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Migrants' Missing Votes

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Abstract

Emigrants are less likely to participate in elections in their home country. They are also self-selected in terms of education, gender, age, and political preferences, changing the structure of the origin population. High emigration rates can therefore have a systematic influence on election results. Using administrative migration and voting data, we show that counties in Poland that have experienced large emigration following the accession to the European Union in 2004 are characterised by larger vote shares for right-wing parties. We use instrumental variable estimations that exploit distance to the border and to airports to account for endogenous migration patterns. Results are robust to estimations using first differences. Results hold for elections of the national and EU parliament and for different areas within Poland. Surprisingly, we find no effects on incumbent parties. In addition, our results show increased voting for parties with pro-European positions. Analysing the mechanisms using survey data, we illustrate that emigrants (stayers) have less (more) trust in right-wing parties. The results have important policy implications for voting regulations.

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1 Introduction

Migration is a global phenomenon that is continuously increasing and has reached 272 million people or 3.5 percent of the world's population (UN DESA 2019). Migration flows are highly asymmetric and certain countries such as China, India but also many Central and Eastern European countries experience large outflows. There is a substantial economic literature focusing on the effects of emigration on origin countries, mostly focusing on brain drain versus brain gain concerns and remittances. Political effects, especially the effects on voting, have received less attention. High emigration rates can, however, have a substantial impact on election results in the origin country if emigrants are a selected group and are less likely to cast their votes from abroad.

For governments facing a close race for reelection, the votes from abroad can be decisive. Many governments have therefore started to run election campaigns also in countries that have a large diaspora, a controversial example being the Turkish president Erdogan campaigning in Germany in 2018. Depending on the political preferences of the diaspora, governments can also strategically facilitate or complicate voting from abroad, therefore receiving more or less votes from abroad. For instance, there exists anecdotal evidence from the Polish diaspora that the recent government has made voting from abroad more difficult as the diaspora is more likely to vote for the opposition. The goal of this paper is to causally analyse the role of emigration on election outcomes.

The case of Poland is an interesting setting to study the effects of emigration on election results. Especially after the accession to the European Union (EU) and the subsequent introduction of free labour mobility to other EU countries, Poland has seen large emigration rates, resulting in 4.4 million Polish citizens currently living abroad (11.4 percent of the total population according to UN DESA, 2019). This is not surprising, given the huge wage differentials within the EU. Polish citizens who are living abroad, are much less likely to participate in elections in Poland. Across different destinations and years, turnout of Polish citizens abroad is rarely larger than 10 percent, as opposed to an average of 50 percent in Poland. In addition, Polish citizens residing abroad also vote very differently. They are a selected group of citizens, distinct in education and age, and they also differ in political preferences (Berlinschi and Harutyunyan 2019). Emigration thus changes the structure of the population remaining in the home country, which has important consequences for voting. On average, emigrants vote less for right-wing parties. Therefore, increasing emigration from Poland has lead to a situation where the voters that typically vote against right-wing parties are residing abroad and do not participate, thus leading to increased vote shares for right-wing parties in Poland.

This paper analyses the causal effects of emigration on election outcomes in Poland. We use detailed administrative emigration data and merge it with official election results of all elections between 2000 and

2019 at the county level. To account for endogeneity, for instance resulting from unobserved economic conditions, we instrument emigration with distance to the border or to the nearest airport. The instrument is a strong predictor of emigration, both when we measure distance in kilometers and when we use travel time. Our results consistently show that larger emigration rates increase the vote share of the right-wing party (PiS or earlier existing right-wing parties and coalitions), while decreasing the vote share for left-wing parties at the same time. These findings are robust to using either an Ordinary Least Squares regression (OLS) or relying on the instrumental variable (IV) approach outlined above. In general, the effects of emigration on voters' preferences are stronger using an IV approach. Furthermore, results are stronger in Western Poland, which is closer to the German border. The results are also robust to estimating regressions in first differences and to including county-level controls such as the number of unemployed, GDP per capita, average incomes, the industry, age or education structure as well as time and region fixed effects. Moreover, our findings remain robust to using an alternative party classification system as well as alternative specifications of the instrument. In a second step, we provide suggestive evidence that social norms and preferences, in particular trust, can at least partially explain our results. We complement our analysis with the Life in Transmission Survey, which provides information on values on attitudes for Polish citizens at the county-level, and show that emigrants have less trust in right-wing populist parties than stayers.

As it is the case in many European countries, populist parties of the right-wing spectrum have increased their vote share in Poland in recent years. In particular, the PiS is gaining in importance and forms the government since 2015. While it is hard to find a consistent classification of 'populist parties', there exist also left-wing populist parties. Overall, our results are more robust if we differentiate between right- and left-wing parties than if we analyse populist parties.

As additional outcomes, we analyse voting for the incumbent and voting for parties with pro-European stances. One would expect that those who disagree with the current government are more likely to emigrate, leading to increased vote shares for the incumbent. However, we do not find any robust and significant effects for vote shares to the incumbent parties. This effect seems to be prevalent in developing country dictatorships (Lodigiani 2016), but we cannot find any evidence for this in a developed democratic country. Similarly surprising, we find that emigration increases voting for parties with pro-European positions. Given that emigrants are more likely to be pro-European, one could expect that those left-behind are less likely to vote pro-European. There are several potential explanations for this counter-intuitive result, including increased incentives and intentions to migrate in the future as well as reduced labour market competition, leading to pro-European voting.

There are different reasons why emigration affects voting outcomes at the origin. The first reason is the direct effect of the absence of a selected group of voters. If Polish emigrants are more likely to vote

for a specific type of party and are less likely to vote from abroad, then this party is missing votes due to emigration. In addition, emigration can have effects on the economy that result in different voting patterns. Dustmann et al. (2015) reveal that wages in Poland increased as a result of increasing emigration and Giesing and Laurentsyeva (2017) show that emigration led to a decline in total factor productivity in new EU member states. Furthermore, emigrants interact with their countrymen back home and remit money, knowledge and social norms to their origin. Fackler et al. (2020), for instance, show that emigration increases knowledge transfer and thus innovation in the home country. All the above mentioned reasons can have different implications for voting. Due to data limitations, we are not able to disentangle the effects but provide estimates of the overall effect.

The most closely related paper is by Anelli and Peri (2017). Similar to us, they find evidence for the so-called "Exit Effect" that describes the fact that the departure of liberal-minded voters decreases their influence on politics at home (Hirschman 1993). Anelli and Peri (2017) show that emigration from Italy in the aftermath of the financial crisis hindered political change as local elected officials were less likely to be young, college-educated, and female. To the best of our knowledge, this is the only other paper that analyses the causal effects of emigration on election outcomes for a democratic country. In contrast to us, their main outcomes of interest are characteristics of local elected politicians. We instead focus on national parliamentary election outcomes, use a different instrumental variable and the emigrants in our context are not fleeing from a recession, which might make them being differently selected.

There is a larger economic literature that analyses the effects of emigration on democratisation.[1] This literature typically highlights the existence of political remittances, i.e. the spillover of political norms and values that emigrants to democratic countries transfer to their network in the home country. Cross-country comparisons (Docquier et al. 2016; Spilimbergo 2009) show for a large set of countries that emigration can promote democracy and advances political quality at the origin. Mercier (2016) studies the migration experience of political leaders across different countries between 1960 and 2004 and concludes that leaders that studied abroad and come to power in autocratic settings have a positive influence on democratic development in their home country. This strand of research is complemented by specific country studies that focus on the precise mechanism that links emigration to democracy. Barsbai et al. (2017) illustrate that Moldovan emigrants to democratic countries had political norm spillovers to their network and inspired them to vote more democratic. Pfutze (2012) shows that the larger the proportion of migrant households in Mexican municipalities, the larger the vote share for the opposition party in 2000-2002. Karadja and Prawitz (2019) analyse historical Swedish data and find that the mass emigration to the US in the nineteenth century increased labour movement membership, strike participation and voting for left-wing parties. Batista and

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[1]Lodigiani (2016) provides an informative overview of this literature.

Vicente (2011) and Chauvet and Mercier (2014) study the effects of return migrants and show that return migrants promote political accountability in Cape Verde and political participation in Mali, respectively.

Our contribution to the literature is threefold. First, to the best of our knowledge, we are the first to document an increase in right-wing voting resulting from emigration. Populist right-wing parties are on the rise all over Europe and we contribute by providing a new reason that can explain their increasing importance[2]. Second, we look at a developed and democratic EU member state. The results from most of the previous literature are based on autocratic countries and highlight progress in democratisation. In a country that is already democratic, expected results will be different. We show that there is no effect on the incumbent government but a rise in right-wing voting. Therefore, we contribute by showing that the effect between emigration and democratisation is non-existent for a developed country such as Poland. Third, we show a causal effect based on an instrumental variable strategy that has not been used before in this literature. We thus contribute by strengthening the causal interpretation of the effect.

