham, Forthcoming.

- Schnabel, C. and J. Wagner. 2005. "Determinants of Trade Union Membership in West Germany: Evidence from Micro Data, 1980-2000," *Socio-Economic Review* 3: 1 – 24.
- Silvia, S.J. 2013. *Holding the Shop Together – German Industrial Relations in the Postwar Era*. Cornell University Press.
- Spears, R. 2021. "Social Influence and Group Identity," *Annual Review of Psychology* 72: 367 – 390.
- Visser, J. 2002. "Why Fewer Workers Join Unions in Europe: A Social Custom Explanation of Membership Trends," *British Journal of Industrial Relations* 40: 403 – 430.
- Visser, J. 2019a. "Trade Unions in the Balance," ILO ACTRAV Working Paper, Geneva.
- Visser, J. 2019b *ICTWSS Data Base. Version 6.0*. Amsterdam: Amsterdam Institute for Advanced Labour Studies AIAS.
- Windolf, P. and J. Haas. 1989. "Who Joins the Union? Determinants of Trade Union Membership in West Germany," *European Sociological Review* 5: 147 – 165.

**Table 1:** Variable Definitions and Descriptive Statistics

<i>Variable</i>	<i>Definition (Mean, Standard Deviation)</i>	<i>Mean, SD</i>
Union member	Dummy equals 1 if the employee is a member of a trade union.	0.180, 0.384
First-generation migrant	Dummy equals 1 if the employee is a first-generation immigrant. The dummy equals 0 if the employee is a native.	0.132, 0.338
Second-generation migrant	Dummy equals 1 if the employee is a second-generation immigrant. The dummy equals 0 if the person is a native.	0.076, 0.264
Years in Germany	The number of years an immigrant resides in Germany. The variable is set equal to 0 if the employee is a native.	2.863, 8.416
Contacts with natives	Ordered variable for visits during the last year: 0 = The migrant did not visit Germans in their home <i>and</i> was not visited by Germans; 1 = The migrant either visited Germans in their home <i>or</i> was visited by Germans; 2 = The migrant visited Germans in their home <i>and</i> was visited by Germans. The variable is set equal to 0 if the employee is a native.	0.230, 0.630
Works council	Dummy equals 1 if a works council is present in the firm the employee works for.	0.597, 0.491
Full-time employee	Dummy equals 1 if the employee is a full-time employee.	0.723, 0.4474
Working hours	Number of weekly hours the employee actually works including possible overtime.	24.85, 19.05
Tenure	The employee's tenure with the firm in years.	11.42, 10.30
Log of income	Log of gross income (in Euro) received last month.	7.745, 0.636
Public sector	Dummy equals 1 if the employee works in the public sector.	0.226, 0.418
Firm size 20–199	Dummy equals 1 if the employee works in a firm with 20–199 employees.	0.270, 0.444
Firm size 200–1999	Dummy equals 1 if the employee works in a firm with 200–1999 employees.	0.244, 0.430
Firm size $\geq 2000$	Dummy equals 1 if the employee works in a firm with 2000 or more employees.	0.279, 0.449
Work experience	The employee's years of full-time and part-time work experience.	20.11, 11.07
Unemployment experience	The employee's total unemployment experience in years.	0.525, 1.577
Years of schooling	The employee's years of schooling.	12.40, 2.567
Age	The age of the employee.	43.91, 10.69
Male employee	Dummy equals 1 if the employee is a man.	0.511, 0.499
Married	Dummy equals 1 if the employee is married.	0.647, 0.478
Social democratic party	Dummy equals 1 if the employee leans toward the social democratic party (SPD).	0.149, 0.356
Conservative party	Dummy equals 1 if the employee leans toward a conservative party (CDU/CSU).	0.130, 0.336
Origin country unionization	Union density of the workforce in the migrant's country of origin (in %). The variable is set equal to 0 if the employee is a native.	6.806, 21.219
Occupation dummies	Eight two-digit occupation dummies.	-----
Industry dummies	Seventeen two-digit industry dummies.	-----
State dummies	Eleven federal state dummies.	-----
Wave dummies	Two dummy variables for the year of observation.	-----

Number of observations = 16,234. For the variable for second-generation immigrants, the number of observations is 15,248.

