# Does Labor Protection Increase Support for Immigration? Evidence from Switzerland

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# Does Labor Protection Increase Support for Immigration? Evidence from Switzerland

## Abstract

What affects native support for immigration? At a time of rising anti-immigration sentiments, this is a question raised by both academics and policy makers. We study the role of labor protection in shaping native preferences over migration policies. We look at Swiss national votes which took place from 2000 to 2014. Our results show that a higher immigrant exposure reduces pro-immigration vote shares in municipalities with a relatively low-skilled native population. The negative response is mitigated under higher levels of labor protection as measured by collective bargaining coverage. We look at labor market outcomes to understand mechanisms at play and find some suggestive evidence that collective agreements mitigate negative wage responses among low-skilled natives. Overall, the analysis suggests that labor protection affects vote outcomes by improving in addition other labor market conditions or by alleviating existing fears among the native population.

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# 1   Introduction

The number of international migrants has risen by nearly seventy percent since 1990, reaching 272 million people globally (UNPD, 2019). A small number of countries, mostly high-income, have received a disproportionately large share of immigrants. Among OECD members, the foreign population accounts for approximately nine percent of the population (OECD, 2020a). At the same time, immigration has come to the center of political debates in a number of these countries. Anti-immigrant rhetoric dominated recent elections in the United States and several European countries, and the debates leading up to the Brexit referendum. The wide voter support such campaigns receive is evidence of a rising concern about how foreigners are integrated into society and the labor market of the receiving country.

In this paper, we investigate the role of labor market concerns in shaping native preferences over migration policies. Fears over deteriorating labor market conditions are a widely discussed determinant of voting outcomes on immigration issues. Labor protection offered by Collective Bargaining Agreements (CBAs) could reduce concerns because they set binding wage and working conditions for the contracting parties. We investigate how natives respond to the local presence of immigrants depending on their collective bargaining coverage. The analysis on voting outcomes is informative of the role of labor market concerns in shaping support for immigration. To understand the effect of labor protection on labor market outcomes, we further study wage and employment outcome responses to immigration at different levels of collective bargaining coverage.

Switzerland offers a favorable setting to study our research question. The share of foreigners in the population increased from 19.2% in 2000 to 24.2% in 2019. With such high levels, the country ranks second among the OECD member states (OECD, 2020a). Given the Swiss direct democracy that gives voters a say on national policies, we can measure revealed support for immigration. We focus on votes that are classified as Immigration Policy or European Foreign Policy by the Federal Statistical Office. These votes took place between 2000 and 2014. Moreover, the country ranks among the most liberal labor markets. Similar to other Western economies, collective agreements regulate wage and working conditions in Switzerland. The coverage rate is 40.3% in 2018 and a large part of the workers fall under centrally negotiated agreements that set binding conditions for an industry and region (Bundesamt für Statistik, 2019).

In our empirical analysis, we link native pro-immigration vote shares and labor market outcomes to local exposure to immigrants under different levels of collective bargaining coverage. We use information on generally valid CBAs and employment by industry to build a regional measure of the share of workers employed in an industry with a collective agreement.

Since immigrants could self-select into regions with better labor market conditions or more positive attitudes towards them, ordinary least squares estimations are likely to give biased results. To mitigate these concerns, we rely on an instrumental variable strategy that uses past settlement patterns to allocate immigrants to regions within Switzerland.

We start our analysis by comparing native skill levels to those of immigrant workers and calculate native collective bargaining coverage rates by level of skill. Immigrants are over-represented to the left of the skill distribution and underrepresented to the right. Collective agreements set standards most relevant to low-skilled workers such as minimum wages. We confirm that low-skilled natives are more likely to be employed in industries with a CBA than high-skilled natives. In summary, collective agreements protect labor market outcomes for the subset of natives who are likely to compete against foreign workers.

The analysis of voting outcomes reveals a negative but insignificant effect of a higher immigrant exposure on the share of pro-immigration votes. This effect varies with native educational attainment. Specifically, at the low end of the skill distribution we estimate that a rise in immigration equal to 1 percent of the native population leads to a decline in pro-immigration vote shares of 0.49 percentage points. The effect is positive at the upper end of the skill distribution. In low-skilled municipalities, the marginal effect of a rise in immigration at low coverage levels is $-0.59$ and at high coverage levels significantly lower $(-0.33)$. At the upper end of the skill distribution, the response to a higher presence of immigrants depends little on the level of labor protection. Our findings are robust to various sensitivity checks.

To assess the relevance of labor market concerns as a determinant of voting behavior, we turn to native labor market outcomes. Our findings suggest that a rise in the exposure to immigration is linked to a reduction in wages of low- to medium-skilled workers and an increase in wages of high-skilled workers. While results are not statistically significant, we find that collective bargaining agreements partially mitigate the negative wage effects for the lowest skill groups. We complement the analysis by looking at employment rates. We find on average a negative but insignificant effect of exposure to immigrants and of collective bargaining coverage. These estimates are driven by the subset of medium skilled natives, for whom we also find that negative employment effects are slightly mitigated by higher CBA coverage. Overall, we argue that the effect labor protection has on voting outcomes is unlikely to be fully explained by changes in wages and employment. This suggests that collective bargaining agreements also improve other labor market conditions or alleviate concerns among the native population that cannot be directly linked to labor market outcomes.

With our analysis on voting outcomes we contribute to the literature on attitudes to-

wards immigration. Various determinants have been studied using social survey data with mixed evidence. Exposure to migrants could reduce prejudice as suggested by the intergroup contact theory (Allport *et al.*, 1954). Schindler and Westcott (2020) find that stated prejudice and implicit bias towards blacks is lower in regions with a higher historical presence of black American military units in the United Kingdom (UK). In contrast, Dustmann and Preston (2001) find that a high concentration of ethnic minorities can explain racial intolerance towards them again in the UK. Similarly, Card *et al.* (2012) and Tabellini (2019) argue that cultural differences are the main drivers of anti-migrant sentiments. Using Swiss data, Hainmueller and Hangartner (2013) and Diehl *et al.* (2018) find that preferences over migration policies vary with the country of origin of the migrant population. Our focus is instead on the labor market conditions in the destination regions.

The literature has established a link between anti-migrant sentiments and economic concerns among the native population. Several studies investigate the fiscal burden of immigration and how this affects native attitudes towards immigrants (see Dustmann and Preston, 2007; Facchini and Mayda, 2009; Alesina *et al.*, 2018). Another strand of the literature argues that natives who are likely to compete against foreigners in the labor market hold more negative attitudes (see Scheve and Slaughter, 2001; Mayda, 2006; O'Rourke and Sinnott, 2006; Ortega and Polavieja, 2012; Pecoraro and Ruedin, 2019; Haaland and Roth, 2020). In contrast, Hainmueller *et al.* (2015) present evidence that concerns about labor market competition do not substantially affect native attitudes towards immigrants. D'Hombres and Nunziata (2016), Cavaille and Marshall (2019) and Margaryan *et al.* (2021) find that education decreases the probability of holding anti-migrant views, but that this is not driven by a labor market channel. While we also proxy exposure to foreign labor market competition with education and skill level, our contribution is to study the effect of local immigrant exposure under different levels of labor protection. This allows us to directly test the relevance of labor market concerns as a determinant of native preferences over migration policies.

A growing literature links election outcomes and exposure to immigrants. Evidence from Austria (Halla *et al.*, 2017), Denmark (Dustmann *et al.*, 2019), Germany (Otto and Steinhardt, 2014), Italy (Barone *et al.*, 2016) and France (Edo *et al.*, 2019) suggests that higher local migrant presence is associated with more votes for right-wing parties. Similarly, Cavaille and Ferwerda (2017) argue that support for the far-right rose after granting non-EU migrants access to public housing in Austria. Guiso *et al.* (2017) link votes for populist parties to economic insecurity induced by immigration. Mayda *et al.* (forthcoming) find that Republican vote shares decline in US counties with an increase in high-skilled immigrants, whereas results are opposite when looking at low-skilled immigrant inflows. Steinmayr (2021) finds that long-term interaction reduces far-right vote shares in the context of Austria, evidence

in line with the contact hypothesis, while short-term interaction has the opposite effect.

As election votes capture preferences over a variety of political issues, it is difficult to infer support for immigration using this approach. By studying outcomes of referendums directly linked to immigration policy we overcome this problem. Facchini and Steinhardt (2011) relate votes on immigration policy in the US House of Representatives to labor market concerns. Similar to us, Brunner and Kuhn (2018) look at Swiss votes related to immigration regulation. Their results point at a sizeable increase in anti-immigration vote shares as a response to the presence of culturally different migrants in the municipality. In contrast, our paper asks whether labor protection as measured by collective bargaining agreements can affect vote outcomes.

Union membership has received attention in the political and economics literature. A recent contribution to the former shows that union membership is associated with lower racial resentment among whites (Frymer and Grumbach, 2021). In the economics literature, the role of unions received significant attention in the 1990s among labor economists (see Card, 1996; Lemieux, 1998). With respect to collective bargaining agreements, recent papers have found mixed evidence on the wage effects (Card and De La Rica, 2006; Gürtzgen, 2016) and some evidence of negative employment effects (Kahn, 2000; Magruder, 2012). Our focus is on how labor protection affects native labor market outcomes in the context of rising immigration. In an early paper focusing on European countries, Angrist and Kugler (2003) argue that labor regulation can protect some native workers from immigrant competition, but it can also lead to worse employment outcomes. Recent work investigates the effect of immigration on labor market conditions at different levels of employment protection (D'Amuri and Peri, 2014), fixed versus indefinite term contracts (Edo, 2016) and minimum wages (Edo and Rapoport, 2019). A number of papers focus on negative employment effects of immigration under rigid wages (see Boeri and Brücker, 2005; Brücker and Jahn, 2011; Brücker et al., 2014). In a meta analysis, Foged et al. (forthcoming) argue that institutional differences are vital in reconciling findings from different countries. Collective bargaining, specifically, is not found to have a significant effect. We contribute to this literature by exploiting within country variation in collective bargaining coverage. Our coverage measure is based on generally valid collective bargaining agreements. It is arguably more exogenous to local economic conditions because the agreements are binding also for parties that did not participate in the bargaining process.

The literature has found mixed evidence of how immigration affects native wages (see Borjas, 2003; Ottaviano and Peri, 2012; Dustmann et al., 2016). Using a skill-cell approach and Swiss data, Gerfin and Kaiser (2010) document positive effects for the low-skilled and negative effects for the high-skilled natives, while Basten and Siegenthaler (2019) find no

significant wage effects. Using a geographic area approach, Beerli *et al.* (2021) find positive effects of skilled immigrants on the wages of tertiary educated natives. We follow a similar regional approach and the estimation strategy of Dustmann *et al.* (2012), and focus on the impact of foreigners on native wage and employment outcomes under different levels of labor protection.

The remainder of the paper is organized as follows: in Section 2 we discuss Swiss immigration policies and collective bargaining agreements, and data used; in Section 3 we describe the empirical strategy and present basic trends in the data; in Section 4 we present our results; Section 5 concludes.

# 2 Context and Data

## 2.1 Swiss Context

**Migration regulation** The Swiss direct democracy allows its citizens over eighteen years of age to take part in political decisions. Voters can challenge newly approved policies by the parliament with referendums and in addition propose changes through popular initiatives.[1] Since only Swiss nationals are eligible to vote, voting outcomes reflect native preferences. Popular votes are scheduled three to four times per year and each eligible voter receives a voting booklet with details of the proposal. Media widely discusses the arguments for and against a proposal in the weeks up to the vote. Hence, we can expect that voters understand well the principles of direct democracy and have access to all relevant information to make an informed choice.

Voters approved the two major migration regulations that are currently in place. They differentiate migrants on the basis of country of origin. Individuals from European Union (EU) and European Free Trade Association (EFTA) countries face preferential treatment relative to third-country nationals. The Agreement on the Free Movement of Persons (AFMP) was negotiated as a part of a set of bilateral agreements. Initially it applied to workers from

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[1]Constitutional amendments or accessions to supranational organizations are by default subject to a compulsory referendum. Optional referendums can challenge an act passed by parliament. A popular majority is sufficient for approval. Popular initiatives allow voters to submit proposals that will be incorporated into the federal constitution conditional on being accepted. A sufficient condition for a popular initiative is that 100,000 signatures are collected within 18 months after having fulfilled some formalities that are confirmed by the Federal Chancellery. For comparison, a minimum of 50,000 signatures have to be collected within 100 days after the official publication of the act for an optional referendum to be called. Alternatively, a minimum of eight cantons can demand a vote. A majority of voters and a majority of cantons must vote in favor of the initiative for it to be approved. A double majority is also required for a compulsory referendum to pass.

EU-15/EFTA member states and was later extended to new EU members.[2] For example, EU-15/EFTA members have enjoyed unconditional free movement of persons since 2014. In contrast, immigration of non-EU/EFTA workers is strictly regulated. Rules are guided by the Federal Act on Foreign Nationals and Integration which came into force in January 2008. Quotas for working permits are decided on an annual basis by the Federal Government. Prerequisites for such a permit include a high skill level, non-violation of the local priority requirement, wage and working conditions that correspond to local and professional standards to prevent wage dumping.[3]

According to data from the Swiss State Secretariat of Migration (SEM), the number of foreign residents in Switzerland rose by more than 53% between 2000 and 2018 to above 25% of the population. This observed rise in immigration is largely driven by individuals from EU/EFTA countries. They accounted for 69% of all immigrants at the end of the period. There are significant differences in motives for migration among the EU/EFTA and third-country nationals. In 2018 64.7% of EU/EFTA nationals entered for employment reasons and only 22.8% for family reasons. In contrast, 10% of the inflow of non-EU/EFTA nationals in the same year came for reasons of employment, while 47.3% of them entered for family reunification. This can be linked to the policies in place which make it difficult for non-EU/EFTA nationals to acquire a working permit.