The paper has important implications beyond elections in Poland. Several other Central and Eastern European countries that have joined the EU since 2004 are experiencing similar emigration rates and a rise in right-wing populist governments. The paper also has implications for the creation of fair voting systems in the context of globalisation. As migration is increasing, so is the number of citizens that are casting their vote from abroad. The rules for citizens residing abroad vary over time and by country of origin but in general voting from abroad is more costly in terms of effort and time. In many cases one needs to travel to the closest embassy or consulate, which might be several hours away. Voting by letter from abroad has only recently been introduced in most countries. In addition, one typically needs to pre-register, which is an additional administrative burden. These difficulties lead to very low turnout rates of migrants, practically disenfranchising parts of the population. Governments should therefore ensure that citizens with foreign residence can cast their vote in an easy way. Voting by letter and increasing the locations where one can cast a vote are simple measures. One has to keep in mind, however, that the incumbent does not always have incentives to facilitate voting from abroad. Typically, governments know if citizens residing abroad are voting in their favour or not and can thus strategically facilitate or hinder the voting process abroad.

This paper is structured as follows. The next section describes Poland's institutional background. In Section 3, we introduce the datasets and provide descriptive statistics. Section 4 outlines the empirical strategy, including the construction of the instrumental variable. Section 5 presents the main results and heterogeneity analyses and Section 6 provides guidance on the underlying mechanisms. Section 7 shows the implemented robustness checks. Section 8 concludes with policy implications.

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[2]There is a large literature that explains right-wing voting with increasing immigration (for example, Barone et al. (2016), Edo et al. (2019), and Halla et al. (2017)) but so far no one has linked right-wing voting to emigration.

2 Institutional Background

2.1 Background on the Electoral System

With the collapse of the Soviet Union, the so-called *Third Polish Republic* organised the first partially free elections in 1989 (Kancelaria Sejmu (2020), Polish National Electoral Office (2020)). Since then the Polish government consists of two chambers, the *sejm* (parliament) and the *senate*, which jointly take the responsibility for Poland's legislative power: the parliament drafts legislative proposals, whereby the senate has consulting competencies and may propose changes before sending a proposal to the Polish president.

Both chambers are elected with a system of proportional representation in a four year cycle, in which every Polish citizen aged 18 or above is eligible to cast a vote. In total 460 deputies to the parliament and 100 senators are elected. To lower the risk of fragmentation and increase the work ability of the parliament, parties who reach a vote share below five percent are not represented in the parliament. Likewise, coalitions of parties have to reach a minimum vote share of eight percent. National minorities are excluded from this rule and therefore the German minority party (MN) is represented in the parliament.

After the eastward enlargement of the European Union in 2004, Polish citizens are further allowed to vote for representatives in the European parliament. The first European parliament (EP) election took place in 2004, three consecutive EP elections followed in 2009, 2014 and 2019. Similarly to national parliamentary elections, national parties (coalition of parties) have to reach a minimum vote share of five (eight) percent in order to be represented in the EP (Bundeszentrale für politische Bildung 2020).

If Polish citizens who reside abroad want to cast their vote, they need to register as voters at a Polish consulate or embassy before the election. This registration can be made online, by e-mail, post, fax, telephone or in person. Until 2013, voters needed to cast their vote in person on election day. The number of embassies and consulates that were available for voting has increased over time. For instance, in 2007 there were 20 polling stations in the U.K., 21 in the U.S. and six in Germany. In 2015 there were 40 in the U.K., 31 in the U.S. and 17 in Germany. In 2019 there were 52 in the U.K., 48 in the U.S. and 23 polling places in Germany.[3] Since 2014, it was no longer necessary to appear in person at the polling station. One could also apply for a postal vote at the consulate or embassy. In 2018, this right was withdrawn by the Polish government and postal voting is now only available to people with a qualified disability (Korzek and Pudzianowska 2018). According to Korzek and Pudzianowska (2018), it remains unclear why the option of postal voting was abolished in 2018. However, the question arises whether one goal was to reduce votes for the opposition. In the first round of 2015 presidential elections, the PiS candidate Duda won only 24.6 percent of all votes

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[3]Source: National Electoral Commission, Polling District Search Engine Abroad, Retrieved July 25, 2020, from Government of Poland, National Electoral Office.
Website: https://sejmsenat2019.pkw.gov.pl/sejmsenat2019/en/organy_wyborcze/obwodowe/pow/149900.

coming from abroad, less than if the Polish mainland is included (34.8 percent). Postal voting has been shown to increase participation in voting from abroad (Ciornei and Østergaard-Nielsen 2015). Since the distance to the nearest polling station is typically much greater for Poles abroad than at home, the abolition of postal voting is particularly detrimental to these voters, who predominantly support the opposition.

2.2 Background on the Political Party Landscape

Poland has undergone substantial changes in the lead of government in recent decades. Following its communist legacy, the government was composed of left-wing and socialist parties after the collapse of the Soviet Union until the early 2000s. Starting with the national parliamentary elections in 2005 the government shifted to a centre, more conservative position, and since 2015, the government is primarily formed by the right-wing populist Law and Justice (PiS) party. The following gives a brief chronological overview of the respective governments.

The centre-right party Solidarity Electoral Action (AWS) succeeded in bringing together right-wing "post-Solidarity" parties and defeated the Democratic Left Alliance in the 1997 parliamentary elections with an "anti-Communism" strategy. AWS's success was based on its legitimacy as a party that was in the tradition of the historical opposition movement "Solidarity" under the communist government. It formed a coalition with the liberal-democratic Freedom Union (UW) and passed four major social reforms that were widely considered ill-conceived. Many actors, however, remained loyal to the historical movement rather than the AWS, and the coalition developed as a weak confederal structure, which led to a heavy defeat in the following parliamentary elections (Szczerbiak 2004) in 2001.

The Democratic Left Alliance (SLD) has been the dominant player in the Polish party landscape for many years. In 2001, the largest left-wing party in Poland formed a coalition with the smaller social-democratic Union of Labour (UP) and won the 2001 parliamentary elections by a large majority. SLD promotes equal opportunities, e.g. through free education, and fights for employees' rights to reduce unemployment (Materska-Sosnowska 2010). However, some of SLD's very own issues are now also represented by PiS or Civic Platform (PO). The dominance of the Democratic Left Alliance ended in 2005, when SLD won only about a quarter of the seats that the party had won in the 2005 parliamentary elections. Finally, in 2015 SLD was without parliamentary representation for the first time.

PO, meanwhile, positions itself as an alternative to PiS. PO represents the mainstream of European politics (Fomina and Kucharczyk 2016), is economically more liberal and pursues a more future-oriented course (Harper 2010). Nevertheless, its social values are close to Catholic conservatism and are therefore no alternative to the PiS in this respect. Accordingly, PO voters are typically better educated winners

of the post-communist era, while PiS attracts voters from the poorer and less successful part of society (Dzięciołowski 2017). The Comparative Political Data Set classifies PO as right-wing party. In the provided context this classification may be considered controversial. Yet, ParlGov (an alternative party classification system, cf. Section 7) classifies PO as a conservative party as well. The Chapel Hill Expert Survey, which provides an expert rating on the positioning of political parties, further assigns the PO a mean value of 6 on the left-right ideological stance scale (PiS 8), while centre parties are assigned values well below 6. For the sake of consistency across party classifications, we consequently subsume the PO as a right-wing party.

The Law and Justice (PiS) party can be classified as populist right-wing. On the one hand, the party stands for a strong welfare state that seeks to distribute the national product more evenly among the population (Pankowski 2010). Exemplary of this are the reduction of the retirement age and the increase in the tax-free income limit (Markowski 2019). On the other hand, the party stands for a pronounced euroscepticism, especially as an opponent of the admission quota for Syrian refugees demanded by the EU Commission, and a culturally anti-liberal policy. Fomina and Kucharczyk (2016) therefore classify the PiS, which began as a center-right party in 2001, as an authoritarian-populist party of the right political spectrum. Following their election victory in 2005, Law and Justice formed a coalition with the Eurosceptic party League of Polish Families (LPR) and the right-wing Self-Defense of the Polish Republic (SRP). After 8 years of opposition (2007-2015), PiS has been in a majority government since 2015.

Table A1 shows all Polish elections taking place from 1997 to 2019, including both national parliament and European parliament elections. For each election, the table lists all parties elected to parliament and those parties who formed a government succeeding parliamentary elections.