**Table 2:** Initial Estimates

<i>Variable</i>	<i>(1)</i>	<i>(2)</i>
First-generation migrant	-0.730*** [-0.108] (0.158)	-----
Second-generation migrant	-----	-0.0803 [-0.012] (0.207)
Full-time employee	0.403** [0.594] (0.169)	0.456*** [0.678] (0.176)
Working hours	-0.014* [-0.002] (0.008)	-0.014* [-0.002] (0.008)
Tenure	0.059*** [0.009] (0.015)	0.056*** [0.008] (0.015)
Tenure squared	-0.0003 [-0.00005] (0.0004)	-0.0002 [-0.00003] (0.0004)
Log of income	0.503*** [0.074] (0.147)	0.464*** [0.069] (0.151)
Public sector	0.416*** [0.061] (0.149)	0.366** [0.054] (0.153)
Firm size 20–199	0.190 [0.028] (0.184)	0.169 [0.025] (0.193)
Firm size 200–1999	0.654*** [0.096] (0.207)	0.602*** [0.089] (0.215)
Firm size $\geq 2000$	1.389*** [0.205] (0.215)	1.434*** [0.213] (0.225)
Works council	2.325*** [0.343] (0.171)	2.247*** [0.334] (0.177)
Work experience	0.017 [0.003] (0.012)	0.006 [0.001] (0.013)
Unemployment experience	-0.015 [-0.002] (0.036)	-0.024 [-0.004] (0.041)
Years of schooling	0.434** [0.064] (0.208)	0.499** [0.074] (0.236)

Years of schooling squared	-0.020*** [-0.003] (0.008)	-0.023*** [-0.003] (0.009)
Age	0.016 [0.002] (0.036)	0.052 [0.008] (0.037)
Age squared	-0.0002 [-0.00003] (0.0004)	-0.0005 [-0.00007] (0.0004)
Male employee	0.384*** [0.057] (0.131)	0.412*** [0.061] (0.138)
Married	-0.063 [-0.009] (0.111)	-0.086 [-0.013] (0.115)
Social democratic party	1.037*** [0.173] (0.132)	1.082*** [0.161] (0.138)
Conservative party	-0.740*** [-0.109] (0.154)	-0.844*** [-0.126] (0.162)
Occupation dummies	Included	Included
Industry dummies	Included	Included
State dummies	Included	Included
Wave dummies	Included	Included
Pseudo R <sup>2</sup>	0.158	0.151
Rho	0.746*** (0.022)	0.760*** (0.021)
Number of observations	16,234	15,248
Number of employees	13,089	12,130

Dependent variable: Union member. Method: Random effects logit. Regression (1) is based on the combined sample of first-generation immigrants and natives. Regression (2) is based on the combined sample of second-generation immigrants and natives. The table shows the estimated coefficients. Standard errors in parentheses are clustered at the employee level. Marginal effects evaluated at the mean of the dependent variable are in square brackets. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



**Table 3:** The Moderating Role of Integration into Society and Workplace

<i>Variable</i>	<i>(1)</i>	<i>(2)</i>
First-generation migrant	-3.341*** [-0.493] (0.633)	-2.744*** [-0.404] (0.679)
Years in Germany	0.035*** [0.005] (0.013)	0.028** [0.004] (0.013)
Contacts with natives	0.438** [0.065] (0.220)	0.502** [0.074] (0.225)
Works council	2.185*** [0.322] (0.174)	2.184*** [0.322] (0.174)
First-generation migrant x Works council	1.249*** [0.184] (0.398)	1.277*** [0.188] (0.400)
Origin country unionization	-----	-0.012** [-0.002]
Control variables	Included	Included
Pseudo R <sup>2</sup>	0.160	0.160
Rho	0.748*** (0.022)	0.748*** (0.022)
Number of observations	16,234	16,234
Number of employees	13,089	13,089

Dependent variable: Union member. Method: Random effects logit. The regressions are based on the combined sample of first-generation immigrants and natives. The table shows the estimated coefficients. Standard errors in parentheses are clustered at the employee level. Marginal effects evaluated at the mean of the dependent variable are in square brackets. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ .

## Endnotes

---

<sup>1</sup> We consider first-generation immigrants who have lived for at least one year in Germany.

<sup>2</sup> Table 1 shows the descriptive statistics for the combined sample of first-generation immigrants and natives. If we only consider first-generation immigrants, the average unionization rate in the country of origin is 51.66%, the average years in Germany are 21.72 years, and the average of the contact variable is 1.746.

<sup>3</sup> The logit model provides a straightforward way to calculate marginal effects at the mean  $\bar{y}$  of the dependent variable by multiplying the estimated coefficients with the scalar  $\bar{y}(1 - \bar{y})$ . Our subsequent regressions will include interactions of the explanatory variables. Calculating marginal effects for interaction effects requires particular care in nonlinear models such as logit or probit. In nonlinear models, evaluating marginal effects of interaction variables can potentially result in artificial and atheoretical predictions if they are calculated at the means of the explanatory variables or as average marginal effects (Frant 1991, Greene 2010). The functional form of a nonlinear model implies that all explanatory variables have a nonlinear influence on the probability of interest. Hence, calculating the marginal effect for an interaction variable can produce interaction effects simply by distributional assumption. For example, the marginal effect may be nonzero even if the coefficient of the interaction variable is zero. One may even obtain marginal effects with signs reversed to those of the estimated coefficients. Evaluating marginal effects at the mean of the dependent variable avoids such spurious results as the coefficients are multiplied by a constant factor (e.g., Allen 2007, Bishop and Mane 2001, Dill and Jirjahn 2016). When interpreting our estimates, we follow Greene's (2010) advice to put primary focus on the coefficients and to use marginal effects as quantitative illustrations.

## IAAEU Discussion Paper Series in Economics

- 01/2018      Wage Inequality and Structural Change  
*Joanna Tyrowicz and Magdalena Smyk*  
[published as: Tyrowicz, J. and M. Smyk (2018). Wage Inequality and Structural Change. *Social Indicators Research* 141(2), 503-538.]
- 02/2018      Labor Reallocation and Demographics  
*Joanna Tyrowicz and Lucas van der Velde*  
[published as: Tyrowicz, J. and L. van der Velde (2018). Labor Reallocation and Demographics. *Journal of Comparative Economics* 46(1), 381-412.]
- 03/2018      Identifying Age Penalty in Women's Wages: New Method and Evidence from Germany 1984-2014  
*Joanna Tyrowicz, Lucas van der Velde and Irene van Staveren*  
[published as: Tyrowicz, J., L. van der Velde and I. van Staveren (2018). Does Age Exacerbate the Gender-Wage Gap? New Method and Evidence from Germany, 1984-2014. *Feminist Economics* 24(4), 108-130.]
- 04/2018      On Welfare Effects of Increasing Retirement Age  
*Krzysztof Makarski and Joanna Tyrowicz*  
[published as: Makarski, K. and J. Tyrowicz (2019). On Welfare Effects of Increasing Retirement Age. *Journal of Policy Modelling* 41(4), 718-746.]
- 05/2018      A Cautionary Note on the Reliability of the Online Survey Data – the Case of Wage Indicator  
*Magdalena Smyk, Joanna Tyrowicz and Lucas van der Velde*  
[published as: Smyk, M., J. Tyrowicz. and L. van der Velde (2021). A Cautionary Note on the Reliability of the Online Survey Data – the Case of Wage Indicator. *Sociological Methods and Research* 50(1), 429-464.]
- 06/2018      How (Not) to Make Women Work?  
*Karolina Goraus, Joanna Tyrowicz and Lucas van der Velde*  
[published as: Goraus, K., J. Tyrowicz and L. van der Velde (2018). How (Not) to Make Women Work? *Social Science Research* 75, 154-167.]
- 07/2018      Efficiency Wages in a Cournot-Oligopoly  
*Marco de Pinto and Laszlo Goerke*  
[published as: de Pinto, M. and L. Goerke (2019). Efficiency Wages in a Cournot-Oligopoly, *The B.E. Journal of Economic Analysis and Policy* 19(4), 20180236.]
- 08/2018      Inequality in an OLG Economy with Heterogeneous Cohorts and Pension Systems  
*Joanna Tyrowicz, Krzysztof Makarski and Marcin Bielecki*  
[published as: Tyrowicz, J., K. Makarski and M. Bielecki (2018). Inequality in an OLG Economy with Heterogeneous Cohorts and Pension Systems. *Journal of Economic Inequality* 16(4), 583-606.]
- 09/2018      Corporate Social Responsibility and Tax Avoidance  
*Laszlo Goerke*  
[published as: Goerke, L. (2019). Corporate Social Responsibility and Tax Avoidance. *Journal of Public Economic Theory* 21(2), 310-331.]