**Collective bargaining** The Swiss labor market is considered relatively unregulated – it ranks 32 out of 37 countries in 2019 according to the employment protection legislation index of the OECD where the US is ranked most liberal (OECD, 2020b). Switzerland has no national minimum wage and also had no cantonal minimum wages up to 2017. Collective Bargaining Agreements (CBA) are a wide spread tool to set working conditions in North America and in most of Europe including Switzerland.[4] These are fixed-term contracts with normative provisions such as beginning and termination of a work contract, wages, working hours, holidays and wage eligibility during sickness, motherhood and military service. Where the law defines minimum requirements, a CBA may only offer better terms for the employees. Clauses such as minimum wages are updated regularly. Conditions are binding for the contracting parties, which are the involved employers and employees. Firms can decide to apply CBAs to unionized and non-unionized workers, while extension mechanisms can make the conditions generally valid for a whole occupation or industry within a geographical area.

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[2]EU-15 member states are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom; EFTA are Iceland, Liechtenstein and Norway.

[3]High-skilled people are defined as tertiary educated with several years of professional experience as a manager or a specialist. To fulfil the local priority requirement employers need to present a proof that there are no other suitable Swiss or EU/EFTA candidates available for the specific position.

[4]See the overview on the website of the OECD.

According to the Survey on Collective Labour Agreements, the number of covered employees rose from 1.27 million to 1.98 million between 1999 and 2014 in Switzerland (Bundesamt für Statistik, 2019).[5] In the end of the period around 41% of all employed were covered, of which 87% were covered by agreements with minimum wage clauses. The increase in CBA coverage was due to unions starting new campaigns in particular in the low-paid service industries, public sector firms that became eligible for collective bargaining and political discussions related to the free movement of workers (Lampart and Kopp, 2013). The AFMP, specifically, was predicted to significantly increase the inflow of EU/EFTA workers with potentially negative implications on the natives' labor market conditions.

Since 1956 it is possible to declare an existing CBA generally valid. The procedure starts with a written request from the contracting parties. A prerequisite for an agreement to be declared generally valid is that it is signed by an employer association. A sufficient number of workers and firms must be covered by the existing CBA to extend its validity to everyone in the industry or occupation within some geographical area.[6] Although only a small share of all CBAs are generally valid, they account for 50% of all covered workers. The total number of such agreements rose from 36 in 2000 to 71 in 2014, and the number of total workers covered doubled. Generally valid CBAs are negotiated at the cantonal or national level, where regions or cantons can be excluded. In comparison, our unit of observation is smaller, which offers advantages for identification purposes.

## 2.2  Data

We use a combination of administrative data and large-scale surveys.

**Voting outcomes** The Federal Statistical Office (FSO) classifies votes by topic. We look at the set of votes that relate to immigration policy and European foreign policy. For a list of votes with more details see Table A1 and the Data Appendix. The eleven votes we focus on took place in the period 2000–2014. Specifically, we cover seven votes on European foreign policy. Five of them are optional referenda and are directly related to the AFMP. The two others are popular initiatives and proposed to join the EU and to restrict immigration in violation to the AFMP, respectively. The four votes on immigration policy consist of two popular initiatives, an optional referendum and a counter proposal from the Federal

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[5]While the number of covered includes employers as well as employees, we consider the former as insignificant.

[6]The following conditions defined by law must be fulfilled for an agreement to be declared generally valid: (1) necessity; (2) non-infringement of general interest and minority interests considered; (3) quorum conditions – more than half of the employers being covered by the generally valid CBA must be part of the current CBA; more than half of the employees being covered by the generally valid CBA must be part of the current CBA; the employers involved in the current CBA must employ more than half of the employees that will be covered under the generally valid CBA.

Government to one of the initiatives. All of them proposed the introduction of stricter measures. We use information on participation and acceptance rates at the municipality level.[7] In line with Brunner and Kuhn (2018) in the Swiss context and Brey (2021) in the US context, we classify proposals as pro- or anti-immigration based on implications for aggregate immigration levels.

We supplement these data with information from the Vox Survey (Vox Survey, 2019). This is a post-vote telephone survey covering eligible voters. We restrict the sample to the eleven votes used in our main analysis. The questionnaire asks whether and how respondents voted in a specific vote, about demographic characteristics, income level and a set of attitudinal questions. We link self-reported voting behavior to stated attitudes towards foreigners in the country.

**Labor market outcomes** The Swiss Earnings Structure Survey (SESS) is a large-scale firm survey conducted biennially. It is a repeated cross-section of firms covering the secondary and tertiary sectors of the economy. Respondents provide information about a random subset of employees. The number of workers covered depends on firm size, with information available for at least one third of all workers. At the firm level there is information about the commuting zone where the firm is located, industry and size. The SESS has information on the gross hourly wages of individual workers and their educational attainment. The data allow us to distinguish between native and foreign workers, and within the latter group, between foreigners with different types of permits. We limit the sample to employees 18–65 years of age, working in private sector enterprises with available region of work and permit type as well as gender. We collapse the employee-level data at the regional level. Our main outcome of interest is the hourly wage by skill level where we proxy skill with percentiles of the native wage distribution (see Dustmann *et al.*, 2012) and educational attainment. We differentiate between three skill levels based on highest education attained – at most up to lower-secondary, upper-secondary and tertiary education.

While the SESS covers only employed individuals, the Swiss Labor Force Survey (SLFS) includes individuals aged 15 years and older. Quarterly and yearly information about municipality of residence, demographic characteristics such as sex, age and marital status, educational attainment and employment is available for the household head. We limit the sample to individuals in the age group 18–65. Employment is defined as being employed for a salary, by a family member or self-employed. The main outcome of interest is the native employment rate in a region – the number of employed relative to population 18–65 years of age. We use yearly data and construct outcomes by educational attainment defined as in

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[7]Out of the 2,222 municipalities in 2018, seven do not have an own voting office leaving us with a sample of 2,215 municipalities.

the analysis of wage outcomes.

**Immigration** We use administrative data from the Swiss Central Migration Information System (ZEMIS). Among immigrants, we use information on individuals with short-term (L), resident (B) and settled status permit (C). Individuals are covered if they reside in the country on December 31 for the period 1996–2018. The database offers information on the stock of migrants by country of citizenship, permit type, gender, age and civil status. To calculate local exposure to immigrants, we combine the data with information on population size at the municipality level $r$ from the FSO. We divide the number of immigrants by the native population, both measured at the end of the previous year.

$$m_{rt} = \frac{nr\ immigrants_{r,t}}{nr\ natives_{r,t}}$$

**Collective bargaining** The State Secretariat of Economic Affairs (SECO) provides a list of the universe of generally valid agreements from June 2000 onwards. Based on this raw information, we construct a database that shows for each CBA the name, the period when it was in force, its geographic coverage and the 3-digit NOGA-08 industry. We restrict the sample to CBAs with clauses on wage and working conditions. CBAs with a specific purpose like regulating retirement or further education are excluded. Due to missing employment data for the primary sector, we exclude the one CBA that falls within this sector. Table A2 gives an overview of the generally valid CBAs in 2014 and the 2-digit NOGA industry into which they fall. We proxy the share of workers employed in an industry with a CBA by combining information on coverage and employment.

$$Sh\,CBA\,Cov_{r,t} = \sum_{i=1}^{I} Sh\,Empl_{i,r,t} \times \mathbb{1}\{CBA_{r,i,t} = 1\}$$

A region is indicated with $r$, $t$ is year, $i$ is industry at the 3-digit NOGA-08 level and $I$ the total number of such industries (259). The first term on the right-hand side is the share of employees in region $r$ that work in industry $i$ in $t$. We combine two data sources to construct this variable – native employment by industry in 1995 and annual growth rates in total employment at the country level. The employment data from 1995 covers all firms and is available at the municipality level and for 4-digit NOGA industries. For the yearly variation, we use a survey that has been conducted quarterly since 1991 for 2-digit NOGA industries at the country level. It includes employees in the second and third sectors only. The second term in the equation is a dummy variable equal to one if there is a generally valid CBA in region $r$ industry $i$ and year $t$.

# 3    Empirical Strategy and Trends

## 3.1    Empirical Strategy

We are interested in how regional exposure to immigrants affects views on immigration policies and labor market outcomes. Our main contribution is to investigate whether these effects depend on the level of collective bargaining coverage. The empirical analysis builds on the following two regression equations.

$$y_{r,t} = \alpha_1 m_{r,t} + \alpha_2 Sh\,CBA\,Cov_{r,t} + \mathbf{X}'_{r,t}\gamma + \delta_r + \delta_t + \varepsilon_{r,t} \tag{1}$$

$$y_{r,t} = \alpha_1 m_{r,t} + \alpha_2 Sh\,CBA\,Cov_{r,t} + \alpha_3 m_{r,t} \times Sh\,CBA\,Cov_{r,t} + \mathbf{X}'_{r,t}\gamma + \delta_r + \delta_t + \varepsilon_{r,t} \tag{2}$$

Region $r$ and year $t$ define the unit of observation. In the analysis of voting outcomes $r$ stands for municipality. Municipalities are the smallest administrative units with a total of 2,222. Their large number makes them attractive for the analysis of voting outcomes in the absence of individual-level data. In the labor market analysis the geographical unit is the commuting zone or MS-region.[8] A commuting zone – 106 in total – consists of municipalities that are spatially similar, so obey the principles of small-scale labor market areas.

Outcome variables $y_{r,t}$ measure the share of pro-immigration votes, the natural log of gross hourly native wages and the native employment rate. The latter two outcomes are analysed by educational attainment. Wage effects are additionally estimated separately for each fifth percentile of the native wage distribution following Dustmann *et al.* (2012). Our main independent variables measure the migrant exposure $m_{r,t}$ and the level of CBA coverage $Sh\,CBA\,Cov_{r,t}$. We subtract the sample means from these two independent variables. The coefficient of interest is $\alpha_3$ in Equation 2 which shows the effect of exposure to immigrants in regions with different CBA coverage levels.

The vector with control variables $\mathbf{X}_{r,t}$ contains information on gender, average age and highest educational attainment. In the voting analysis age and education are based on the 2000 census and interacted with a year variable. In the labor market analysis the controls refer to time-varying native characteristics from the SESS and SLFS, respectively (for an overview of control variables see Table A3). We include region fixed effects, referendum fixed effects in the voting analysis and year fixed effects in the labor market analysis. Standard errors are clustered at the regional level.

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[8]MS comes from the French "mobilité spatiale".

We study the effect of local exposure to immigrants. The place of work and residence of immigrants likely depend on labor market conditions as well as native attitudes towards foreigners and is, therefore, not random. If immigrants select into places with higher wages or with a more migration friendly community, it would result in a positive bias. To address this, we follow an instrumental variable approach where we create a shift-share instrument for immigration exposure (see Altonji and Card, 1991; Card, 2001). We fix the share of immigrants with nationality $n$ across regions $r$ in 1996 and use the stock of immigrants $M$ by nationality $n$ in year $t$ as the yearly shift. To further mitigate endogeneity issues, we calculate the yearly shift as a leave-one-out variable dropping the number of immigrants residing in the own region $r$.[9]

$$\overline{M}_{r,t} = \sum_{n=1}^{N} Sh\,migr_{n,r,1997} \times M_{n,-r,t}$$

This identification strategy has been widely applied in the migration literature. The intuition is that past immigration can predict location choice of newly arriving migrants. The key assumption is that past immigration is uncorrelated with current demand shocks. It is challenging to confirm the validity of this assumption and we therefore conduct several tests that are proposed in recent papers.

In the migration context, Jaeger et al. (2018) argue that estimates based on a shift-share instrumental variable are likely positively biased as they reflect dynamic adjustments of economic conditions to previous migration waves. We consider this less of a concern for a number of reasons. First, the origin composition of migrants changed substantially over our observation period.[10] Second, we document negative wage effects for natives in skill groups affected by immigration, which is unlikely under dynamic adjustments to past migration. Third, our first stage F-statistics is around $39 - 44$ in the voting analysis and around $9 - 10$ in the wage analysis. This suggests that migrant destinations by origin in the past are far from perfect predictors of future flows, enhancing external validity.

Other studies raise general concerns with the use of a shift-share type of instrument (see Goldsmith-Pinkham et al., 2020; Borusyak et al., 2021). The underlying variation in

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[9]We divide the countries into fifteen groups following Dustmann et al. (2012). First, we take the eight countries that have the largest change in stock of migrants in Switzerland between 2000 and 2014 as separate units. These are Germany, Portugal, France, United Kingdom, ex Jugoslavia, Poland, Czechoslovakia and Italy. Second, we group the remaining countries by geographic area. These are Latin America, North America, Africa, Asia, Oceania, Other Europe, Unknown. Note that using all 160 countries as separate units in the construction of the instrument lowers the first stage F-statistics but leads to consistent results.

[10]The correlation between changes in immigrant stock by country from 1990 to 2000 and 2000 to 2010 is 0.11 and not significant. The correlation between changes from 1980 to 1990 and 1990 to 2000 is 0.86, indicating that the origin composition of immigrants remained very similar over period.

our instrument comes from fifteen countries or country groups over a period of fifteen years. Following the literature we compute the Rotemberg weight (RW) for each country. Estimates tend to be sensitive to misspecification for origins which receive high weights. We exclude the three countries with the highest weights in each analysis when constructing the instrumental variable in a robustness check and results are shown to be robust (available upon request).[11] Another source of endogeneity could be the time-varying denominator due to naturalizations or native regional outflows. In a robustness check, we show that results are robust when using a time invariant denominator with data from 2000.

Generally valid CBAs are attractive for identification purposes as they are binding for an industry within some geographical area. All employees, independent of their union membership, are covered and firms cannot select out. Moreover, our geographic unit is smaller (municipality) or differently defined (commuting zones) than the level at which generally valid CBAs are negotiated. These aspects mitigate endogeneity issues compared to firm-level CBAs (Fanfani, 2019). Since our main interest is in the interaction between exposure to immigrants and CBA coverage, endogeneity can arise if immigrants favor work locations that are CBA covered. The correlation between the change in the CBA coverage and the share of immigrants in the period 2000–2014 is 0.15 and not significant. This shows no evidence that the interacted specification suffers from an endogeneity problem.