3 Data and descriptive statistics

3.1 Migration data

The migration data in our analysis stems from administrative records by Statistics Poland, which are published annually for all years since 1995. It is based on official registrations of permanent emigrants and immigrants, that is persons registering for permanent departure (or residence in Poland respectively) for a minimum duration of 12 months.[4] We focus on the years 1997 up to 2019, which corresponds to the time

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[4]Statistics Poland defines a permanent emigrant by a person registering for permanent departure to abroad in the PESEL register (migration for a minimum duration of 12 months). An immigrant is a person registering for permanent residence in Poland from abroad. Information on permanent migration is therefore based on administrative data. Data on temporary migration (migration < 12 months) is available at state level based on a statistical survey conducted by the Statistics Poland as of December 31 each year. Throughout the observation period, permanent emigration accounts only for a small fraction of overall emigration in Poland, which is not surprising given the magnitude of seasonal workers and nursing staff leaving Poland on a three to six month basis (Figure A2). In principle, it is possible that permanent emigrants have become naturalised in their country of destination. Since Polish emigrants with a double nationality may still cast their vote in Polish elections, this is no important limitation in our setting.

frame in our electoral data. Unfortunately, Statistics Poland does not provide information for 2015. To circumvent this limitation, we therefore take the average values for county-level migration between 2014 and 2016. Considering that migration is relatively stable across both years, we consider this a suitable proxy.

The great advantage of this dataset is that it captures the aggregate number of permanent international migrants per county (*powiat*) over an extensive time period. Each county (total of 380 counties) is assigned a unique numeric identifier using the official teryt-classification. As such, it is an ideal source of information to address our research question.

3.2   Voting data

To capture voters' preferences, we use information on official electoral results at the county level for all parliamentary elections from 2001 to 2019 and the European parliament elections in 2004, 2009, and 2014 (see Table A1). For each county, these include the number of valid votes per electoral committee in absolute numbers and the electoral district of the county. Because, similar to the migration data, this dataset contains 3- or 4-digit teryt codes, we merge information of the two datasets using official district codes. For this purpose, we collapse the migration data based on legislative periods in a first step, using the total number of emigrants per county in year t of the preceding election up to year t-1 of the respective election. We then merge both datasets using information on county and election year.

Given the minimum voting shares outlined above, we consider only parties/coalitions of parties who pass this threshold and classify them into a right-middle-left scheme based on the Comparative Political Data Set (Armingeon et al. 2019) for our main results. Table 1 lists all parties or coalitions of parties who pass the respective threshold in at least one of the relevant national parliament and European parliament elections. Subsequently, we calculate the share of votes to right-wing (left-wing) parties in each county and election year.

3.3   Data on party classification

To ensure a consistent classification of political parties in Poland and to emphasise the robustness of our results, we rely on three alternative party classifications, which have been developed by political scientist and have been used in the empirical literature before (De Sio et al. 2016; Döring and Hellström 2013; Döring and Manow 2017; Huysmans 2019; Medeiros et al. 2019; Potrafke 2017; Whitefield et al. 2007).

For our main results, we rely on the Comparative Political Data Set (Armingeon et al. 2019). It consists of annual data for 36 democratic countries for the period of 1960 to 2018 and classifies political parties into left-wing, center, and right-wing (cf. Table 1). Second, the Parliament and Government Composition

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Table 1: List of Polish Parties

Name	Abbreviation	Type	Classification
Left and Democrats	LiD	coalition	left
Coalion of the Democratic Left Alliance and the Union of Labour	SLD-UP	coalition	left
Law and Justice	PiS	party	right
League of Polish Families	LPR	party	right
Civic Platform	PO	party	right
Polish Peasants' Party	PSL	party	center
Self-Defence of the Polish Republic	SRP	party	left
Palikot Movement Election Committee/Twój Ruch	RP	party	left
Democratic Left Alliance	SLD	party	left
German Minority	MN	party	center
Electoral Committee of Voters of Kukiz 15	Kukiz	party	right
The Ryszard Petru's Election Committee	Modern	party	center
KORWiN Electoral Committee	KORwin	party	right
European Coalition	KE	coalition	center
Spring	Wiosna	party	left
The New Right Election Committee	KNP	party	right
Social Democracy of Poland	SDPL	party	left
Freedom Union	UW	party	right

Note: Table 1 lists all parties / coalitions of parties who were elected into the national or the European parliament during the observation period (2001-2019). Party classification is based on the Comparative Political Data Set by Armingeon et al. (2019). Source: Polish National Electoral Commission (PKW).

Database (ParlGov)[5] contains data on party positions for all EU and most OECD members for the entire post-war period and provides information on political parties' position on the right-center-left scheme[6] and party families (Döring and Manow 2011). These include, for example, conservative, liberal, agrarian, and socio-democratic parties and may serve as an alternative classification scheme. Third, to estimate the effect of emigration on party positioning on European integration, we rely on the Chapel Hill expert surveys (CHES) from 2002 to 2019 (Polk et al. 2017). To make the results comparable across years and survey items, we rescale expert opinions such that higher values indicate pro-European attitudes, standardise variables, and compute means for each item and party. We use these means to build weighted averages of party positions in each county and election year.

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[5]The ParlGov database classifies parties, which received a minimal voting share of 1.0 percent, and electoral committees with minimum two election results. While it is impossible to classify the universe of parties in our electoral data, it covers all parties (coalitions of parties) that reached the required minimal threshold (cf. Section 2) and are therefore included in our initial estimations.

[6]The ParlGov dataset classifies parties' position in the left-right position on a scale from 0 'left' to 10 'right' with data from Castles and Mair (1983), Huber and Inglehart (1995), Benoit and Laver (2006), and CHES (2010). To utilise this scale, we generate the average position in each county using weighted averages. Considering a county with three parties in a given election, we compute county i's stand in election year t on the left-right position as $LR_{it} = ShareParty1_{it} * PositionParty1 + ShareParty2_{it}*PositionParty2+ShareParty3_{it}*PositionParty3$. The higher the weighted average of the left-right dimension, the higher the support for right-wing parties.

3.4 Data on values and attitudes

To compare differences in attitudes and values across Polish counties, we rely on information from the Life in Transition Survey (LiTS). Under the lead of the European Bank for Reconstruction and Development (EBRD) and the World Bank, the LiTS focuses on transition countries in central and eastern Europe to foster the transition to an open market-oriented economy after the collapse of the Soviet Union in 1989. As of now, there exist three repeated cross sections in 2006, 2010, and 2016. Each survey wave contains roughly 1000 observations per country.

The LiTS is a repeated cross-sectional, nationally representative household and attitudinal survey. Besides information on respondents' demographic and socio-economic characteristics, it collects a wide range of additional variables, including preferences, attitudes, and values. In contrast to similar survey datasets, such as the European Values Study or the European Social Survey, the LiTS provides geographically disaggregated information that can be related to the county level.[7] Considering that the administrative data provide migration and voting data at the county level as well, this is a great advantage in our setting.

3.5 Descriptive Statistics

Figure 1 displays that emigration increased strongly in Poland in the last thirty years, and in particular after Poland's accession to the EU in 2004. While on average 50 Polish citizens per county registered their emigration in 2004, this number almost tripled to 124 emigrants per county in 2006 (Figure 1b). Nevertheless, average emigration rates differ greatly across counties in Poland (see Figure 2). Moreover, Figure 1 underlines that emigration per county is more prevalent in some years than in others. This pattern may be partly explained by the transitional provisions, which allowed pre-2004 EU member states to unilaterally restrict labor market access for a limited period of time (Kahanec et al. 2014). For instance, while the UK, Ireland, and Sweden opened their labor markets in 2004, Germany and Austria kept these restrictions for immigrants from Poland until 2011. In contrast to emigration, the average immigration rate per county has increased by roughly 10 additional immigrants from 2004 to 2017.[8] In addition, Figure A1 and A1b show the education levels of residents in Poland and Polish emigrants respectively, highlighting positive selection in terms of education.

Turning to electoral results, Figure A3 illustrates that voting patterns changed considerably over the respective observation period. This is true in particular with regard to the share of right-wing votes in national parliament elections: While approximately 17 percent of citizens voted for right-wing parties in

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[7] The LiTS dataset samples roughly 1000 observations per country and wave. While the data allows us to investigate preferences at county-level, it does not contain observations in all Polish counties.

[8] This can be explained by a large influx of Ukrainians, following the conflict between Russia and Ukraine.