- 10/2018 A Regression Discontinuity Evaluation of Reducing Early Retirement Eligibility in Poland  
*Oliwia Komada, Pawel Strzelecki and Joanna Tyrowicz*  
[published as: Komada, O., P. Strzelecki and J. Tyrowicz (2019). A Regression Discontinuity Evaluation of Reducing Early Retirement Eligibility in Poland. *International Journal of Manpower* 40(2), 286-303.]
- 11/2018 Stigmatization, Liability and Public Enforcement of Law  
*Clemens Buchen, Bruno Deffains and Alberto Palermo*  
[published as: Buchen, C., B. Deffains and A. Palermo (2019). Stigmatization, Liability and Public Enforcement of Law. *Revue d'économie politique* 129(2), 239-259.]
- 12/2018 Sickness Absence and Relative Income  
*Laszlo Goerke*  
[published as: Goerke, L. (2019). Absence from Work, Sick Pay and Positional Consumption Concerns. *Labour: Review of Labour Economics and Industrial Relations* 33(2), 187-211.]
- 01/2019 Ostracism in Alliances of Teams and Individuals: Voting, Exclusion, Contribution, and Earnings  
*Stephan Huber, Jochen Model and Silvio Städter*
- 02/2019 Evaluating Welfare and Economic Effects of Raised Fertility  
*Krzysztof Makarski, Joanna Tyrowicz and Magda Malec*  
[published as: Makarski, K., J. Tyrowicz and M. Malec (2019). Fiscal and Welfare Effects of Raised Fertility in Poland: Overlapping Generations Model Estimates. *Population and Development Review* 45(4), 795-818.]
- 03/2019 The Structure and Behavioral Effects of Revealed Social Identity Preferences  
*Florian Hett, Markus Kröll and Mario Mechtel*  
[published as: Hett, F., M. Mechtel and M. Kröll (2020). The Structure and Behavioral Effects of Revealed Social Identity Preferences. *Economic Journal* 130(632), 2569-2595.]
- 04/2019 All on board? New Evidence on Board Gender Diversity from a Large Panel of European Firms  
*Joanna Tyrowicz, Siri Terjesen and Jakub Mazurek*  
[published as: Tyrowicz, J., S. Terjesen and J. Mazurek (2020). All on Board? New Evidence on Board Gender Diversity from a Large Panel of European Firms. *European Management Journal* 38(4), 634-645.]
- 01/2020 Thorstein Veblen, Joan Robinson, and George Stigler (probably) never met: Social Preferences, Monopsony, and Government Intervention  
*Laszlo Goerke and Michael Neugart*  
[published as: Goerke, L., M. Neugart (2021). Social Preferences, Monopsony, and Government Intervention. *Canadian Journal of Economics/Revue Canadienne d'Économique* 54(2), 864-891.]
- 02/2020 Younger, Dissatisfied, and Unhealthy - Relative Age in Adolescence  
*Luca Fumarco, Stijn Baert and Francesco Sarracino*  
[published as: Fumarco, L., S. Baert and F. Sarracino (2020). Younger, Dissatisfied, and Unhealthy - Relative Age in Adolescence. *Economics & Human Biology* 37, 100858.]
- 03/2020 Horizontal FDI in a Dynamic Cournot - Oligopoly with Endogenous Entry  
*Laszlo Goerke*  
[published as: Goerke, L. (2020). A Political Economy Perspective on Horizontal FDI in a