## 3.2   Summary Statistics and Stylized Facts

Table 1 shows summary statistics for the main variables of interest over the period 2000–2014.

Voting outcomes across the individual votes as measured by the share of pro-immigration votes are summarized first. There is substantial variation in outcomes and some proposals faced considerably higher voter approval than others. For example, the Bilateral Agreements with the EU, which is the first vote we consider (a pro-immigration proposal), was approved by a clear majority of voters. The vote on the Federal Law on Foreign Nationals which took place in 2006 (an anti-immigration proposal) also had wide voter support. In contrast, the initiative "Yes to Europe" that proposed to join the EU (a pro-immigration proposal) was rejected by around 77%. Additionally, there is considerable variation across municipalities for each of the votes included.

Wage and employment outcomes for native workers at the commuting zone level are presented next. The mean log gross hourly wage received by native workers is 3.6 (35 CHF in levels). There is a large wage premium to upper-secondary but particularly to tertiary

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[11]The three origins receiving the highest positive weights in the analysis of voting outcomes are Portugal, Germany and Asia. The three origins in the analysis of the wage and employment outcomes are Germany, Portugal and France.

education. For the average region, a low-skilled worker earns a gross hourly wage of about 28 CHF and a high-skilled worker approximately 48 CHF.[12] The average native employment rate is 77.6% and varies widely across skill groups. Among lower-secondary educated individuals it is 45.1% and among tertiary educated 90.9%.

Educational qualifications are not always comparable across countries. In addition, skills acquired abroad may not be perfectly transferable and, thus, be discounted. Wages allow an alternative view on how education is valued on the labor market. Figure 1a follows Dustmann *et al.* (2012) and plots the share of migrants along the native wage distribution. The horizontal line at 1% is a natural point of comparison as it represents the equal split of natives along own wage distribution. The graph shows that migrants are overrepresented up to the fortieth percentile of the income distribution. Overall, this evidence suggests that low- to medium-skilled natives face the strongest labor market competition with foreign workers.[13] This is confirmed by Figure A1a which plots the share of native and migrant workers by educational attainment.

The share of native workers covered by a generally valid CBA is 17.9%. Given the objective of CBAs and the industries in which they fall, we expect that agreements apply in particular to workers with low levels of skills. Figure 1b shows that the share of covered workers is higher at lower percentiles of the wage distribution in 2000 and 2014. Therefore, coverage level drops as skill level rises. Figure A1b offers similar evidence when proxying skill with educational attainment – it is among the tertiary educated that coverage is lowest. As in most agreements managers are explicitly excluded, coverage for the high-skilled workers is likely to be overestimated by simply looking at industry of employment.

# 4   Results

## 4.1   Votes and Preferences

Our proxy for support for immigration comes from vote outcomes, which is in contrast to the majority of studies that use survey responses. The benefit of votes is that they show revealed rather than stated preferences. A potential concern with vote outcomes could be that they do not represent the preferences of the population because of participation rates of around 50% of eligible voters. Although abstention in single votes can be large, the share of

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[12]The exchange rate USD/CHF is approximately 1.03 (August, 2019).

[13]We plot the density of migrants along the native wage distribution by aggregate labor market regions to visually test the homogeneity of the relative density across the sixteen regions (see assumptions in Dustmann *et al.*, 2012). A visual check when pooling data over all years shows that the patterns in the regions are similar.

permanent abstainers is estimated to be only between ten and twenty percent in the Swiss context (Sciarini *et al.*, 2016).

To compare voting outcomes with general immigration preferences, we rely on the Vox survey data. Respondents are asked whether they would prefer Switzerland (1) that gives equal opportunities to foreigners or better chances for the Swiss; (2) that is more open to the outside or more closed. In Table A4 we test if reported voting behavior and attitudes are correlated after controlling for individual-level attributes. All regressions include place of residence and referendum fixed effects.[14] Consistently, respondents who state that they are in favor of equal opportunities for foreigners and an open Switzerland are found to be more likely to cast a pro-immigration vote. This is suggestive evidence that voting behavior is representative of general attitudes towards migrants.

## 4.2   Immigrant Exposure and Native Voting Behavior

We are motivated by a conceptual framework in which labor market concerns affect support for immigration (see Scheve and Slaughter, 2001). Given that immigrants are overrepresented at the bottom of the skill distribution, we expect that labor market concerns are especially relevant to low-skilled natives. Below we test whether such concerns lead to negative voting behavior.

Table 2 presents estimates of the impact of a higher immigrant exposure on the share of pro-immigration votes from Ordinary Least Squares (OLS) in Panel A and Instrumental Variable (IV) regressions in Panel B. The first stage is reported in columns (1) and (4) and is strong with a Kleibergen-Paap F-statistic of 44.2 and 38.5 in columns (2) and (5) respectively.[15] Estimates in these two columns and both panels show that exposure to immigrants has on average a negative but insignificant impact on the voting behavior of natives.

We modify Equation 1 to allow for the direct effect of migrants to depend on native skill levels. We proxy the share of skilled voters using the proportion of upper-secondary or higher educated natives based on 2000 census data. We divide municipalities into three

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[14]Note that place of residence is defined based on a separate classification with sixty-four categories, referred to as agglomerations.

[15]Note that the most recent literature on the first stage F-statistic suggests a threshold of around 100 for reliable inference (Lee *et al.*, 2020). Alternatively, an F-statistic of 38.453 as in our preferred specification in column (5) demands an adjustment of the critical value for 5% significance of 1.143, which is relatively small. To account for clustering, we report the effective F-statistic and the 5% critical values in our specifications with one endogenous regressor following Olea and Pflueger (2013). Critical values are lower when accepting higher biases. Finally, we also report the ninety percent Anderson-Rubin confidence intervals in the table footnotes, which are applicable in the multiple endogenous variables specifications with heteroscedastic standard errors. Overall, we confirm that our instrument is strong.

groups corresponding to the terciles of the native skill distribution. The share of individuals with at least an upper-secondary degree is less than 65% in the bottom tercile and above 72% at the top of the distribution. There are important differences between municipalities in the three skill groups. Municipalities in the lowest tercile vote less often pro-immigration (44.2%) than those in the third tercile (54.7%). The share of immigrants in the bottom tercile is 16.0% and in the top one 29.7%. Moreover, the share that is CBA covered decreases with the skill level in the population – coverage level is 26.9% in the first tercile and 16.2% at the third tercile.

In columns (3) and (6) of Table 2 we present results from an augmented specification where we interact exposure to immigrants with the top two terciles of the native skill distribution. Estimates without controls remain statistically insignificant as reported in column (3). Adding controls in column (6) increases significance levels and it becomes evident that as the average skill level in a municipality rises, the response to immigration becomes more positive. A comparison between the two specifications shows that IV estimates of the immigration exposure are more pronounced – they are more negative in lower skilled municipalities and more positive in higher skilled municipalities. In our preferred specification in column (6), an increase in the number of immigrants equal to 1 percent of the native population decreases the share of pro-immigration votes by 0.33 percentage points in the bottom tercile. At the top of the distribution, the effect is positive but insignificant. In Panel A columns (1) and (2) of Table A5 we present estimates from a regression with a fixed denominator of the migrant exposure measure. Results are overall robust and confirm that educational attainment shapes how natives respond to higher immigrant exposure.

The estimated responses to higher immigrant exposure are consistent with a labor market channel where natives who compete against migrants are less in favor of immigration. However, education is likely to affect support for immigration through a number of channels. Specifically, it is argued to directly promote tolerance and improve knowledge and appreciation of foreign cultures (see Hainmueller and Hopkins, 2014). Additionally, competition for public goods and services could affect in particular low-skilled natives if they are more likely to use them. If labor protection raises support for immigration for natives who it aims to protect, we consider this as evidence that labor market concerns shape preferences over migration policies. Therefore, our main focus of analysis is on how immigrant presence interacts with collective bargaining coverage in determining vote outcomes.

## 4.3 Collective Bargaining and Native Voting Behavior

In the analysis of collective bargaining coverage we follow Equation 2 and introduce triple interaction terms between the migrants exposure measure, the terciles of the native skill distribution and the share CBA covered. Panel A of Table 3 shows OLS regressions and Panel B the instrumented specification. The first stage F-statistic drops but is still between 11 and 13, depending on the controls.[16] In line with our hypothesis, we observe that it is in municipalities with low levels of native educational attainment that CBAs raise pro-immigration vote shares. Results are qualitatively similar in the OLS and IV regressions, while being more significant in the latter. They are also not driven by municipalities with coverage levels in the lowest or highest decile of the coverage distribution according to an unreported robustness check.

In Figure 2 we plot the estimates from column (2) in Panel B. The y-axis shows the marginal effect of a higher foreigner share on vote outcomes. Figure (a) shows the marginal effects at the mean value of coverage which is 19.4%. At mean values, a rise in immigration equal to 1 percent leads to a decline in pro-immigration vote shares of $-0.49$ percentage points in municipalities with low native educational attainment. Figure (b) calculates the marginal effects at low (tenth percentile, i.e. around ten percent coverage) and high (ninetieth percentile, i.e. around thirty-five percent coverage) levels of coverage. In low-skilled municipalities, a 1 percent rise in immigration decreases pro-immigration vote shares with 0.59 percentage points under low coverage. At high levels of coverage, the magnitude is smaller ($-0.33$). Using a continuous measure of skill instead of its terciles gives results which are qualitatively similar (see Figure A2). Results in the last column of Panel A in Table A5 with a fixed denominator of the migrant exposure measure also confirm the baseline findings.

We conduct our analysis at the municipality level, which relates to the place of living of voters. Its advantage is the high number of units compared to more aggregated geographic regions. Since voters do not necessarily work in the municipality of living, the CBA coverage at the place of residence is only a proxy for the effective coverage. By construction, generally valid agreements cover an industry in several municipalities in the same region, so local coverage correlates with coverage in nearby areas. Low-skilled occupations, which are typically the ones covered by CBAs, are more likely to be locally available than skilled jobs. Therefore, labor protection in the municipality of living is likely to be applicable to the type of workers who are the focus of the study. To alleviate remaining concerns, we run the analysis at the commuting zone level and report the IV results in Panel B of Table A5.

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[16]In the footnotes of Table 3 we report the ninety percent Anderson-Rubin confidence intervals for the newly introduced interaction terms. Estimates are consistently significant.

The first stage F-statistic and overall significance levels tend to decline with a lower number of observations. In line with our baseline results, we observe that a higher level of labor market protection increases support for immigration in commuting zones where the native population is relatively low-skilled.

The baseline set of votes can be categorized into immigration policy votes and European foreign policy votes. We conduct the analysis separately for the two sets of votes and present results in Table A6. Columns (1)–(3) show that our results are driven by the first set of votes which are more directly targeted towards issues relating to immigrants only. The European foreign policy votes, in contrast, are linked to other political aspects besides immigration. In Table A7 we conduct five placebo tests by using groups of votes that are not related to immigration or labor market topics. Results confirm that the interaction terms between immigrant exposure, native skill level and CBA coverage are not significant, suggesting that our main results are consistent with attitudes towards immigrants being driven by labor market concerns rather than spurious correlations between our right-hand side variables.

In Table A8 we study participation rates as an outcome of interest. The focus is on our preferred IV specification with controls. Estimates in columns (1) to (2) show that higher immigrant exposure does not affect turnout significantly regardless of the skill level of the native population. CBA coverage has a negative effect on participation and the last column presents evidence that the marginal effect of higher immigration by skill level depends on the level of labor protection. This matters for municipalities with relatively low-skilled natives where the effect of higher immigrant exposure on participation is negative at low and insignificant at high coverage rates. In municipalities with lower labor market protection, a rise in immigration may disincentivize natives who intend to cast a pro-immigration vote to actually vote.

We have provided evidence that labor protection is linked to a more positive response to immigration in the subset of municipalities with a relatively low skill level and argue that this points at individual labor market concerns shaping voting behavior. In the next section we test how native labor market outcomes respond to immigration and whether this response depends on the extent to which native workers are covered by collective agreements.

## 4.4   Labor Market Analysis

In the analysis of wage outcomes we follow Dustmann *et al.* (2012) and proxy returns to skill with percentiles of the native wage distribution. We first examine how native wages respond to migrant exposure. Table 4 presents estimates at the 50th, 5th, 10th and 95th percentiles. While results are largely statistically insignificant, the coefficients of the immigrant exposure

measure are negative for the lower skill levels and positive for the 95th percentile regression. Including control variables changes the estimates only marginally. IV estimates are more pronounced in magnitude than those from OLS regressions. The first stage KP F-statistic is around 10 and potentially points at a weak instrument problem.[17] In Table 4 we also show that CBA coverage is not significant, but a higher coverage tends to have a positive effect on wages at the lower percentiles and a negative effect on the 95th percentile. This is suggestive evidence that CBA coverage reduces wage dispersion (Cardoso and Portugal, 2005).

Results in Panel A of Table A9 are based on the specification with a fixed denominator of the migrant exposure measure. The pattern of the estimates is consistent with our baseline but estimates become statistically significant for the 5th and 10th percentiles. Moreover, the positive coefficient on the CBA coverage measure turns marginally significant for the 5th and 10th percentiles. In another robustness check, we run the analysis using educational attainment as a proxy for skill in Panel A of Table A10. Coefficient signs are consistent with the results from the baseline specification while the immigration exposure coefficient is only statistically significant for individuals with an upper-secondary degree.