Figure 1: Migration patterns in Poland

(a) Migration stocks (b) Migration flows
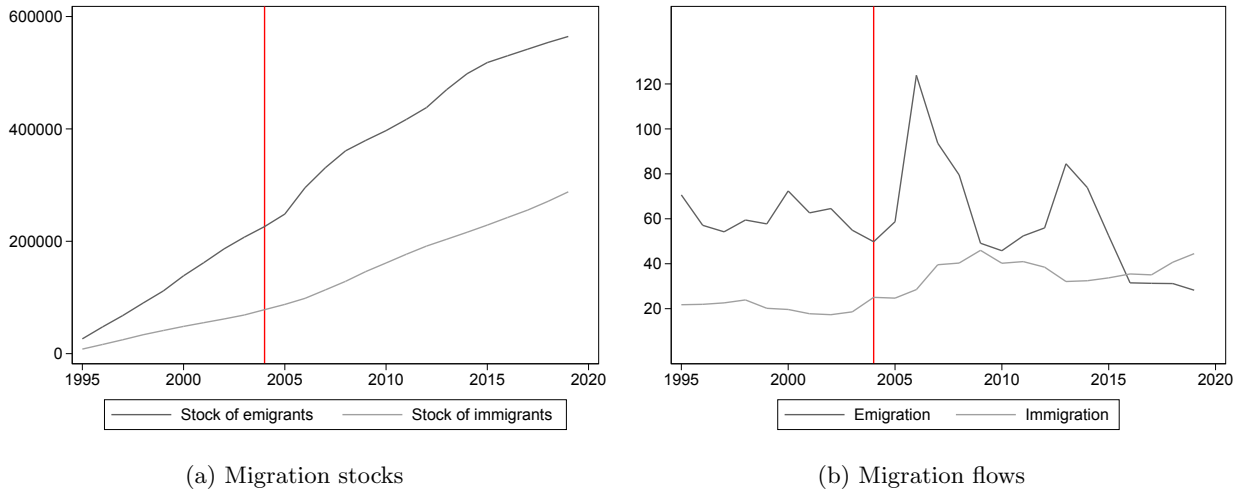
Note: Figure 1 displays migration patterns of emigrants and immigrants from 1995 to 2018. Figure 1a sums the stock of emigrants/immigrants in Poland since 1995 and Figure 1b displays the average number of emigrants and immigrants per county each year. The red line marks the year or Poland's accession to the EU (2004). Source: Statistics PL.

2001, their share rose to roughly 50 percent in recent elections. On the other hand, the share of left-wing votes has almost continuously decreased from 51 percent in 2001 to 8 percent in 2015.

The aforementioned patterns, including increasing emigration rates per county and rising voting shares for right-wing parties, are validated in Table 2, which demonstrates regional characteristics including all years (column 1), for years preceding the eastward enlargement of the EU (column 2), and post-2004 (column 3). This table further suggests that Poland has benefited from its EU-membership in economic terms: the average number of registered unemployed persons per county has decreased from 6,130 to 5,765. Likewise, average annual gross domestic product per capita in current prices has increased by 76 percent from 19,031 to 33,570 Złoty per state (*voivodship*).[9] Furthermore, educational outcomes, such as the number of graduates of higher education institutions, have increased over time.

Correlations between voting patterns and emigration rates are shown in Figure A4. It plots the relationship between the share of right-wing votes per county and the number of emigrants in a county. The graph shows a strong positive correlation, indicating that over all years counties that experience higher rates of emigration, are also prone to a higher share of right-wing votes. Figure A5 further demonstrates that this pattern holds for all election years separately. Likewise, emigration is somewhat negatively correlated with the share of left-wing votes (Figure A6).

Figure A7 provides descriptive evidence that emigrants participate less in elections. As outlined above, this can be due to a lack of interest or to larger hurdles. While turnout of voters in Poland averages around

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[9]Złoty represents the current local currency in Poland. This finding holds if we compare the average gross domestic product per capita in constant prices (base year: 2010; increase from 25,000 to 29,500 Złoty).

Figure 2: Average emigration across counties in 2006

(151,1038]
(70,151]
(34,70]
[0,34]
No data
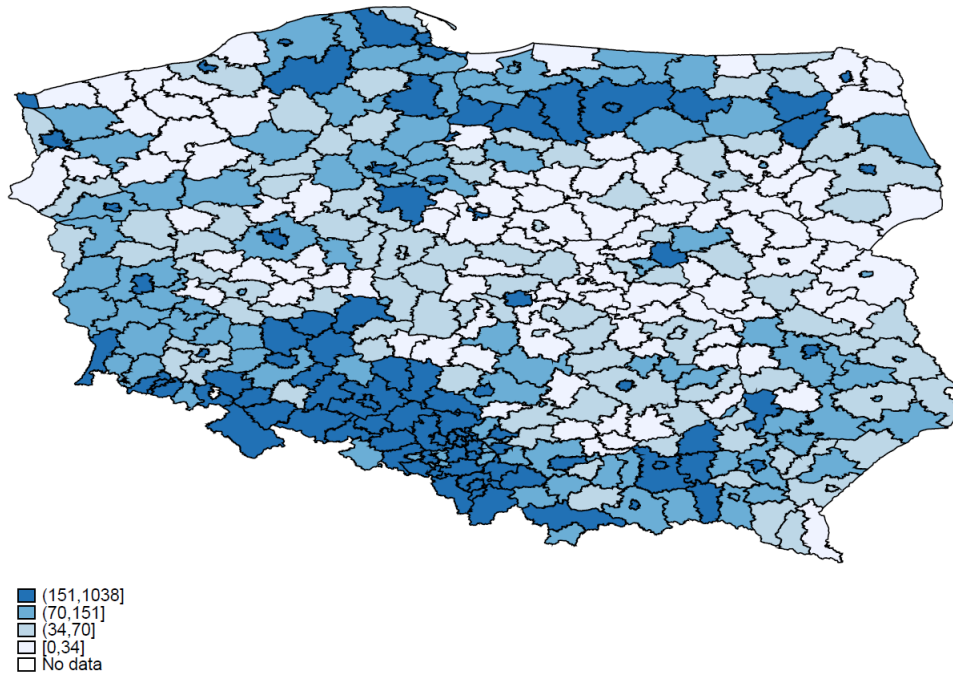
Note: Figure 2 displays emigration per county in 2006, which is characterised by a particularly large outflow of emigrants after accession to the EU in 2004. Yet, the overall emigration patterns are stable over the observation period. Emigration is defined as the number of persons registering their departure to abroad. Source: Statistics PL.

50 percent, Polish citizens residing abroad have turnout rates below 5 percent. We can therefore claim that the votes of emigrants are "missing". This is important because Polish citizens residing abroad are voting differently. Figure A8 shows the voting results for Polish citizens that cast their vote in Poland versus those that cast their vote abroad. Votes casted abroad are less likely to support right-wing parties.

Table 2: Descriptive statistics

	(1) Total mean/sd	(2) Pre EU-enlargement mean/sd	(3) Post EU-enlargement mean/sd
Share right-wing votes	0.635	0.279	0.678
	(0.174)	(0.104)	(0.124)
Share left-wing votes	0.202	0.585	0.155
	(0.175)	(0.107)	(0.113)
Share of incumbent parties	0.381	.	0.381
	(0.226)	(.)	(0.226)
Mean emigration per county	63.322	59.542	63.785
	(110.893)	(163.876)	(102.586)
Mean immigration per county	30.935	19.759	32.302
	(60.892)	(30.369)	(63.495)
Mean net migration per county	32.387	39.783	31.483
	(95.438)	(153.078)	(85.773)
Mean population per county	100791.807	99152.434	100992.204
	(113796.798)	(84216.096)	(116909.893)
Registered unemployed persons	5804.860	6130.366	5765.070
	(4636.503)	(3792.782)	(4728.321)
GDP per capita	31955.385	19030.684	33570.973
	(13039.581)	(4468.770)	(12856.990)
Average monthly per capita income	995.144	578.563	1047.217
	(335.650)	(65.465)	(319.064)
Share of female residents	0.511	0.510	0.511
	(0.009)	(0.008)	(0.009)
Percentage working in agricultural sector	15.120	18.195	14.735
	(8.354)	(8.874)	(8.207)
Percentage working in industrial sector	30.466	31.139	30.382
	(5.558)	(6.272)	(5.458)
Share of respondents aged 15-29	0.226	0.234	0.225
	(0.024)	(0.012)	(0.025)
Share of respondents aged 30-49	0.283	0.291	0.282
	(0.014)	(0.018)	(0.013)
Share of respondents aged 50-64	0.187	0.140	0.192
	(0.029)	(0.014)	(0.025)
Graduates of higher education institutions	28911.405	17533.029	30333.702
	(18651.956)	(10973.578)	(18925.290)
N	3420	380	3040

Note: This table displays descriptive statistics on voting and migration patterns, and regional covariates. Voting data has limitations for electoral results in 2001 and does not report voting shares for parties below the 5 percent threshold, including information on AWS and UW, that formed the government in 1997. Hence, it is only possible to compute the share of incumbent votes for elections from 2001 onward. Source: Statistics PL.

4 Empirical Strategy

4.1 Estimated regressions

To quantify how emigration alters electoral outcomes in Poland, we estimate the following equation,

$$Y_{t,i} = \alpha + \beta emig_{t,i} + \gamma X_{t,i} + \delta_t + \tau_i + \epsilon_{t,i}. \tag{1}$$

In Equation 1, $Y_{t,i}$ is the outcome variable for county i in parliamentary term t. We have three different outcome variables, measured in logs: the share of votes to right-wing parties, the share of left-wing votes, and the share of votes to the incumbent parties. $emig_{t,i}$ measures the number of emigrants per county for all years since the preceding election up to the current election in logs.[10] $X_{t,i}$ is a vector of regional characteristics in county i in year t, including the number of unemployed persons, GDP per capita and average monthly per capita income (measured at the state rather than the county level), the share of female residents, the share of people working in the agricultural and industrial sector, the share of residents aged 15-29, 30-49, and 50-64 years old, and the number of graduates from higher education institutions. To avoid capturing effects of current emigration in period t on those control variables, we lag all control variables one period.[11] δ_t and τ_i are time and state fixed effects. The term $\epsilon_{t,i}$ is the residual picking up other time-varying factors affecting electoral outcomes across counties.