Dynamic Cournot-Oligopoly with Endogenous Entry. *European Journal of Political Economy* 63, 101897.]

- 04/2020      An Efficiency-wage Model with Habit Concerns About Wages  
*Laszlo Goerke*  
[published as: Goerke, L. (2021). Habit Formation and Wage Determination. *Managerial and Decision Economics* 42(1), 61-76.]
- 05/2020      Termination of Employment Contracts by Mutual Consent and Labor Market Fluidity  
*Cyprien Batut and Eric Maurin*
- 06/2020      Trade Unions and Corporate Social Responsibility  
*Laszlo Goerke*  
[published as: Goerke, L. (2022). Trade Unions and Corporate Social Responsibility. *Annals of Public and Cooperative Economics* 93(1), 177– 203.]
- 07/2020      Guess who’s there: Employment Protection Legislation and the Degree of Substitutability between Labour Contracts  
*Daniela Sonedda*
- 08/2020      Unions and Workers’ Well-being  
*Laszlo Goerke*  
[published as: Goerke, L. (2021). Unions and Workers’ Well-being. *Handbook of Labor, Human Resources and Population Economics*: Springer Reference, ed.: Zimmermann, Klaus F., Springer-Verlag: Berlin und Heidelberg, 2021.]
- 01/2021      Wage Determination in the Shadow of the Law: The Case of Works Councilors in Germany  
*Laszlo Goerke and Markus Pannenberg*
- 02/2021      Our Product is Unique: A Note on a Delegation Game with Differentiated Products  
*Clemens Buchen, Sven Hartman and Alberto Palermo*  
[published as: Buchen, C., S. A. Hartmann and A. Palermo (2021). Our product is unique: A note on a delegation game with differentiated products. *Economics Bulletin* 41(3), 1322-1329.]
- 03/2021      Adverse Selection, Heterogeneous Beliefs, and Evolutionary Learning  
*Clemens Buchen and Alberto Palermo*  
[published as: Buchen, C., A. Palermo (2022). Adverse selection, heterogeneous beliefs, and evolutionary learning. *Dynamic Games and Applications* 12, 343–362.]
- 04/2021      Tax Evasion by Firms  
*Laszlo Goerke*  
[forthcoming as: Goerke, L. Tax Evasion by Firms. *Marciano, Alain and Giovanni Battista Ramello (eds) (2022), Encyclopedia of Law and Economics – Living Edition, Springer: New York.*]
- 05/2021      Cost Uncertainty in an Oligopoly with Endogenous Entry  
*Marco de Pinto and Laszlo Goerke*  
[forthcoming as: de Pinto, M. and L. Goerke. Cost Uncertainty in an Oligopoly with Endogenous Entry. *Bulletin of Economic Research*.]

- 01/2022      Endogenous Market Structure and Partisan Competition Authorities  
*Laszlo Goerke*  
[published as: Goerke, L. (2022). Partisan Competition Authorities, Cournot-Oligopoly, and Endogenous Market Structure. *Southern Economic Journal* 89(1), 238-270.]
- 02/2022      On the Welfare Effects of Adverse Selection in Oligopolistic Markets  
*Marco de Pinto, Laszlo Goerke and Alberto Palermo*
- 03/2022      Immigrants and Trade Union Membership: Does Integration into Society and Workplace Play a Moderating Role?  
*Fenet Jima Bedaso, Uwe Jirjahn and Laszlo Goerke*