We next test whether the magnitude of the wage effects depends on the level of labor protection in Table 5. Panels A and B report OLS estimates, while Panels C and D report IV results. In the IV specification with controls, the estimates of the interaction term are marginally insignificant with a p-value of 0.104 for the 5th percentile and 0.123 for the 10th percentile of the wage outcome. Figure 3a shows the marginal effect of an increase in immigration at every 5th percentile of the native wage distribution at mean values of coverage. Overall, differences in magnitude by skill levels are consistent with the distribution in Figure 1a where immigrants are overrepresented on the left side of the skill distribution and underrepresented to the right. In Figure 3b we show how wages respond to immigration under low and high levels of coverage. To the left of the wage distribution, the negative effect of a higher immigrant exposure is smaller under higher level of collective bargaining coverage. Differences between coverage levels are small at all percentiles. To the right of the distribution, the level of coverage is not relevant.

The results with the fixed denominator are presented in Panel B of Table A9. The interaction term is positive and statistically significant at the five percent level at the 5th and 10th percentiles. We conclude that estimates from our baseline specification tend to be conservative compared to the fixed denominator specification. In a further robustness check in Panel B of Table A10, we run the analysis using educational attainment as a proxy for skill. Estimates for the interaction term are statistically insignificant. This analysis suggests

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[17]The same conclusion is reached when looking at the effective F-statistic and its critical values following Olea and Pflueger (2013).

that the three education categories are too broad to identify how labor protection changes the effect of immigration on wages.

Wage effects are of first-order interest given that we focus on CBAs with minimum wage regulation. However, evidence shows that collective bargaining agreements can have negative employment effects because of the downward wage rigidities that they introduce (e.g., Card, 1990; Martins, 2021). In Table 6 we investigate effects on the employment rate. Our most stringent specification in which we instrument for migrant presence and include the full set of controls (see Panel D) shows an insignificant negative overall effect of the share of immigrants. We do not find evidence that immigration and labor protection negatively affect native employment for the lowest skilled. Estimates show, however, that an increase in CBA coverage decreases employment of workers with an upper-secondary education. Table 7 shows that collective agreements mitigate the negative employment effects of immigration for natives in this education group. The findings from the analysis on the employment rate are broadly in line with those from an unreported analysis on the unemployment rate. In summary, evidence does not show that labor protection mitigates the negative wage effect of immigration at the expense of employment for the lowest skilled. Overall, we are unable to rule out the possibility that collective agreements may improve labor market conditions beyond wages and employment conditions and that such additional factors play a role in explaining the higher voter support we observe.

# 5  Conclusion

In this paper, we examine how exposure to migrants affects native support for immigration and we look at labor market outcomes to better understand underlying mechanisms. Our results show that support for looser immigration regulation of lower skilled natives declines as immigration rises. This negative effect is smaller under a higher level of labor protection. We find some evidence that this finding is consistent with how native wages respond to rising immigration under different levels of collective bargaining coverage. Overall, our study suggests that labor protection affects vote outcomes by improving in addition other labor market conditions or by alleviating existing fears among the native population. This study contributes to a debate on determinants of attitudes towards foreigners. Importantly, our findings have implications on the design of policies to alleviate economic concerns from immigration.

The need for social protection in the broader context of globalization has been emphasized in the literature (Rodrik, 1997). We add to the discussion of policies which affect attitudes towards immigration by assessing the role of labor market protection. This paper shows

that CBAs can be effective in boosting support for immigration. In Switzerland, parental union organizations recommended a vote in favor of the Agreement on the Free Movement of Persons as accompanying measures were deemed sufficient to protect working conditions. These measures came into force in 2004 and include systematic wage controls to prevent abusive wage undercutting and sanctions for breaching the rules. There are also controls to enforce compliance with the CBA clauses. Other countries such as Austria have similarly introduced supporting measures to strengthen the enforcement of labor protection at the same time as removing restrictions to immigration. The general policy lesson of our findings is that setting common labor market standards within industries and effectively enforcing them raises support for immigration.

Our labor market results measure short-term effects. Capital adjustments, incentives to switch occupations and acquire more skills likely offset any short-term effects of migrant inflows. Conversely, labor market regulations could slow down such adjustments and, thus, affect long-term native wage and employment outcomes. For example, D'Amuri and Peri (2014) provide evidence that natives are less likely to switch their occupations following an immigrant inflow if employment regulation is stricter. If such adjustments occur in the longer run, the evidence offered in this study is not indicative for how CBAs affect labor market outcomes after markets have adjusted. Any policy recommendation, thus, needs to consider the trade-off between immediate outcomes and frictions that could slow-down in particular long-term labor market adjustments.
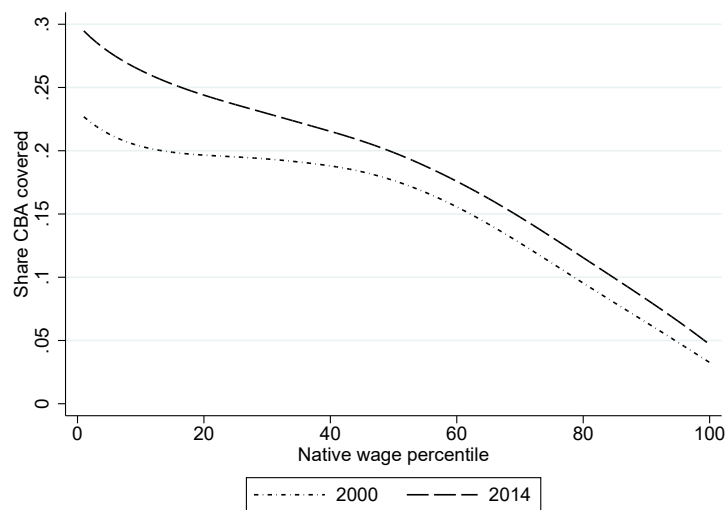
# Figures

Figure 1: Skill level and CBA coverage

(a) Position of immigrant workers in native wage distribution
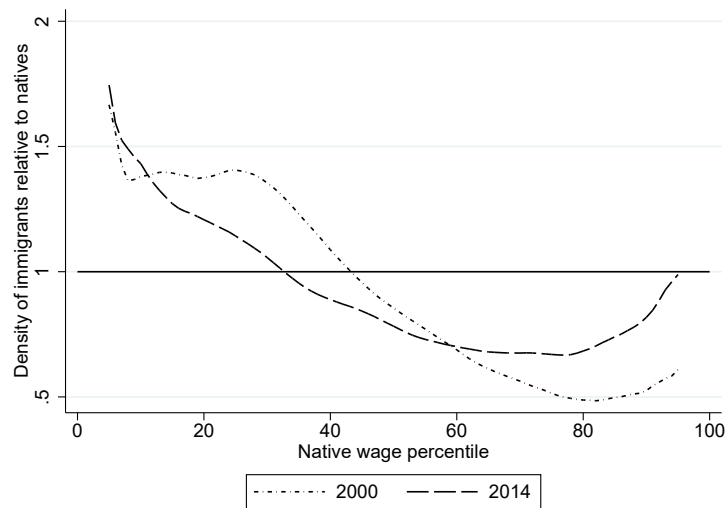


(b) Native CBA coverage by position in wage distribution



*Note:* Figure (a) presents kernel estimates of the density of migrant workers along the native wage distribution from its 5th to 95th percentile. Figure (b) presents a local linear smooth plot of the share of native workers employed in an industry with a CBA by percentile of the native wage distribution. Sources: SECO, SESS.

Figure 2: Voting analysis by terciles of native educational attainment

(a) Estimates at mean level of CBA coverage
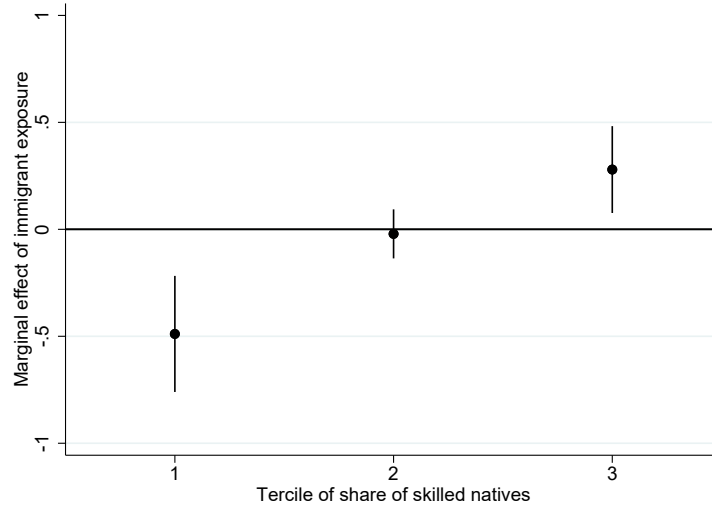


(b) Estimates at low and high CBA coverage
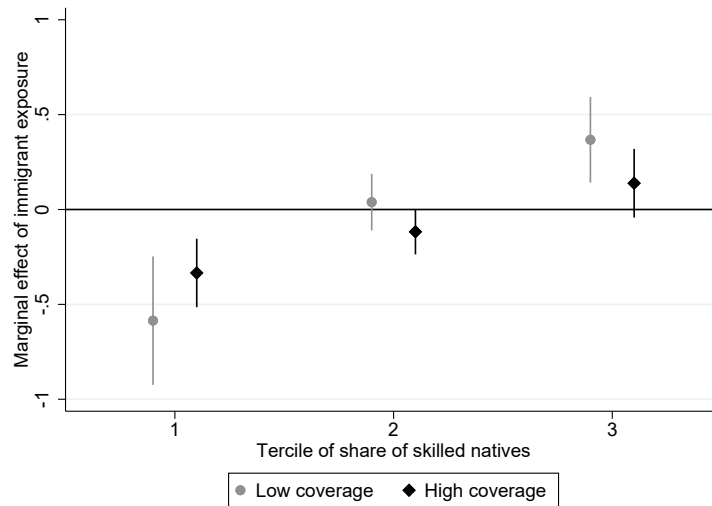


*Note:* The figure presents estimates from IV regressions using municipality level data. The outcome is the share of pro-immigrant votes. Share of migrants is the number of foreign residents divided by native population. Share of skilled natives is the share of native residents with upper-secondary or higher level of education. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations reflect the number of Swiss residents in 2000. Standard errors are clustered at the municipality level, 95% confidence intervals plotted. In Figure (b) effects are reported at the 10th and 90th percentile of the coverage measure. Sources: FSO, SECO, ZEMIS.

Figure 3: Wage analysis by native percentiles of the wage distribution

(a) Estimates at mean level of CBA coverage
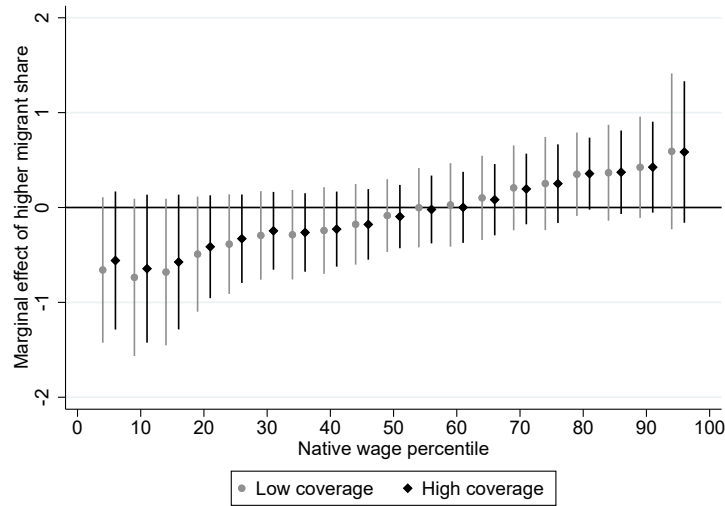


(b) Estimates at low and high CBA coverage



● Low coverage    ◆ High coverage

*Note:* The figure presents estimates from IV regressions using biennial data at the commuting zone level. The outcome is the ln real gross hourly wage at each fifth percentile. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Weights assigned to observations equal the number of natives employed in commuting zone in 2000. Standard errors are clustered at the commuting zone level, 95% confidence intervals plotted. In Figure (b) effects are reported at the 10th and 90th percentile of the coverage measure. Sources: FSO, SECO, SESS, ZEMIS.

# Tables

## Table 1: Summary statistics

|  | N | Mean | Sd | Min | Max |
|---|---|---|---|---|---|
| Share pro-immigration | 22150 | 0.505 | 0.165 | 0.000 | 0.960 |
| ... Bilateral agreements with EU | 2215 | 0.671 | 0.119 | 0.059 | 0.960 |
| ... For a regulation on immigration | 2215 | 0.638 | 0.091 | 0.191 | 0.947 |
| ... Yes to Europe | 2215 | 0.231 | 0.108 | 0.000 | 0.688 |
| ... Bilateral agreements, Schengen and Dublin | 2215 | 0.545 | 0.119 | 0.064 | 0.825 |
| ... AFMP extension and measures | 2215 | 0.558 | 0.106 | 0.068 | 0.824 |
| ... Federal law on foreign nationals | 2215 | 0.320 | 0.101 | 0.063 | 0.705 |
| ... Cooperation with Eastern Europe | 2215 | 0.533 | 0.102 | 0.050 | 0.857 |
| ... AFMP continuation and extension | 2215 | 0.595 | 0.110 | 0.081 | 0.860 |
| ... For the expulsion of criminal foreigners | 2215 | 0.507 | 0.045 | 0.328 | 0.725 |
| ... Against mass immigration | 2215 | 0.495 | 0.112 | 0.064 | 0.810 |
| Mean ln gross hourly wage of natives | 848 | 3.594 | 0.109 | 3.246 | 3.837 |
| ...lower-secondary educated | 848 | 3.345 | 0.082 | 2.924 | 3.732 |
| ...upper-secondary educated | 848 | 3.526 | 0.081 | 3.219 | 3.729 |
| ...tertiary educated | 847 | 3.879 | 0.103 | 3.277 | 4.078 |
| Native employment rate | 1590 | 0.776 | 0.047 | 0.332 | 1.000 |
| ...lower-secondary educated | 1576 | 0.451 | 0.117 | 0.000 | 1.000 |
| ...upper-secondary educated | 1590 | 0.787 | 0.059 | 0.132 | 1.000 |
| ...tertiary educated | 1585 | 0.909 | 0.053 | 0.000 | 1.000 |
| Share of immigrants | 33330 | 0.296 | 0.190 | 0.000 | 1.612 |
| Share CBA covered | 33330 | 0.179 | 0.075 | 0.000 | 0.690 |

*Note:* The table presents summary statistics for voting and native labor market outcomes, immigrant exposure and collective bargaining agreement coverage. See Table A1 for a description of the votes considered. Voting outcomes are weighed using the number of voters, labor market variables with the number of native workers in 2000 (SESS data) and the number of native respondents 18-65 years of age in 2000 (SLFS data). The migrant exposure measure is weighed with the total population level in 2000 and the share of CBA covered with the number of workers in 2000. SESS, SLFS, migrant exposure and CBA coverage variables are measured at the commuting zone level, vote outcomes at the municipality level. Sources: FSO, SECO, SESS, SLFS, ZEMIS.