The coefficient of interest is β, which measures the effect of a one percent increase in emigrants per parliamentary term t on political preferences in county i. If $emig_{t,i}$ is uncorrelated with the error term $\epsilon_{t,i}$, Equation 1 provides a consistent estimate. Considering the presence of potential omitted variables, which may jointly determine both emigration and political preferences, OLS regressions will be biased. Furthermore, reverse causation is a potential problem: Changes in political outcomes at the county level can affect emigration rates. This is why we use an instrumental variable approach, which addresses both of these issues and enables us to estimate the causal effect of emigration on voting outcomes in Poland.

4.2 Construction of the IV

The main reason why we cannot run simple OLS regressions is that there exist economic, political, and demographic changes that influence both emigration rates and voting patterns. For instance, declining economic conditions may increase emigration and likewise change political preferences. If this is the case, $\epsilon_{t,i}$ and $emig_{t,i}$ are correlated and the OLS estimates are biased. To address these concerns, we are implementing an IV estimation strategy. We use an instrument for emigration that is already validated in the economic literature (e.g., Dustmann et al. (2016)): distance to border. The main idea is that the closer a county is to the border, the more likely it is that emigration is taking place in that particular county. We expand this

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[10]The parliamentary term t captures all years following the previous election up to the year of the subsequent election. For instance, if we consider the parliament elections in 2005 and 2007, emigration in this parliamentary term includes the years 2005 and 2006.

[11]Results are robust to using a two-year lag or fixing all control variables to the year 2000. Like this, we avoid the problem of including "bad controls" in the regression.

instrument and add distance to an international airport in Poland.

The instrument needs to meet two conditions. First, it needs to be relevant, i.e. there needs to be a significant correlation between distance to border or airport and emigration at the county level. Distance can be measured in travel time (duration in hours) or in geographical distance (measured in kilometers). Figure A9 illustrates the relationship between the travel distance in hours to the closest border crossing point or airport and the number of emigrants in a county, while Figure A10 shows the same when we measure distance in kilometers. In both graphs, one can see a clear negative relationship, showing that emigration is highest for counties that have a short distance or duration to the next border crossing of airport. Table 3 shows the corresponding first stage regressions. The F-Statistic is well above 10. Therefore we conclude that the instrument is relevant.

Table 3: First stage: County-level emigration and distance to border or airport

	(1) b/se	(2) b/se	(3) b/se
Duration in hours, in logs	-0.082**		-0.261**
	(0.033)		(0.119)
Distance in km, in logs		-0.053*	0.162
		(0.029)	(0.103)
Constant	-26.730***	-26.750***	-27.158***
	(1.649)	(1.652)	(1.667)
Regional characteristics	✓	✓	✓
Time FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	3312	3312	3312
R-Squared	0.655	0.655	0.656
F	70.60	50.68	38.83

Note: Table 3 reports the coefficients from the first stage regression of the number of emigrants per county, measured in logs, on distance to the next border crossing or airport, measured as the duration in hours or the distance in kilometer, respectively. Source: Statistics Poland.

In addition, the instrument needs to satisfy the exclusion restriction. In our context this means that, once we control for emigration and our other control variables, there is no direct influence of distance to border or airport on voting outcomes. Given that we control for the number of unemployed persons, GDP per capita and average monthly per capita income, the share of female residents, sector structure, age, and the number of graduates from higher education institutions, we do not see any connection between distance and election outcomes.

The distance instrument has been successfully used by several other papers in the literature. Card (1993) and Kane and Rouse (1995) made this approach popular by estimating the returns to schooling by using the distance to a college as an instrument for choosing education levels. While they were not the first to use

this type of distance instrument (e.g. Mallar 1979), the distance instrument is being introduced in a growing number of studies not only in the context of education economics but also in other fields such as migration economics. The IV approach is particularly prevalent in studies that estimate the effect of migration on the labor market in the host country. Del Carpio and Wagner (2015) use distance from border as an instrument for the inflow of Syrian refugees to Turkey, Peri (2012) use it for the immigration status of Mexicans to the US, and Ruiz and Vargas-Silva (2015) measure the proximity of the borders to Rwanda and Burundi to instrument for the intensity of the forced migration shock. In a comparative approach, McKenzie et al. (2010) contrast the results of a natural experiment with estimates using distance to the immigration office as an instrument for migration of Tongans to New Zealand. They find that the IV estimates are within 1% of the experimental estimates which they assume to be unbiased.

5   Results and heterogeneity

5.1   Main results

This section examines the effect of emigration from Poland on voters' support for right-wing and left-wing parties using both an OLS and an IV estimation strategy. Tables A2 and A3 display the results based on the OLS regression and Tables 4 and 5 show the causal effects of emigration on vote shares using the IV strategy. In all tables, column (1) abstains from including fixed effects, column (2) includes time fixed effects, column (3) incorporates state level fixed effects, and column (4) takes both types of fixed effects into account.

Table A2 indicates that an increase in the county-level emigration rate is positively correlated with the vote share for right-wing parties, such as PiS. The relationship is robust to including different types of fixed effects and is statistically significant at the one percent level. The most conservative specification in column (4) (including state and time fixed effects) indicates that a one percent increase in the county-level emigration rate increases the share of right-wing parties by 0.033 percent.

In contrast to the OLS results, we may interpret IV estimation results in Table 4 causally. The results consistently show that increasing emigration leads to rising vote shares for right-wing parties. We can interpret the coefficient in the following way: A one percent increase in the number of emigrants in a given county increases the vote share for the right-wing parties by 0.389 percent. Control variables go in the intuitive direction.

With respect to voters' preferences to left-wing parties, the OLS regressions in Table A3 illustrate that a higher level of county-level emigration is correlated with a statistically significant decline in votes to the left-wing parties, whereby estimates range from 0.048 to 0.153 percentage points. Similarly to previous results,

Table 4: Effect of emigration on the share of right-wing votes

	(1) Share right b/se	(2) Share right b/se	(3) Share right b/se	(4) Share right b/se
Log emigration per county	0.278***	0.267***	0.364**	0.389**
	(0.039)	(0.032)	(0.149)	(0.153)
Registered unemployed persons	-0.000***	-0.000***	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000***	0.000	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001***	-0.000	0.002***	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Share of female residents	-6.173***	-4.046**	-7.853	-8.640
	(1.846)	(1.583)	(5.297)	(5.711)
Percentage working in agricultural sector	-0.002	-0.003*	-0.036***	-0.014**
	(0.002)	(0.001)	(0.007)	(0.006)
Percentage working in industrial sector	-0.023***	-0.019***	-0.123***	-0.021**
	(0.004)	(0.003)	(0.023)	(0.010)
Share of respondents aged 15-29	4.654***	2.061***	4.149**	0.880
	(0.625)	(0.468)	(1.642)	(1.608)
Share of respondents aged 30-49	-5.282***	-5.347***	-6.976**	-7.050*
	(1.187)	(1.072)	(3.416)	(3.792)
Share of respondents aged 50-64	2.965***	0.088	1.150	-0.703
	(0.513)	(0.408)	(1.611)	(1.055)
Graduates from tertiary education	0.000***	0.000***	-0.000	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	1.634	1.428	7.139	4.440
	(1.315)	(1.055)	(4.601)	(4.181)
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	3312	3312	3312	3312

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

estimates increase substantially if we use the IV approach. A one percent increase in the number of emigrants in a given county decreases the vote share for the left-wing parties by 0.459 percent. These results are in line with the arguments of missing votes due to the emigration of a selected group of citizens. If emigrants are more likely to be left-wing voters, then their emigration would create this pattern.

There are at least three reasons why the IV estimates are larger than the OLS estimates. First, there might be omitted variable bias. As the OLS seems to be biased towards zero, we need the omitted variable to be negatively (positively) correlated with emigration and positively (negatively) with voting for right-wing parties. One example could be expectations for an economic boom, which would reduce emigration and could increase voting for right-wing parties. Similarly, an expected economic downturn could lead to increasing emigration and lower voting for right-wing parties as people hope for safety nets and employment protection provided by left-wing parties. Second, reverse causality could explain the differences between OLS and IV estimation results. This could be the case if people who are not satisfied with election results decide to emigrate. We think this is unlikely to drive the difference in the results due to the time structure of our data (emigration is measured in the years preceding the election). Third, we could have measurement error in the emigration data, for instance unrecorded emigration, that could bias the OLS estimator towards zero. This could also be caused by temporary migration that is not recorded in our variable of permanent migration.

5.2   Heterogeneity analyses

Following these main results, we do three heterogeneity analyses to gain further insights. To check if results differ by the type of election, we split the sample into elections for the national parliament and the EU parliament.[12] Table A4 shows that results are much stronger for national elections. Two patterns are worth mentioning at this point: First, if one compares both types of elections, estimates are roughly 30 percent larger in the national parliament elections. Second, estimates are statistically significant only for the national parliament elections. This suggests that estimation results are driven by votes at the federal level. Possible explanations could be different turnout rates or different stakes of emigrants.

In a second specification, we also split the sample into East and West Poland. The motivation for this is that emigration to the old EU member states is more likely to come from Western Poland due to the distance argument. We therefore would expect stronger effects in Western Poland.[13] Table A5 confirms our expectations for both outcome variables, the share of votes to right-wing and left-wing parties. While a one percent increase in the number of emigrants per county results in a 0.349 percent increase in the share of

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[12]While the period up until the next election differs across years, which implies unequal windows for emigration, the estimates further control if this variation in the election calendar affects our results.

[13]Note that because we divide East versus West Poland by states, we abstain from including state fixed effects in this specification.

Table 5: Effect of emigration on the share of left-wing votes

	(1) Share left b/se	(2) Share left b/se	(3) Share left b/se	(4) Share left b/se
Log emigration per county	-0.435***	-0.341***	-0.509**	-0.459**
	(0.061)	(0.050)	(0.206)	(0.183)
Registered unemployed persons	0.000***	0.000***	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	-0.003***	-0.000*	-0.003***	-0.001***
	(0.000)	(0.000)	(0.001)	(0.000)
Share of female residents	19.372***	7.176***	18.626***	12.888**
	(2.566)	(2.436)	(5.523)	(6.553)
Percentage working in agricultural sector	-0.016***	-0.005**	0.082***	0.047***
	(0.002)	(0.002)	(0.008)	(0.008)
Percentage working in industrial sector	0.028***	0.025***	0.168***	0.048***
	(0.006)	(0.005)	(0.032)	(0.013)
Share of respondents aged 15-29	-5.383***	-1.415*	-5.169***	-1.143
	(0.928)	(0.817)	(1.735)	(2.065)
Share of respondents aged 30-49	12.322***	10.798***	14.564***	12.580***
	(2.053)	(1.665)	(5.340)	(4.531)
Share of respondents aged 50-64	0.435	9.370***	4.279	9.614***
	(1.026)	(0.703)	(2.992)	(1.484)
Graduates from tertiary education	-0.000***	-0.000***	-0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-11.213***	-7.690***	-18.087***	-12.014**
	(1.844)	(1.599)	(5.527)	(4.901)
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	2903	2903	2903	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of left-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

right-wing votes in Western Poland, the effect size decreases to 0.222 percent for states in Eastern Poland.

The relatively long time period is a major advantage of the data under investigation. Despite its benefits, Poland has undergone substantial changes over time that may have influenced both migration patterns and voters' preferences. First, the time period covers Poland's accession to the European Union in 2004, which induced gradual changes in free labour mobility (see Section 3.5). These bans were ultimately abolished in 2011. Second, casting a vote from abroad has been facilitated in 2014, which may in turn influence electoral outcomes (see Section 2). Tables A6 to A9 indicate that the results are heterogeneous over time. Overall, estimates suggest that the results are driven by earlier periods. This is what we would expect once voting from abroad by letter was permitted. For instance, a one percent increase in the number of emigrants per county, decreases the share of right-wing votes by 0.395 percent for elections until 2014. For the 2014-2019 period, the estimate drops to 0.094 percent and the estimate is no longer statistically significant. This pattern holds for the share of left-wing votes, too. Similarly, Tables A7 and A9 — which illustrate results for time splits in 2001-2004, 2005-2011, and post 2011 respectively — suggest that the effect size dissipates over time.

5.3   Incumbent votes

Another interesting voting outcome is the vote share that goes to the incumbent. We define incumbent as those parties that formed the government in the preceding national parliament election.[14] In most election years, this is a coalition of different parties. There are two different hypothesis about how emigration can affect the vote share of the incumbent. First, if citizens who disagree with the government are more likely to emigrate, we would expect that those that stay behind are more supportive of the government and therefore expect a positive effect of emigration on voting for the incumbent. This would be in line with Anelli and Peri (2017). Second, voters could be influenced by changing economic conditions that result from emigration. Previous papers have shown that emigration affects wages (Dustmann et al. 2015), productivity (Giesing and Laurentsyeva 2017), innovation (Fackler et al. 2020), and education (Beine et al. 2008). These economic implications of emigration are complex and the direction depends on the circumstances, so it is not possible to derive a clear prediction of the direction for the effect. According to Table 6, the effect of emigration on vote shares for the incumbent is small and not significantly different from zero. This could either mean that there is no effect of emigration on voting outcomes or that there are different effects that cancel each other out. This is contradicting a result in the previous literature for Mexico (Pfutze 2012) who found that increasing emigration leads to more voting for the opposition and thus less voting for the incumbent.

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[14]Unfortunately, the voting data have limitations for electoral results in 2001 and does not report voting shares for parties below the 5 percent threshold, including information on AWS and UW, that formed the government in 1997. Hence, this is only possible to compute the share of incumbent votes for elections from 2001 onward.

Table 6: Effect of emigration on the share of incumbent parties

	(1) Share incumbent b/se	(2) Share incumbent b/se	(3) Share incumbent b/se	(4) Share incumbent b/se
Log emigration per county	0.017	0.002	0.119	0.016
	(0.018)	(0.005)	(0.077)	(0.018)
Registered unemployed persons	-0.000***	-0.000	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000***	-0.000	-0.000*	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001***	-0.000	0.001***	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Share of female residents	4.036***	-0.474*	0.925	-1.132
	(0.888)	(0.255)	(2.919)	(0.706)
Percentage working in agricultural sector	0.006***	-0.000	-0.008**	-0.006***
	(0.001)	(0.000)	(0.004)	(0.001)
Percentage working in industrial sector	0.010***	-0.000	0.012	-0.000
	(0.002)	(0.000)	(0.011)	(0.001)
Share of respondents aged 15-29	2.192***	0.753***	1.890***	0.543**
	(0.219)	(0.095)	(0.628)	(0.221)
Share of respondents aged 30-49	-2.868***	-0.265	-5.500***	-0.611
	(0.535)	(0.164)	(1.802)	(0.452)
Share of respondents aged 50-64	-1.742***	0.412***	-2.569***	0.374**
	(0.226)	(0.087)	(0.620)	(0.163)
Graduates from tertiary education	-0.000**	0.000***	-0.000*	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-2.294***	0.110	0.070	0.545
	(0.574)	(0.168)	(2.340)	(0.510)
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	2198	2198	2198	2198

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of votes to the incumbent parties per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

5.4 Voting for pro-European parties

Besides analysing votes for certain parties, it is also interesting to look at certain party positions and whether emigration causes voters to prefer parties with certain positions. One particularly interesting party position in this context is the party stance toward the European Union and further European integration. It is important to note that there is no clear left-right divide on this position in Poland. Moderate conservative parties, for instance the PO, are classified as pro-European and right-wing. Table 7 shows that emigration causes voters to elect parties with positive attitudes towards the European Union. This is very robust to using different indicators and different datasets. Column (1) - (4) uses different EU-related indicators from the CHES dataset and column (5) uses an EU indicator from the ParlGov dataset. The results show that emigration causes left behind voters to favour further European integration, EU cohesion and an internal market. Emigration also increases voting for parties that attach higher importance to topics of EU integration.

This result can seem counter-intuitive at first. One could have expected that pro-European voters are those that are more likely to emigrate, leaving behind those voters that are more pessimistic about European integration. However, there are a number of different reasons, why emigration could lead to increased voting for parties with pro-EU stances. First, it could increase migration intentions of those left behind (Bertoli and Ruyssen 2018; Piracha and Saraogi 2017). Voters with migration intentions are likely to vote pro-European and especially in favour of the internal market, so that their intentions can be realised easier.[15] Second, municipalities experiencing large permanent emigration are also likely to experience large temporary emigration and those temporary emigrants are likely to vote pro-European as they benefit from EU integration at least temporarily. Third, those left behind benefit from remittances and increasing wages due to reduced labour market competition (Dustmann et al. 2015). These arguments can explain the surprising finding that emigration causes non-emigrants to vote pro-European.

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[15]This argumentation is similar to the brain gain hypothesis, that finds that the education level of non-emigrants increases as a result of high-skilled emigration due to increased incentives to invest in education for everyone (Beine et al. 2001; Mountford 1997; Vidal 1998). Similarly, in our case, the incentives and intentions of those left behind are changed.