Table 2: Voting analysis by native educational attainment

|  | Outcome: share of pro-immigration votes | | | | | |
|  | Without controls | | | With controls | | |
|  | First-stage | | | First-stage | | |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| *Panel A:* OLS | | | | | | |
| Sh. migrants |  | 0.015 | -0.022 |  | -0.002 | -0.087*** |
|  |  | (0.030) | (0.033) |  | (0.027) | (0.033) |
| Sh. CBA cov. |  | -0.045 | -0.045 |  | -0.031 | -0.032 |
|  |  | (0.029) | (0.029) |  | (0.028) | (0.029) |
| Sh. migrants x T2 sh. skilled |  |  | 0.021 |  |  | 0.070* |
|  |  |  | (0.037) |  |  | (0.042) |
| Sh. migrants x T3 sh. skilled |  |  | 0.064 |  |  | 0.141** |
|  |  |  | (0.070) |  |  | (0.061) |
| N | . | 22150 | 22150 | . | 22150 | 22150 |
| *Panel B:* IV | | | | | | |
| IV Sh. migrants | 0.558*** |  |  | 0.558*** |  |  |
|  | (0.084) |  |  | (0.090) |  |  |
| Sh. migrants |  | 0.057 | -0.091 |  | 0.014 | -0.333*** |
|  |  | (0.095) | (0.083) |  | (0.074) | (0.100) |
| Sh. CBA cov. | -0.001 | -0.046 | -0.043 | -0.005 | -0.032 | -0.031 |
|  | (0.018) | (0.029) | (0.029) | (0.017) | (0.027) | (0.028) |
| Sh. migrants x T2 sh. skilled |  |  | 0.034 |  |  | 0.218** |
|  |  |  | (0.078) |  |  | (0.099) |
| Sh. migrants x T3 sh. skilled |  |  | 0.183 |  |  | 0.455*** |
|  |  |  | (0.115) |  |  | (0.150) |
| First stage KP F-stat |  | 44.251 | 36.130 |  | 38.453 | 33.199 |
| MP Effective F-stat |  | 39.827 | . |  | 34.609 | . |
| MP Critical Value 5% |  | 37.418 | . |  | 37.418 | . |
| N | 22150 | 22150 | 22150 | 22150 | 22150 | 22150 |

*Note:* The table presents estimates from OLS and IV regressions using municipality level data. Share of migrants is the number of foreign residents divided by native population. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 and $T$ stands for tercile of the variable. 90 percent Anderson-Rubin confidence intervals for estimates in column (6) of Panel B are as follows: Sh. migrants [-0.648,-0.176], Sh. migrants x T2 sh. skilled [-0.016,0.451], Sh. migrants x T3 sh. skilled [0.103,0.925]. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Sources: FSO, SECO, ZEMIS.

Table 3: Voting analysis by native educational attainment and CBA coverage

| | Outcome: share of pro-immigration votes | |
|---|---|---|
| | Without controls | With controls |
| | (1) | (2) |
| *Panel A:* OLS | | |
| Sh. migrants | -0.069* | -0.123*** |
| | (0.036) | (0.037) |
| Sh. CBA cov. | 0.143*** | 0.128*** |
| | (0.035) | (0.034) |
| Sh. migr. x Sh. CBA cov. | 0.249 | 0.197 |
| | (0.179) | (0.190) |
| Sh. migr. x T2 sh. skilled | 0.061 | 0.095** |
| | (0.040) | (0.044) |
| Sh. migr. x T3 sh. skilled | 0.112* | 0.169*** |
| | (0.062) | (0.057) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | -0.775*** | -0.751** |
| | (0.293) | (0.306) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | -0.943*** | -0.908*** |
| | (0.258) | (0.263) |
| N | 22150 | 22150 |
| *Panel B:* IV | | |
| Sh. migrants | -0.165* | -0.405*** |
| | (0.090) | (0.111) |
| Sh. CBA cov. | 0.209*** | 0.184*** |
| | (0.040) | (0.042) |
| Sh. migr. x Sh. CBA cov. | 0.668* | 0.964** |
| | (0.345) | (0.387) |
| Sh. migr. x T2 sh. skilled | 0.141* | 0.331*** |
| | (0.086) | (0.108) |
| Sh. migr. x T3 sh. skilled | 0.327*** | 0.607*** |
| | (0.110) | (0.141) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | -1.217*** | -1.564*** |
| | (0.455) | (0.501) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | -1.451*** | -1.842*** |
| | (0.407) | (0.436) |
| First stage KP F-stat | 12.825 | 11.274 |
| N | 22150 | 22150 |

*Note:* The table presents estimates from OLS and IV regressions using municipality level data. Share of migrants is the number of foreign residents divided by native population. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 and $T$ stands for tercile of the variable. 90 percent Anderson-Rubin confidence intervals for estimates in column (2) of Panel B are as follows: Sh. migrants x Sh. CBA cov. [0.206,1.722], Sh. migrants x T2 sh. skilled x Sh. CBA cov. [-2.545,-0.582], Sh. migrants x T3 sh. skilled x Sh. CBA cov. [-2.696,-0.989]. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, ZEMIS.

Table 4: Wage analysis by native percentiles of the wage distribution

| | First-stage (1) | 50th pct (2) | 5th pct (3) | 10th pct (4) | 95th pct (5) |
|---|---|---|---|---|---|
| | | **Outcome:** ln **real gross hourly wage at the m-th percentile** | | | |
| *Panel A: OLS* | | | | | |
| Sh. migrants | | -0.083 | -0.131 | -0.157* | 0.245 |
| | | (0.088) | (0.086) | (0.085) | (0.199) |
| Sh. CBA cov. | | 0.004 | 0.132 | 0.089 | -0.156 |
| | | (0.084) | (0.129) | (0.116) | (0.207) |
| Mean outcome | | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | | 0.103 | 0.070 | 0.068 | 0.195 |
| N | . | 848 | 848 | 848 | 848 |
| *Panel B: OLS with controls* | | | | | |
| Sh. migrants | | -0.061 | -0.121 | -0.146** | 0.268 |
| | | (0.063) | (0.073) | (0.067) | (0.182) |
| Sh. CBA cov. | | -0.020 | 0.115 | 0.063 | -0.169 |
| | | (0.067) | (0.131) | (0.116) | (0.192) |
| Mean outcome | | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | | 0.103 | 0.070 | 0.068 | 0.195 |
| N | . | 848 | 848 | 848 | 848 |
| *Panel C: IV* | | | | | |
| IV Sh. migrants | 0.441*** | | | | |
| | (0.144) | | | | |
| Sh. migrants | | -0.061 | -0.486 | -0.573* | 0.614 |
| | | (0.138) | (0.307) | (0.327) | (0.373) |
| Sh. CBA cov. | 0.011 | 0.001 | 0.175 | 0.139 | -0.200 |
| | (0.076) | (0.084) | (0.133) | (0.119) | (0.208) |
| Mean outcome | 0.295 | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.130 | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | | 9.396 | 9.396 | 9.396 | 9.396 |
| MP Effective F-stat | | 8.228 | 8.228 | 8.228 | 8.228 |
| MP Critical Value 5% | | 37.418 | 37.418 | 37.418 | 37.418 |
| N | 848 | 848 | 848 | 848 | 848 |
| *Panel D: IV with controls* | | | | | |
| IV Sh. migrants | 0.442*** | | | | |
| | (0.137) | | | | |
| Sh. migrants | | -0.102 | -0.503 | -0.593* | 0.581 |
| | | (0.164) | (0.323) | (0.349) | (0.365) |
| Sh. CBA cov. | 0.005 | -0.015 | 0.159 | 0.115 | -0.205 |
| | (0.077) | (0.068) | (0.129) | (0.110) | (0.199) |
| Mean outcome | 0.295 | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.130 | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | | 10.456 | 10.456 | 10.456 | 10.456 |
| MP Effective F-stat | | 9.152 | 9.152 | 9.152 | 9.152 |
| MP Critical Value 5% | | 37.418 | 37.418 | 37.418 | 37.418 |
| N | 848 | 848 | 848 | 848 | 848 |

*Note:* The table presents estimates from OLS and IV regressions using biennial data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Weights assigned to observations equal the number of natives employed in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, SESS, ZEMIS.

Table 5: Wage analysis by native percentiles of the wage distribution and CBA coverage

| | Outcome: ln **real gross hourly wage at the m-th percentile** | | | |
|---|---|---|---|---|
| | 50th pct | 5th pct | 10th pct | 95th pct |
| | (1) | (2) | (3) | (4) |
| *Panel A:* OLS interaction | | | | |
| Sh. migrants | -0.086 | -0.134 | -0.160* | 0.239 |
| | (0.089) | (0.086) | (0.082) | (0.212) |
| Sh. CBA cov. | -0.110 | 0.023 | -0.013 | -0.373 |
| | (0.093) | (0.152) | (0.144) | (0.268) |
| Sh. migr. x Sh. CBA cov. | 0.650 | 0.618 | 0.580 | 1.234* |
| | (0.396) | (0.504) | (0.463) | (0.676) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| N | 848 | 848 | 848 | 848 |
| *Panel B*: OLS interaction with controls | | | | |
| Sh. migrants | -0.062 | -0.124* | -0.147** | 0.261 |
| | (0.063) | (0.073) | (0.065) | (0.191) |
| Sh. CBA cov. | -0.042 | 0.058 | 0.033 | -0.315 |
| | (0.067) | (0.147) | (0.132) | (0.251) |
| Sh. migr. x Sh. CBA cov. | 0.127 | 0.320 | 0.169 | 0.825 |
| | (0.297) | (0.476) | (0.393) | (0.568) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| N | 848 | 848 | 848 | 848 |
| *Panel C:* IV interaction | | | | |
| Sh. migrants | -0.101 | -0.577 | -0.667* | 0.576 |
| | (0.149) | (0.371) | (0.399) | (0.384) |
| Sh. CBA cov. | -0.074 | 0.005 | -0.038 | -0.272 |
| | (0.097) | (0.143) | (0.144) | (0.234) |
| Sh. migr. x Sh. CBA cov. | 0.452 | 1.025 | 1.067 | 0.435 |
| | (0.460) | (0.637) | (0.672) | (0.693) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | 4.817 | 4.817 | 4.817 | 4.817 |
| N | 848 | 848 | 848 | 848 |
| *Panel D*: IV interaction with controls | | | | |
| Sh. migrants | -0.094 | -0.572 | -0.657 | 0.586 |
| | (0.173) | (0.373) | (0.401) | (0.385) |
| Sh. CBA cov. | -0.001 | 0.027 | -0.006 | -0.196 |
| | (0.071) | (0.135) | (0.122) | (0.213) |
| Sh. migr. x Sh. CBA cov. | -0.082 | 0.785 | 0.721 | -0.056 |
| | (0.391) | (0.522) | (0.493) | (0.622) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | 5.049 | 5.049 | 5.049 | 5.049 |
| N | 848 | 848 | 848 | 848 |

*Note:* The table presents estimates from OLS and IV regressions using biennial data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Weights assigned to observations equal the number of natives employed in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, SESS, ZEMIS.