Table 7: Effect of emigration on attitudes towards Europe

	(1) Favouring Eur. integration b/se	(2) Importance of Eur. integration b/se	(3) Favouring Eur. cohesion b/se	(4) Favouring internal market b/se	(5) Pro EU b/se
Log emigration per county	0.363**	0.367**	0.180**	0.428**	0.221**
	(0.158)	(0.152)	(0.077)	(0.180)	(0.096)
Registered unemployed persons	-0.000**	-0.000**	-0.000**	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001**	0.000*	0.000**	0.001**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Share of female residents	-10.125*	-10.163*	-5.167*	-11.588*	-5.432
	(5.827)	(5.618)	(2.855)	(6.651)	(3.545)
Percentage working in agricultural sector	-0.009	-0.004	-0.008**	-0.015**	-0.009**
	(0.007)	(0.006)	(0.003)	(0.007)	(0.004)
Percentage working in industrial sector	-0.008	-0.011	-0.004	-0.012	-0.009
	(0.010)	(0.010)	(0.005)	(0.012)	(0.006)
Share of respondents aged 15-29	-3.269**	-3.013*	-0.736	-2.368	-0.923
	(1.627)	(1.570)	(0.800)	(1.860)	(0.988)
Share of respondents aged 30-49	-5.389	-7.263*	-2.762	-6.128	-3.104
	(3.907)	(3.749)	(1.913)	(4.451)	(2.382)
Share of respondents aged 50-64	1.095	-0.596	0.543	1.128	0.700
	(1.073)	(1.032)	(0.527)	(1.223)	(0.655)
Graduates from tertiary education	-0.000*	-0.000**	-0.000**	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	6.391	6.231	3.113	6.793	5.195**
	(4.289)	(4.123)	(2.101)	(4.893)	(2.607)
Time FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
N	3312	3312	3312	3312	3312

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable 'Favouring European integration' is measured on a scale from 1 'strongly opposes' to 7 'strongly favours'. Outcome variable 'Importance European integration' is measured on a scale from 1 'no importance' to 4 'great importance'. Outcome variable 'Favouring EU cohesion' is measured on a scale from 1 'strongly opposes' to 7 'strongly favours'. Outcome variable 'Favouring internal market' is measured on a scale from 1 'strongly opposes' to 7 'strongly favours'. Outcome variables in column (1) to (4) were standardised. Outcome variable 'Favouring EU' is measured on a scale from 0 'anti EU' to 10 'pro EU'. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL, ParlGov, and CHES (2002-2019).

6   Social preferences as transmission mechanism

In this section, we provide suggestive evidence that social norms and preferences provide an underlying mechanism driving our regression results.

To test this hypothesis, we analyse whether increasing emigration affects socio-political views and attitudes, in addition to electoral preferences. Considering that trust is one of the most essential indicators of social preferences (Fehr 2009), we mainly focus on LiTS survey questions on trust in people and political institutions. For the respective analysis, we draw information from the LiTS survey data, which provides information on values and attitudes over the entire observation period (cf. Section 3). Importantly, its repeated cross-sectional design covers the different periods in the lead of government.

We regress individuals' social preferences, including for example trust in people or trust in government, on an indicator variable that takes a value of one for high-emigration counties, zero else.[16] Moreover, we control for an individual's sex, age, and education, as well as the same set of regional-level covariates including regional and time fixed effects as in the baseline specification. If social preferences work as an underlying mechanism, we would expect that high levels of emigration have a changing effect for values and attitudes across government periods: In 2006, when left-wing and centre parties formed the government, we expect emigration to decrease overall levels of trust in government/parties, considering that individuals who support left-wing parties and are hence more likely to trust the reigning authorities are leaving Poland. In 2016, when the PiS formed the government and obtained the majority of deputies in the parliament, the effect should be reversed, because individuals with contrasting positions to the government are leaving their country of residence.

Figure 3 strongly supports our hypothesis. The respective figure illustrates the effect of increasing emigration on trust in people, trust in government, trust in parliament, trust in parties, trust in courts, and trust in president. For all variables capturing trust in authorities, we consistently find a change in trust levels over time periods (Figure 3b to Figure 3f). For instance, while high levels of emigration decrease trust in government by 0.19 units in 2006, the estimate is positive and statistically significant (+ 0.6 units) in 2016.[17] In contrast to this, the effect of emigration on trust in people is close to zero and statistically insignificant for all periods, emphasising that the effect is not driven by overall changes in trust levels in the Polish population, but in trust towards the authorities only. Hence, the findings suggest that social preferences, in particular trust in political institutions, serve as an underlying mechanism driving our results.

There exist several alternative transmission channels. For instance, if family members benefit from finan-

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[16]An individual's county of residence is marked as a high-emigration county if the number of emigrants exceeds average emigration flows per county in a given year. Trust is measured on a 5-point likert scale from 1 'strongly disagree' to 5 'strongly agree'. For the linear probability model, we form a dichotomous version, where the outcome variable is equal to one if trust ≥ 4.

[17]The results are robust to using a linear probability model as well (Tables A10, A11).

Figure 3: Transmission channels
The effect of high emigration on social preferences
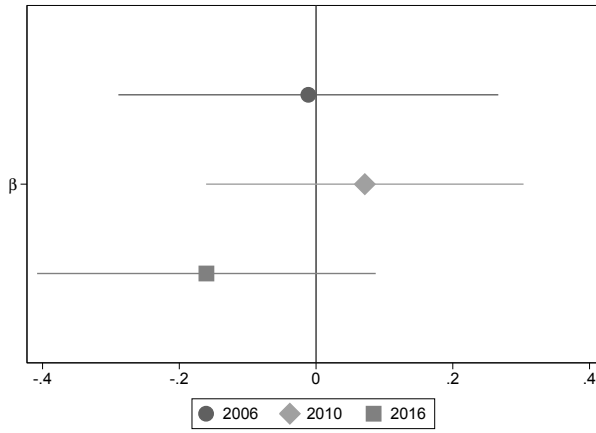
(a) Trust in people
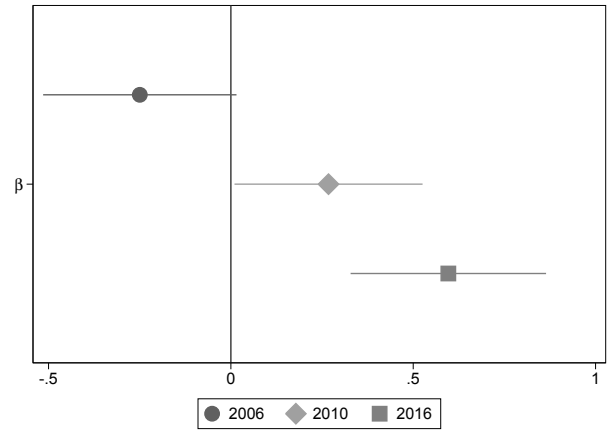
(b) Trust in government
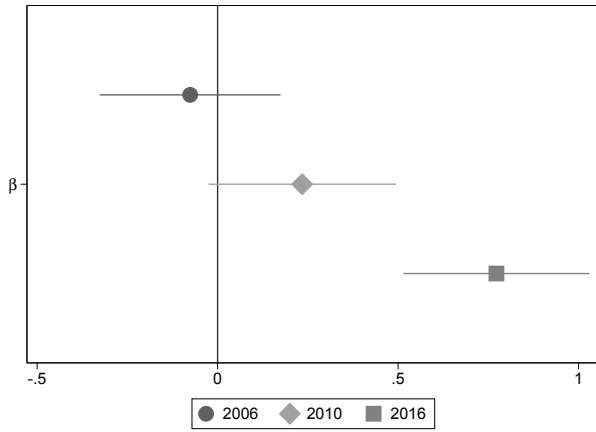
(c) Trust in parliament
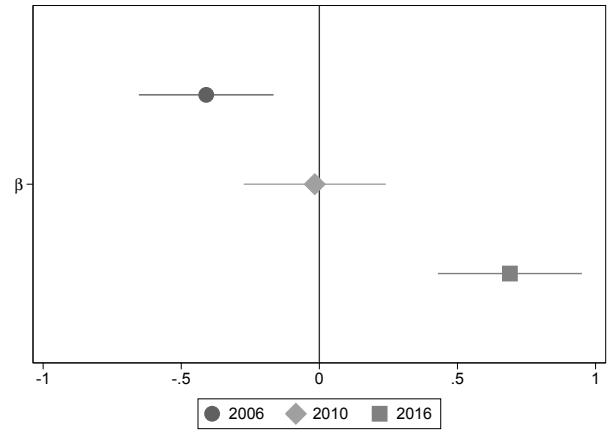
(d) Trust in parties
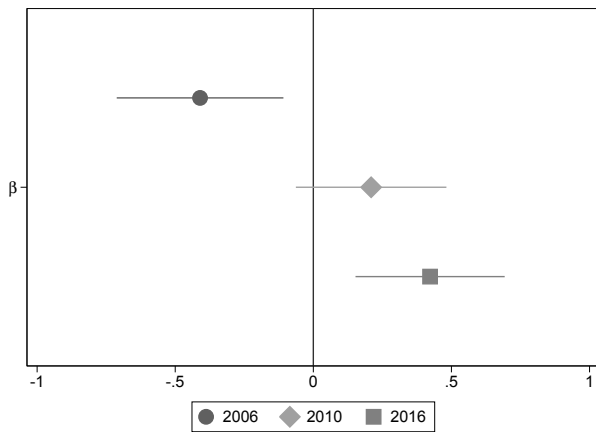
(e) Trust in courts
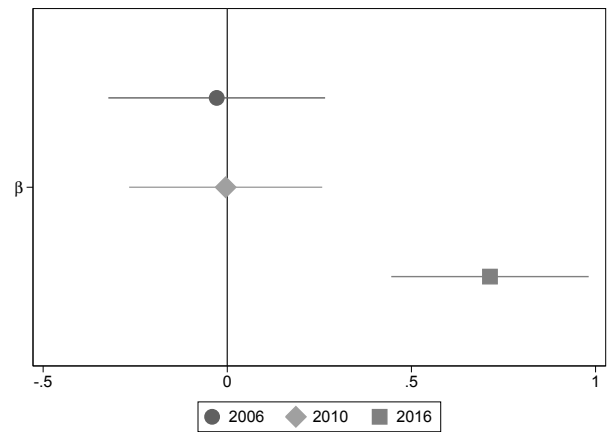
(f) Trust in president