Table 6: Employment analysis by native educational attainment

| | First-stage | All | Up to lower-secondary | Upper-secondary | Tertiary |
|---|---|---|---|---|---|
| | **Outcome: share of natives employed in population 18-65** | | | | |
| | (1) | (2) | (3) | (4) | (5) |
| *Panel A:* OLS | | | | | |
| Sh. migrants | | -0.171** | -0.387 | -0.088 | -0.059 |
| | | (0.070) | (0.260) | (0.074) | (0.112) |
| Sh. CBA cov. | | -0.146* | 0.180 | -0.292*** | -0.016 |
| | | (0.085) | (0.354) | (0.092) | (0.098) |
| Mean outcome | | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | | 0.047 | 0.117 | 0.059 | 0.053 |
| N | . | 1590 | 1576 | 1590 | 1585 |
| *Panel B:* OLS with controls | | | | | |
| Sh. migrants | | -0.092 | -0.320 | -0.098 | -0.065 |
| | | (0.069) | (0.257) | (0.077) | (0.112) |
| Sh. CBA cov. | | -0.127 | 0.256 | -0.269*** | -0.028 |
| | | (0.093) | (0.384) | (0.089) | (0.097) |
| Mean outcome | | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | | 0.047 | 0.117 | 0.059 | 0.053 |
| N | . | 1590 | 1576 | 1590 | 1585 |
| *Panel C:* IV | | | | | |
| IV Sh. migrants | 0.490*** | | | | |
| | (0.153) | | | | |
| Sh. migrants | | -0.593 | -0.488 | -0.383 | -0.378 |
| | | (0.379) | (0.467) | (0.284) | (0.325) |
| Sh. CBA cov. | 0.018 | -0.086 | 0.194 | -0.251*** | 0.029 |
| | (0.057) | (0.079) | (0.368) | (0.080) | (0.105) |
| Mean outcome | 0.272 | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.126 | 0.047 | 0.117 | 0.059 | 0.053 |
| First stage KP F-stat | | 10.210 | 10.087 | 10.210 | 10.189 |
| MP Effective F-stat | | 9.534 | 9.534 | 9.534 | 9.534 |
| MP Critical Value 5% | | 37.418 | 37.418 | 37.418 | 37.418 |
| N | 1590 | 1590 | 1576 | 1590 | 1585 |
| *Panel D:* IV with controls | | | | | |
| IV Sh. migrants | 0.491*** | | | | |
| | (0.153) | | | | |
| Sh. migrants | | -0.308 | -0.160 | -0.396 | -0.432 |
| | | (0.275) | (0.428) | (0.284) | (0.346) |
| Sh. CBA cov. | 0.022 | -0.096 | 0.233 | -0.226*** | 0.025 |
| | (0.056) | (0.092) | (0.390) | (0.079) | (0.102) |
| Mean outcome | 0.272 | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.126 | 0.047 | 0.117 | 0.059 | 0.053 |
| First stage KP F-stat | | 10.280 | 10.180 | 10.280 | 10.262 |
| MP Effective F-stat | | 9.599 | 9.599 | 9.599 | 9.599 |
| MP Critical Value 5% | | 37.418 | 37.418 | 37.418 | 37.418 |
| N | 1590 | 1590 | 1576 | 1590 | 1585 |

*Note:* The table presents estimates from OLS and IV regressions using annual data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Lower-secondary level of education is compulsory education as highest degree, upper-secondary is an apprenticeship or a matura, tertiary is a degree from a university, university of applied sciences, university of teacher education or a professional degree. Weights assigned to observations equal the number of native respondents 18-65 years of age in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Sources: FSO, SECO, SLFS, ZEMIS.

Table 7: Employment analysis by native educational attainment and CBA coverage

| | All | Up to lower-secondary | Upper-secondary | Tertiary |
|---|---|---|---|---|
| | **Outcome: share of natives employed in population 18-65** | | | |
| | (1) | (2) | (3) | (4) |
| *Panel A:* OLS interaction | | | | |
| Sh. migrants | -0.169** | -0.426* | -0.088 | -0.051 |
| | (0.076) | (0.236) | (0.082) | (0.110) |
| Sh. CBA cov. | -0.139* | 0.033 | -0.292*** | 0.011 |
| | (0.083) | (0.350) | (0.099) | (0.146) |
| Sh. migr. x Sh. CBA cov. | -0.051 | 1.020 | -0.005 | -0.190 |
| | (0.457) | (1.354) | (0.493) | (0.518) |
| Mean outcome | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.047 | 0.117 | 0.059 | 0.053 |
| N | 1590 | 1576 | 1590 | 1585 |
| *Panel B*: OLS interaction with controls | | | | |
| Sh. migrants | -0.103 | -0.371 | -0.099 | -0.056 |
| | (0.075) | (0.229) | (0.084) | (0.109) |
| Sh. CBA cov. | -0.168* | 0.050 | -0.274*** | 0.006 |
| | (0.086) | (0.354) | (0.099) | (0.144) |
| Sh. migr. x Sh. CBA cov. | 0.287 | 1.437 | 0.035 | -0.238 |
| | (0.428) | (1.315) | (0.481) | (0.512) |
| Mean outcome | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.047 | 0.117 | 0.059 | 0.053 |
| N | 1590 | 1576 | 1590 | 1585 |
| *Panel C:* IV interaction | | | | |
| Sh. migrants | -0.681 | -0.637 | -0.454 | -0.396 |
| | (0.455) | (0.519) | (0.327) | (0.371) |
| Sh. CBA cov. | -0.182* | 0.028 | -0.328*** | 0.009 |
| | (0.098) | (0.354) | (0.104) | (0.153) |
| Sh. migr. x Sh. CBA cov. | 0.727 | 1.252 | 0.585 | 0.151 |
| | (0.479) | (1.563) | (0.416) | (0.637) |
| Mean outcome | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.047 | 0.117 | 0.059 | 0.053 |
| First stage KP F-stat | 4.373 | 4.365 | 4.373 | 4.368 |
| N | 1590 | 1576 | 1590 | 1585 |
| *Panel D*: IV interaction with controls | | | | |
| Sh. migrants | -0.395 | -0.303 | -0.467 | -0.451 |
| | (0.339) | (0.455) | (0.326) | (0.395) |
| Sh. CBA cov. | -0.194** | 0.067 | -0.306*** | 0.004 |
| | (0.091) | (0.354) | (0.104) | (0.152) |
| Sh. migr. x Sh. CBA cov. | 0.748* | 1.252 | 0.609 | 0.160 |
| | (0.411) | (1.585) | (0.412) | (0.653) |
| Mean outcome | 0.776 | 0.451 | 0.787 | 0.909 |
| Sd outcome | 0.047 | 0.117 | 0.059 | 0.053 |
| First stage KP F-stat | 4.423 | 4.414 | 4.423 | 4.416 |
| N | 1590 | 1576 | 1590 | 1585 |

*Note:* The table presents estimates from IV regressions using annual data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Lower-secondary level of education is compulsory education as highest degree, upper-secondary is an apprenticeship or a matura, tertiary is a degree from a university, university of applied sciences, university of teacher education or a professional degree. Weights assigned to observations equal the number of native respondents 18-65 years of age in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Sources: FSO, SECO, SLFS, ZEMIS.

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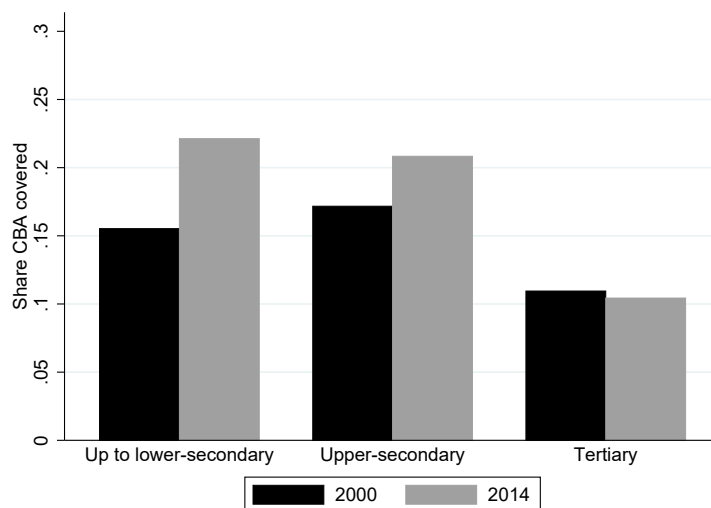
# Appendix Figures

Figure A1: Educational attainment and CBA coverage

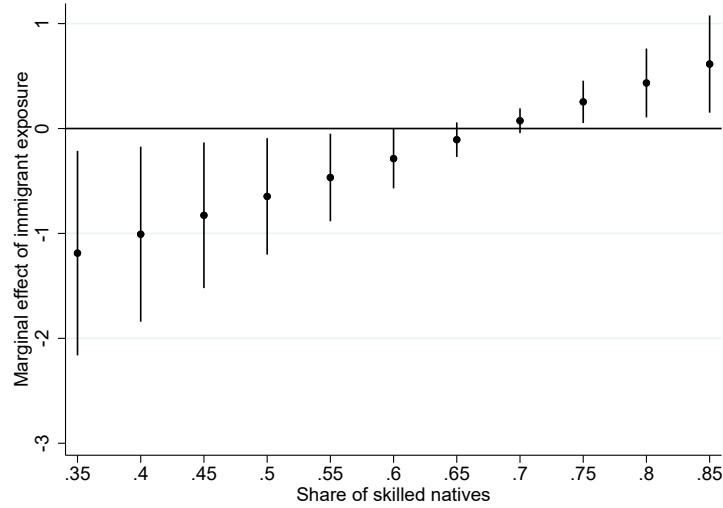(a) Native and immigrant workers by educational attainment
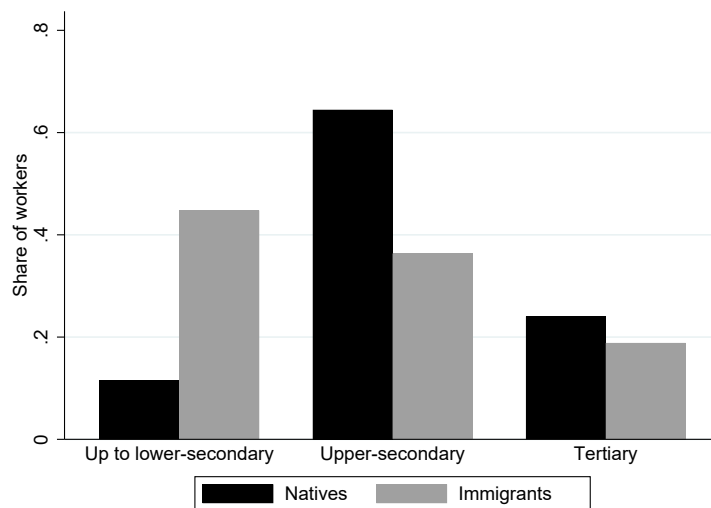


(b) Native CBA coverage by educational attainment



*Note:* Figure (a) presents the share of native and immigrant workers by highest level of educational attainment. Lower-secondary level of education is compulsory education as highest degree, upper-secondary is an apprenticeship or a matura, tertiary is a degree from a university, university of applied sciences, university of teacher education or a professional degree. Figure (b) presents the share of native workers employed in an industry with a CBA by highest level of educational attainment and year. Sources: SECO, SESS.

Figure A2: Voting analysis by continuous native educational attainment

(a) Estimates at mean level of CBA coverage



(b) Estimates at low and high CBA coverage



● Low coverage  ◆ High coverage

*Note:* The figure presents estimates from IV regressions using municipality level data. The outcome is the share of pro-immigrant votes. Share of migrants is the number of foreign residents divided by native population. Share of skilled natives is the share of native residents with upper-secondary or higher level of education in 2000. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations reflect the number of Swiss residents in 2000. Standard errors are clustered at the municipality level, 95% confidence intervals plotted. In Figure (b) effects are reported at the 10th and 90th percentile of the coverage measure. Sources: FSO, SECO, ZEMIS.

# Appendix Tables

Table A1: Votes on immigration policy and European foreign policy 2000–2014

| Nr. | Date | Title | Type | Category | Impact | Approval (%) |
|---|---|---|---|---|---|---|
| 464 | 21.05.2000 | Bilateral Agreements with the EU | Optional | European politics | Positive | 67.2 |
| 467 | 24.09.2000 | Initiative "for regulation of immigration" | Initiative | Immigration policy | Negative | 36.2 |
| 474 | 04.03.2001 | Initiative "yes to Europe!" | Initiative | European policy | Positive | 23.2 |
| 517 | 05.06.2005 | Approval and implementation of the Bilateral Agreements on the association to Schengen and to Dublin | Optional | European politics | Positive | 54.6 |
| 519 | 25.09.2005 | Extension of the Agreement for Free Movement of Persons (AFMP) | Optional | European politics | Positive | 56.0 |
| 524 | 24.09.2006 | Federal Act on Foreign Nationals | Optional | Immigration policy | Negative | 68.0 |
| 526 | 26.11.2006 | Cooperation with Eastern European countries | Optional | European policy | Positive | 53.4 |
| 540 | 08.02.2009 | Approving the continuation of the AFMP and extension to Bulgaria and Romania | Optional | European politics | Positive | 59.6 |
| 552.1 | 28.11.2010 | Initiative "for the expulsion of criminal foreigners" | Initiative | Immigration policy | Negative | 52.9 |
| 552.2 | 28.11.2010 | Federal Decree on the expulsion of criminal foreigners | Counter proposal | Immigration policy | Negative | 45.8 |
| 580 | 09.02.2014 | Initiative "against mass immigration" | Initiative | European politics | Negative | 50.3 |

*Note:* The table presents the list of votes considered in the analysis. Impact refers to the expected effect of the vote on the level of immigration in Switzerland. We classify proposals with an expected positive impact as "pro-immigration" and proposals with an expected negative impact as "anti-immigration" votes.

Table A2: Overview of generally valid CBAs in 2014 by 2-digit NOGA industry

| NOGA industry | CBAs |
| --- | --- |
| C16: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials | CBA for the timber construction industry, CBA for the carpentry trade |
| C23: Manufacture of other non-metallic mineral products | CBA for the Swiss concrete industry, CBA for the Swiss brick industry, CBA for the Swiss marble and granite industry |
| C25: Manufacture of fabricated metal products, except machinery and equipment | CBA for locksmith, metal, agricultural machinery, forging and steel industry in the canton of Baselland, CBA for the metal construction industry in the canton of Vaud, CBA for the metal construction industry in the canton of Valais, CBA for the metal industry |
| C29: Manufacture of motor vehicles, trailers and semi-trailers | CBA for the Swiss bodywork industry |
| C31: Manufacture of furniture | CBA for the Swiss furniture industry |
| C32: Other manufacturing | CBA for the dental laboratories in Switzerland |
| F41: Construction of buildings | CBA for the main construction industry |
| F42: Civil engineering | CBA for the industrial pipeline construction in the canton of Valais, CBA for rail construction |
| F43: Specialised construction activities | CBA for the roofing and wall trade in the canton of Baselland, CBA for the plastering industry in the canton of Baselland, CBA for the painting industry in the canton of Baselland, CBA for the plastering industry in the canton of Basel-Stadt, CBA for the metal construction industry in the canton of Geneva, CBA for the glass industry in the canton of Ticino, CBA for the tile and mosaic lying industry in the canton of Ticino, CBA for the plasters, fillers, dry fitters and ceiling lamps industry in the canton of Ticino, CBA for the carpet, linoleum, plastic, parquet and raised flooring industry in the canton of Ticino, CBA for tinsmithing, roofing, sanitary installations, heating, air conditioning and ventilation in the canton of Vaud, CBA for the electrical, installation and transmission industry in the canton of Valais, CBA for the paving industry in the canton of Valais, CBA for building services engineering and the building facade in the canton of Valais, CBA for the plastering trade in the city of Zurich, CBA for the scaffolding industry, CBA of the Swiss electrical and telecommunications installation industry, CBA for the ceiling and interior design industry, CBA for the Swiss insulation industry, CBA for the Swiss roofing and wall trade, CBA for the Swiss building envelope industry, CBA for the Swiss building technology industry, CBA for the finishing trade in Western Switzerland, CBA for the finishing trade in the canton of Basel-Stadt, CBA for the painting and plastering industry, CBA for the paving industry in the cantons AG, BE, GL, LU, NW, OW, SO, SZ, UR, ZG and ZH, CBA for the paving industry in the cantons of Basel-Stadt and Baselland |
| G45: Wholesale and retail trade and repair of motor vehicles and motorcycles | CBA for the automotive industry in the canton of Ticino, CBA for the automotive industry in the canton of Vaud, CBA for the automotive industry in the canton of Valais, CBA for the automotive industry in the canton of Fribourg, CBA for the automotive industry in Eastern Switzerland |
| G47: Retail trade, except of motor vehicles and motorcycles | CBA for the retail trade in the canton of Geneva (simplified procedure), CBA for the retail trade in the canton of Neuchatel, CBA for the petrol station shops in the canton of St. Gallen, CBA for the petrol station shops in the canton of Fribourg, CBA for the retail trade in the city of Lausanne, CBA for the retail trade in the city of Nyon, CBA for the Swiss butcher's trade |
| I55: Accommodation | CBA for the hospitality industry |
| I56: Food and beverage service activities | CBA for the hospitality industry |
| M71: Architectural and engineering activities; technical testing and analysis | CBA of construction engineers and building trades in the canton of Geneva, CBA for draftsmen in the canton of Ticino, CBA for the engineering surveyors' offices in the canton of Vaud |
| N78: Employment activities | CBA for recruitment services |
| N80: Security and investigation activities | CBA for private security services |
| N81: Services to buildings and landscape activities | CBA for the cleaning industry and facility services in the canton of Ticino, CBA for the gardeners in the canton of Ticino, CBA of landscape architects and gardeners in the canton of Vaud, CBA for the park, garden and landscaping industry in the French speaking part in the canton of Valais, CBA for the cleaning industry in Western Switzerland, CBA for the gardeners in the cantons of Basel-Stadt and Baselland, CBA for the cleaning industry in German-speaking Switzerland, CBA for the cleaning industry in German-speaking Switzerland (simplified procedure) |
| S96: Other personal service activities | CBA for the Swiss hairdressing industry, CBA for the industrial cleaning of textiles in French-speaking Switzerland |

*Note:* The NOGA classification contains in total twenty-one 1-digit NOGA industries (A to U) and eighty-seven 2-digit NOGA industries. For an overview see here. The seventy generally valid CBAs in 2014 fall into eighteen 2-digit NOGA industries. Source: SECO.

Table A3: Summary statistics of control variables

|  | N | Mean | Sd | Min | Max |
|---|---|---|---|---|---|
| *Swiss Earnings Structure Survey (SESS)* | | | | | |
| Share women | 848 | 0.376 | 0.053 | 0.070 | 0.690 |
| Mean age | 848 | 40.623 | 1.059 | 31.394 | 46.135 |
| Share above lower-secondary educated | 848 | 0.875 | 0.043 | 0.429 | 0.985 |
| *Swiss Labor Force Survey (SLFS)* | | | | | |
| Share women | 1590 | 0.509 | 0.041 | 0.169 | 0.839 |
| Mean age | 1590 | 42.113 | 1.318 | 33.185 | 51.463 |
| Share above lower-secondary educated | 1590 | 0.866 | 0.042 | 0.507 | 1.000 |
| *Federal Statistical Office* | | | | | |
| Share women | 8860 | 0.504 | 0.016 | 0.331 | 0.606 |
| Mean age (2000) | 2215 | 39.099 | 2.393 | 29.487 | 58.655 |
| Share above lower-secondary educated (2000) | 2215 | 0.713 | 0.069 | 0.313 | 0.872 |

*Note:* The table presents summary statistics for control variables from the SESS and SLFS surveys, and the census. In the wage analysis weights equal the number of native workers in 2000 (SESS), in the employment analysis the number of native respondents 18-65 years of age (SLFS), the number of Swiss residents in municipality in 2000 for census data. SESS and SLFS variables are measured at the commuting zone level, census variables at the municipality level. Sources: FSO, SESS, SLFS, ZEMIS.

## Table A4: Voting behavior and stated preferences

| | Outcome: equal to one if respondent voted pro-immigration, zero otherwise | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Prefers equal opportunities | 0.245*** | 0.225*** | 0.238*** | | | |
| | (0.012) | (0.012) | (0.012) | | | |
| Prefers open Switzerland | | | | 0.277*** | 0.254*** | 0.271*** |
| | | | | (0.015) | (0.015) | (0.015) |
| Age | | 0.002 | 0.001 | | 0.001 | 0.000 |
| | | (0.002) | (0.002) | | (0.002) | (0.002) |
| Age squared | | -0.000 | -0.000 | | -0.000 | -0.000 |
| | | (0.000) | (0.000) | | (0.000) | (0.000) |
| Female | | 0.035*** | 0.018 | | 0.035*** | 0.015 |
| | | (0.011) | (0.011) | | (0.011) | (0.011) |
| Teacher education | | -0.118*** | | | -0.126*** | |
| | | (0.014) | | | (0.014) | |
| Upper-secondary | | -0.040** | | | -0.048*** | |
| | | (0.016) | | | (0.017) | |
| Lower-secondary | | -0.138*** | | | -0.154*** | |
| | | (0.024) | | | (0.024) | |
| Hh inc. 7001-9000 CHF | | | -0.012 | | | -0.019 |
| | | | (0.017) | | | (0.017) |
| Hh inc. 5001-7000 CHF | | | -0.046*** | | | -0.063*** |
| | | | (0.016) | | | (0.016) |
| Hh inc. 3001-5000 CHF | | | -0.042** | | | -0.052*** |
| | | | (0.017) | | | (0.018) |
| Hh inc. <3000 CHF | | | -0.063*** | | | -0.070*** |
| | | | (0.024) | | | (0.024) |
| N | 6801 | 6801 | 6801 | 6835 | 6835 | 6835 |

*Note:* The table presents estimates from an OLS voting analysis using individual-level data. All specifications include place of residence and vote fixed effects. We code an individual with a response 1–3 as in favor of equal opportunities / open Switzerland, and 4–7 as not in favor. Base category for education is tertiary, base category for household income is above 9000 CHF per month. Robust standard errors in parentheses. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Source: Vox Survey.

Table A5: Voting analysis by native educational attainment and CBA coverage: robustness checks

| | Outcome: share of pro-immigration votes | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| *Panel A:* Fixed denominator | | | |
| Sh. migrants | -0.120 | -0.312*** | -0.319*** |
| | (0.088) | (0.078) | (0.080) |
| Sh. CBA cov. | -0.024 | -0.022 | 0.168*** |
| | (0.026) | (0.027) | (0.039) |
| Sh. migr. x T2 sh. skilled | | 0.077 | 0.146* |
| | | (0.081) | (0.080) |
| Sh. migr. x T3 sh. skilled | | 0.279** | 0.374*** |
| | | (0.131) | (0.119) |
| Sh. migr. x Sh. CBA cov. | | | 0.729** |
| | | | (0.314) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | | | -1.259*** |
| | | | (0.452) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | | | -1.391*** |
| | | | (0.350) |
| First stage KP F-stat | 32.904 | 15.933 | 5.968 |
| N | 22150 | 22150 | 22150 |
| *Panel B:* Commuting zone | | | |
| Sh. migrants | -0.062 | -0.469* | -0.378 |
| | (0.191) | (0.249) | (0.242) |
| Sh. CBA Cov. | -0.088 | -0.099 | 0.253 |
| | (0.167) | (0.162) | (0.159) |
| Sh. migr. x T2 sh. skilled | | 0.409* | 0.353 |
| | | (0.230) | (0.251) |
| Sh. migr. x T3 sh. skilled | | 0.460 | 0.682** |
| | | (0.294) | (0.305) |
| Sh. migr. x Sh. CBA cov. | | | 1.625 |
| | | | (1.088) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | | | -1.033 |
| | | | (1.494) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | | | -3.969*** |
| | | | (1.203) |
| First stage KP F-stat | 8.610 | 5.886 | 2.785 |
| N | 1060 | 1060 | 1060 |

*Note:* The table presents estimates from IV regressions using data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population in 2000 in Panel A and by native population in Panel B. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 split into terciles $T$. Controls are listed in Table A3; all specifications include municipality and vote fixed effects in Panel A and commuting zone and vote fixed effects in Panel B. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level in Panel A and at the commuting zone level in Panel B. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Sources: FSO, SECO, ZEMIS.

Table A6: Voting analysis by native educational attainment and CBA coverage: subset of votes

| | Outcome: share of pro-immigration votes | | | | | |
|---|---|---|---|---|---|---|
| | Immigration policy | | | European foreign policy | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Sh. migrants | -0.085 | -1.016*** | -1.174*** | 0.026 | -0.083 | -0.108 |
| | (0.141) | (0.230) | (0.264) | (0.064) | (0.105) | (0.114) |
| Sh. CBA cov. | -0.094** | -0.090** | 0.060 | -0.070*** | -0.070*** | 0.009 |
| | (0.042) | (0.044) | (0.086) | (0.026) | (0.026) | (0.044) |
| Sh. migr. x T2 sh. skilled | | 1.026*** | 1.167*** | | -0.072 | 0.017 |
| | | (0.226) | (0.264) | | (0.105) | (0.113) |
| Sh. migr. x T3 sh. skilled | | 0.957*** | 1.241*** | | 0.221 | 0.283* |
| | | (0.326) | (0.361) | | (0.142) | (0.145) |
| Sh. migr. x Sh. CBA cov. | | | 2.082** | | | 0.633 |
| | | | (0.931) | | | (0.438) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | | | -2.294** | | | -1.270* |
| | | | (0.994) | | | (0.652) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | | | -2.557** | | | -1.636*** |
| | | | (1.021) | | | (0.520) |
| First stage KP F-stat | 37.355 | 19.137 | 5.261 | 39.149 | 35.413 | 12.858 |
| N | 6645 | 6645 | 6645 | 15505 | 15505 | 15505 |

*Note:* The table presents estimates from IV regressions with controls using data at the municipality level. The split of the votes into the two subgroups follows Table A1. Share of migrants is the number of foreign residents divided by native population. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 split into terciles $T$. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, ZEMIS.

Table A7: Voting analysis by native educational attainment and CBA coverage: placebo tests

| | **Outcome: share of pro-liberal votes** | | | | |
|---|---|---|---|---|---|
| | Health | Defense | Energy & Environment | Law | Transport |
| | (1) | (2) | (3) | (4) | (5) |
| Sh. migrants | 0.133 | 0.373*** | -0.410*** | -0.932*** | 0.530*** |
| | (0.096) | (0.119) | (0.142) | (0.233) | (0.132) |
| Sh. CBA cov. | -0.324*** | 0.049 | 0.066 | 0.400*** | 0.725*** |
| | (0.091) | (0.064) | (0.050) | (0.090) | (0.090) |
| Sh. migr. x Sh. CBA cov. | -0.547 | -0.569 | 0.274 | 0.271 | 0.036 |
| | (0.539) | (0.489) | (0.346) | (0.815) | (0.628) |
| Sh. migr. x T2 sh. skilled | 0.019 | 0.034 | 0.533*** | 0.257 | -0.053 |
| | (0.092) | (0.133) | (0.141) | (0.247) | (0.140) |
| Sh. migr. x T3 sh. skilled | 0.137 | 0.349** | 0.320 | 0.355 | 0.231 |
| | (0.101) | (0.153) | (0.232) | (0.317) | (0.234) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | 0.281 | 0.996 | 0.221 | -0.328 | 1.100* |
| | (0.605) | (0.632) | (0.389) | (0.963) | (0.667) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | 0.738 | -0.023 | -0.365 | 0.186 | 1.357* |
| | (0.569) | (0.538) | (0.632) | (1.106) | (0.772) |
| First stage KP F-stat | 14.926 | 8.289 | 6.331 | 12.233 | 14.588 |
| N | 15505 | 15505 | 19935 | 15505 | 13290 |

*Note:* The table presents estimates from IV regressions with controls using municipality level data. To construct the outcome variables we use votes on different topics and categorize them into liberal and conservative. Share of migrants is the number of foreign residents divided by native population. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 split into terciles $T$. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, ZEMIS.

Table A8: Voting analysis by native educational attainment and CBA coverage: participation rate

| | Outcome: share of eligible voters who voted | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Sh. migrants | -0.046 | -0.018 | -0.127 |
| | (0.105) | (0.114) | (0.142) |
| Sh. CBA cov. | -0.042** | -0.041** | 0.014 |
| | (0.017) | (0.016) | (0.050) |
| Sh. migr. x T2 sh. skilled | | 0.047 | 0.128 |
| | | (0.119) | (0.146) |
| Sh. migr. x T3 sh. skilled | | -0.076 | -0.008 |
| | | (0.187) | (0.213) |
| Sh. migr. x Sh. CBA cov. | | | 1.901*** |
| | | | (0.513) |
| Sh. migr. x Sh. CBA cov. x T2 sh. skilled | | | -1.329** |
| | | | (0.602) |
| Sh. migr. x Sh. CBA cov. x T3 sh. skilled | | | -1.371** |
| | | | (0.555) |
| First stage KP F-stat | 38.455 | 33.200 | 11.274 |
| N | 22150 | 22150 | 22150 |

*Note:* The table presents estimates from IV regressions with controls using municipality level data. Share of migrants is the number of foreign residents divided by native population. Share skilled is the share of native residents with upper-secondary or higher level of education in 2000 split into terciles $T$. Controls are listed in Table A3; all specifications include municipality and vote fixed effects. Weights assigned to observations equal the number of Swiss residents in 2000. Standard errors in parentheses are clustered at the municipality level. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Sources: FSO, SECO, ZEMIS.

Table A9: Wage analysis by native percentiles of the wage distribution and CBA coverage: fixed denominator

| | Outcome: mean ln of native gross hourly wage | | | |
|---|---|---|---|---|
| | 50th pct (1) | 5th pct (2) | 10th pct (3) | 95th pct (4) |
| *Panel A:* IV with controls | | | | |
| Sh. migrants | -0.113 | -0.589** | -0.661** | 0.423 |
| | (0.139) | (0.242) | (0.252) | (0.327) |
| Sh. CBA cov. | -0.006 | 0.211* | 0.170* | -0.217 |
| | (0.071) | (0.112) | (0.093) | (0.214) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | 13.971 | 13.971 | 13.971 | 13.971 |
| N | 848 | 848 | 848 | 848 |
| *Panel B*: IV interaction with controls | | | | |
| Sh. migrants | -0.108 | -0.680** | -0.747** | 0.429 |
| | (0.145) | (0.288) | (0.301) | (0.359) |
| Sh. CBA cov. | 0.009 | -0.019 | -0.048 | -0.203 |
| | (0.070) | (0.133) | (0.120) | (0.209) |
| Sh. migr. x Sh. CBA cov. | -0.083 | 1.282** | 1.218** | -0.078 |
| | (0.387) | (0.501) | (0.482) | (0.728) |
| Mean outcome | 3.553 | 3.062 | 3.157 | 4.224 |
| Sd outcome | 0.103 | 0.070 | 0.068 | 0.195 |
| First stage KP F-stat | 6.706 | 6.706 | 6.706 | 6.706 |
| N | 848 | 848 | 848 | 848 |

*Note:* The table presents estimates from IV regressions using biennial data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population in 2000. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Lower-secondary level of education is compulsory education as highest degree, upper-secondary is an apprenticeship or a matura, tertiary is a degree from a university, university of applied sciences, university of teacher education or a professional degree. Weights assigned to observations equal the number of natives employed in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Sources: FSO, SECO, SESS, ZEMIS.

Table A10: Wage analysis by native educational attainment and CBA coverage

| | Outcome: mean ln of native gross hourly wage | | | |
|---|---|---|---|---|
| | All | Up to lower-secondary | Upper-secondary | Tertiary |
| | (1) | (2) | (3) | (4) |
| *Panel A:* IV with controls | | | | |
| Sh. migrants | -0.060 | -0.711 | -0.322* | 0.080 |
| | (0.153) | (0.688) | (0.182) | (0.142) |
| Sh. CBA cov. | -0.010 | 0.241 | 0.012 | 0.003 |
| | (0.060) | (0.345) | (0.063) | (0.090) |
| Mean outcome | 3.594 | 3.345 | 3.526 | 3.879 |
| Sd outcome | 0.109 | 0.082 | 0.081 | 0.103 |
| First stage KP F-stat | 10.456 | 10.456 | 10.456 | 10.456 |
| N | 848 | 848 | 848 | 847 |
| *Panel B*: IV interaction with controls | | | | |
| Sh. migrants | -0.078 | -0.659 | -0.359 | 0.048 |
| | (0.181) | (0.716) | (0.225) | (0.133) |
| Sh. CBA cov. | -0.046 | 0.345 | -0.060 | -0.060 |
| | (0.081) | (0.324) | (0.087) | (0.125) |
| Sh. migr. x Sh. CBA cov. | 0.210 | -0.610 | 0.426 | 0.376 |
| | (0.358) | (1.045) | (0.405) | (0.508) |
| Mean outcome | 3.594 | 3.345 | 3.526 | 3.879 |
| Sd outcome | 0.109 | 0.082 | 0.081 | 0.103 |
| First stage KP F-stat | 5.049 | 5.049 | 5.049 | 5.048 |
| N | 848 | 848 | 848 | 847 |

*Note:* The table presents estimates from IV regressions using biennial data at the commuting zone level. Share of migrants is the number of foreign residents divided by native population. Controls are listed in Table A3; all specifications include commuting zone and year fixed effects. Lower-secondary level of education is compulsory education as highest degree, upper-secondary is an apprenticeship or a matura, tertiary is a degree from a university, university of applied sciences, university of teacher education or a professional degree. Weights assigned to observations equal the number of natives employed in commuting zone in 2000. Standard errors in parentheses are clustered at the commuting zone level. * p<0.1; ** p<0.05; *** p<0.01. Sources: FSO, SECO, SESS, ZEMIS.

# Data Appendix

We use different datasets from the Swiss Federal Statistical Office (FSO) and the State Secretariat for Migration (SEM). Raw data from the State Secretariat for Economic Affairs (SECO) are obtained to construct a new dataset on generally valid collective bargaining agreements (CBA). The voting analysis is conducted at the municipality level and the labor market analysis at the commuting zone level. We aggregate up data series available at the municipality level (e.g., exposure to immigrants, CBA coverage) to commuting zones according to a concordance table provided by the FSO. We take the municipality definitions from April 2018. The following sections give a detailed overview of the main datasets used and the variable construction.

## Swiss Earnings Structure Survey (SESS)

The SESS is conducted at the firm level in October every second year since 1994. It covers the secondary and tertiary sectors. The population includes firms with at least three employees. The public sector has been integrated gradually (the cantonal public sector was added in 1998, the municipal public sector was added in 2006). Participation in the survey is mandatory. In 2014 it included about 32,000 public and private enterprises with approximately 1.6 million workers.

We restrict the sample to employees of private sector establishments aged between 18 and 65 with available region of work, permit type, gender, education and wage. Native workers are defined as Swiss by nationality. Foreign workers can be distinguished by permit type. We construct the gross hourly wage rate in CHF based on the variable called standardized gross wage. The gross wage includes social contributions and Sunday or night work compensation. Additionally, 1/12 of the 13th salary and other non-periodic payments are added while excluding overtime pay. This sum is divided by weekly working hours and multiplied by 40, which is the standardized number of working hours per month. We take this standardized gross wage to derive the gross hourly wage rate. Last, we calculate the real values using Consumper Price Index data from the Federal Statistical Office that is indexed to December 2015. Following Dustmann *et al.* (2012), we trim observations above the 99th and below the 1st percentile of the wage distribution in each region. Our main outcome of interest is the natural log of gross hourly wage rate at different percentiles and the mean natural log wage by highest educational degree obtained. The three education levels are tertiary, upper-secondary and up to lower-secondary education.

## Swiss Labor Force Survey (SLFS)

The SLFS is an individual-level survey. It was conducted annually in the second quarter of the year from 1991 to 2009 and quarterly in the period between 2010 and 2018. Since 2010 around 125,000 interviews are conducted yearly, whereas one person is interviewed four times within six consecutive quarters. The SLFS covers employed, unemployed and people out of the labor force.

The SLFS includes individuals aged 15 years and older but we limit the sample to individuals in the age group 18–65. We use annual data. To construct the native employment rate, we only keep Swiss by nationality. Employment is defined according to the International Labor Organization and includes individuals being employed for a salary, by a family member or self-employed. The native employment rate is the number of employed relative to the number of survey participants.

## Central Migration Information System (ZEMIS)

The register data from the ZEMIS are maintained by the SEM. This system was introduced in 2008 and includes information from the predecessor databases. Data between 1996 and 2002 are available at the municipality level only, while later data are at the individual level. The ZEMIS covers all non-Swiss (including asylum seekers and cross-border commuters) by their permit type and personal characteristics. The stock of foreign nationals is reported yearly on December 31st.

Our sample includes all foreign nationals who reside in Switzerland and are not asylum seekers. The individuals of interest have a C (settled status), B (resident) or L (short-term) permit and must be present in the stock dataset. C-permits are typically issued after a stay of ten years. The B-permit is valid for one to five years and the L-permit up to 364 days. We construct the exposure to foreigners as the number of non-Swiss individuals relative to the native population at the municipality level in the voting analysis and at the commuting zone level in the labor market analysis.

## Dataset "Generally valid CBAs"

The SECO provides a list of the universe of generally valid agreements from June 2000 onwards. Up to 2006 these lists included the active CBAs by the end of June and were published yearly in the journal "Die Volkswirtschaft". Starting in November 2005, the active CBAs are published monthly with data reported on the first of the month. These lists contain information on the name of the CBA, its geographic validity, the dates of the basic

decision, changes, enforcements and the period of validity.

The year when a CBA comes in force is called the year of the basic decision. CBAs can be adjusted and extended within the same contractual framework or as a new agreement. The variation that we use comes from changes in basic decisions. We build a yearly dataset based on the monthly information on CBAs. A CBA is counted as active in a year if it was valid for at least one month in that year.

There are national and cantonal CBAs. Cantonal CBAs are typically defined at the cantonal level. There are three exceptions where the agreement is valid for a single city. We drop them because the most disaggregated administrative unit that we consider is the district. National CBAs are valid for at least two cantons, while certain districts can be excluded. Although these CBAs are most often valid for multiple cantons, conditions can be canton-specific.

CBAs relate to one or several industries or occupations. The FSO matches each CBA to one 2-digit NOGA-2008 industry and within that to the relevant 3-digit industries. If two or more 2-digit industries are affected, the industry where the higher share of covered people falls is chosen by the FSO. As an exception, we allocate the CBA in the hospitality industry to I55 (accommodation) and I56 (food and beverage activities) because both two-digit industries are similarly covered by the CBA.

We manually select the subset of generally valid CBAs that fall into the secondary and tertiary sectors and include general clauses on wage and working conditions. Thus, we exclude all CBAs with a specific purpose such as regulating early retirement or further education. Our CBA coverage variable measures labor market protection at the extensive margin. If at least one generally valid CBA falls within a 3-digit NOGA industry, we consider it as covered. We combine local employment by industry in 1995 and annual growth rates in employment at the country level to build the regional coverage. We construct this measure at the municipality level in the voting analysis and at the commuting zone level in the labor market analysis.

## Data on Voting Outcomes

We use a municipality level dataset which is provided by the FSO and covers all national vote outcomes since 1960. The key information is the share of votes in favor of the proposal. It is calculated as the number of yes votes divided by the number of valid votes. We combine this information with the predicted impact of the proposal on immigration levels in constructing our outcome variable – the share of pro-immigration votes.

We use all votes that are either categorized as immigration policy or as European foreign

policy votes and occurred between 2000 and 2014. The classification is provided by the FSO following the *Année Politique Suisse 1980ff* from the Institute for Political Science at the University of Bern. We take the average of the initiative on the expulsion of criminal foreigners and its counter proposal because of their similarity. Note that this does not affect our results. The following overview outlines the content of the votes included in our analysis:[18]

**Bilateral Agreements with the EU** The Bilateral Agreement includes seven agreements on immigration, land transport, air transport, trade barriers, public procurement, research, agriculture. The Agreement on the Free Movement of Person (AFMP) is a key part. It enables free movement for individuals from EU and EFTA countries and the same conditions hold for Swiss nationals within the EU and EFTA.

**Initiative "for regulation of immigration"** The purpose of this initiative is to limit the share of foreigners in the population to 18%. In addition, the initiative wants to reduce financial incentives to remain in the country for non-resident foreigners, asylum seekers and other groups of temporary migrants. Last, foreign criminals who should be judicially expelled from the country can be jailed until the enforcement.

**Initiative "yes to Europe!"** The initiative proposes that Switzerland joins the European Union and that the Federal Council starts immediate negotiation.

**Approval and implementation of the Bilateral Agreements on the association to Schengen and to Dublin** The Schengen agreement abandons systematic passport controls which simplifies travelling. At the same time, international cooperation is intensified to reduce crime. The Dublin agreement requires that an asylum application is processed only once in the EU area and Switzerland.

**Extension of the Agreement for Free Movement of Persons (AFMP)** This act gradually extends the AFMP to the ten new EU member countries. Moreover, it introduces accompanying measures for the labor market to prevent deterioration of work and wage conditions.

**Federal Law on Foreign Nationals** This act regulates immigration in particular from non-EU/EFTA countries. Labor migration from non-EU/EFTA countries is limited to high-skilled individuals. Occupational and geographic mobility within the country is simplified for resident immigrants.

**Cooperation with Eastern European countries** This act enables Switzerland to support building democracy and social market economy in former communist countries in Eastern Europe and in soviet countries. The form of cooperation is manyfold: technical, financial, measures to promote participation in world trade, measures to promote the use of

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[18]The FSO provides an overview with a short description of all votes here.

private sector funds.

**Approving the continuation of the AFMP and extension to Bulgaria and Romania** This act continues the Agreement on the Free Movement of Person for an unlimited period. In addition, the AFMP is extended to the new EU member countries Bulgaria and Romania.

**Initiative "for the expulsion of criminal foreigners"** This initiative wants to automatically revoke the right of residence of foreigners who have commited certain criminal offences or have misused social benefits.

**Federal Decree on the expulsion of criminal foreigners** The counter proposal to the initiative "for the expulsion of criminal foreigners" requires to revoke the right of residence based on the severity of the offence.

**Initiative "against mass immigration"** This initiative proposes to limit immigration by introducing quotas defined on national needs.

For the placebo tests in Table A7 we use the following vote categories: health, welfare and sports (9 votes), national defense (9 votes), energy and environmental policies (11 votes), the subgroups criminal and private law of the category law (7 votes), transport policy (8 votes). From this set of votes we drop the ones which we cannot categorize into liberal and conservative based on voting recommendations of the largest four parties.