Note: Figures 3a to 3f display visual results for transmission channels. Trust is measured on a 5-point likert scale from 1 'you can't be too careful' to 5 'most people can be trusted'. Life satisfaction and preferences for redistribution are measured on a 5-point likert scale from 1 'strongly disagree' to 'strongly agree'. Source: Life in Transition Survey (2006, 2010, 2016).

cial remittances from a related emigrant, they may be more likely to cast their vote to right-wing parties, if they are less likely to support redistribution policies. Stayers may therefore engage in strategic voting. However, in Poland, the right-wing parties are in favour of increasing redistribution. Therefore the remittance channel seems unlikely to drive our results. Another alternative transmission channel could be return migration. Further research is needed to disentangle the precise mechanisms. While there is literature that shows the existence of each individual mechanism in a given context, we currently lack individual-level migration data, which may provide further evidence on the relative importance of these channels.

7   Robustness checks

Our results show that a higher county-level emigration rate has a strong and positive effect on the share of right-wing parties, while the share of left-wing votes is negatively affected by emigration. These effects are robust to the inclusion of time and state-level fixed effects (cf. Tables 4 and 5). In this section, we provide additional robustness checks to support the respective results.

Our instrument relies on the assumption that the closer a county is to the Polish border or an international airport, the more likely emigration is taking place. For the main specifications, we chose duration in hours as the instrument, because it provides the largest F-Statistic. Similarly, however, we may also instrument emigration by distance in kilometers or by using an over-identified instrument (see Table 3). Tables A12 and A13 demonstrate that estimation results are indeed relatively robust to the usage of alternative instruments. Compared to our baseline estimation, estimates tend to increase in size if we instrument distance by geographical distance and decrease in the over-identified case. For the share of right-wing votes, the over-identified instrument returns a statistically insignificant estimate.

The estimation results in Section 5 use information on migration flows, capturing the number of emigrants per county in a given year. As such, we can understand migration patterns at a local level over the course of a specific time interval. However, the overall quantity of emigrants may differ across counties as well: To check if our results are robust to using information on the stock rather than the flow of emigrants, we compute the stock of emigrants as the overall sum of emigrants per county since 1997, which represents the first year in our migration data. Table A14 shows respective estimation results, whereby column (1) reports estimates for the log share of right-wing parties and column (2) reports estimates for the log share of left-wing votes. Our results are consistent to previous estimates though somewhat larger: a one percent increase in the number of emigrants increases the log share to right-wing parties by 0.46 percent. Alternatively, we define emigration as log shares of emigrants (number of emigrants as percent of the population in logs, cf. Table A15). In line with our main results, a one percent increase in the share of emigrants increases the share of votes to

right-wing parties by 0.264 to 0.375 percent. The effects of emigration on the share of votes to left-wing parties are slightly smaller compared to the main results and the effect is not entirely robust to the inclusion of regional and time fixed effects.

The identification assumption of our instrument relies on the assumption that the lower the opportunity costs of emigration (e.g., travel time and effort), the more likely are individuals to emigrate from Poland. Therefore, we adapt an existing instrumental variable method by Dustmann et al. (2016) by including travel distance to the nearest international airport. The rational behind this is two-fold: First, Dustmann et al. (2016) investigate the effects of travel bans on commuting behaviour across borders, which primarily takes place by car. Second, the importance of international travel by plane has increased significantly over the years. To analyse the instrument's sensitivity to using distance to the nearest border versus distance to the nearest international airport, we therefore provide estimates differentiated across type of exit points. Table A16 shows the respective estimates, whereby columns (1) and (2) explicitly use distance to nearest border crossing point, and columns (3) and (4) consider an individual's distance to the nearest international airport. The table demonstrates that, while estimates tend to be smaller in size, both specifications are in line with previous specifications: larger emigration rates increase the share of votes to right wing parties, while decreasing the vote share to left-wing parties.

Poland has a common border with several non-European countries, including Belarus, Russia, and Ukraine. The accession to the EU in 2004 greatly facilitated migration to the EU member states, but did not change emigration conditions to any other states. This suggest that the effect should be more prevalent if we consider the distance to fellow EU member countries only. In line with our expectations, Table A17 illustrates that our results are robust to an alternative distance measure, which excludes border crossing points to non-European neighbours. What is more, estimates are slightly bigger in size. In this specification the vote share to the incumbent party or coalition is also significant and positive.

To account for the issue of "bad controls" in our regression, the main specification lags all control variables by one period. One may, however, argue that this is a selective choice. This is why, in a third specification we fix respective covariates to a pre-EU-accession level, using information from the baseline year 2000.[18] In this specification we may argue that control variables are exogenous. Table A18 illustrates that a one percent increase in the number of emigrants per country increases the vote share to right-wing parties by 0.234 percent and decreases the share of votes to left-wing parties by 0.292 percent. Estimation results are quantitatively similar to the main specification.

Our main specification classifies parties into a right-center-left scheme based on the Comparative Political

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[18]Note that because GDP per capita and per capita average monthly income are measured at the state level, including state fixed effects results in a collinearity problem once we fix control variables to the baseline year 2000. To circumvent this problem, we use information on the NUTS1 level rather than states to account for region fixed effects.

Data Set (Armingeon et al. 2019). Similarly to the previous argument, one may review whether this is a selective choice. Therefore, we use an alternative party classification, the Parliament and Government Composition Database (ParlGov, see Döring and Manow (2011)). Similar to our main results, Table A19 demonstrates a strong and consistent effect of emigration on the support towards right-wing parties. A one percent increase in the number of emigrants per county increases the position on the left-right dimension by 0.082 percent (column 4, Table A19). Furthermore, Table A20 shows the respective regression results based on party families. In line with our previous estimations, we find a strong negative effect of emigration on the share of votes to conservative parties (column 1). Considering that both socio-democratic and agrarian parties are classified as left-wing parties, we further expect a negative and statistically significant effect for these two party families. Column 3 and column 4 confirm our expectations. While increasing emigration decreases the share of votes to socio-democratic parties by 0.220 percent, the effect is even stronger for parties from the agrarian party family (-1.5 percent). For the share of votes to liberal parties, however, we find no statistically significant effects.

To ensure that our results are not driven by economic, political, or demographic patterns, we control for a variety of regional-level characteristics as well as state and time fixed effects. As such, we account for both time-variant and time-constant characteristics at the county level. Yet, Table A21 shows that there exist differences between counties with low (control group) and counties with high emigration rates (treatment group). High emigration counties are characterised by more densely populated areas that are economically deprived and indicate lower levels of education. To prove that estimation results are not driven by regional-level differences, we employ a matching mechanism similar to Dustmann et al. (2016) and match treated and control counties on a set of regional control variables (measured in 2000). Column (3) in Table A21 demonstrates that matched treatment counties are indeed much more comparable to control counties in a broad range of regional-level covariates, in particular with respect to economy and education. Subsequently, we re-estimate equation (1) using Polish counties with common support only. Estimated results are displayed in Table A22. The estimates are remarkably similar to our baseline specification proving the robustness of our results.

To control for common and unobserved factors specific to each year (e.g. economic or demographic trends), we follow Edo et al. (2019) and estimate a first differences estimation model:

$$\Delta Y_{t,i} = \beta \Delta emig_{t,i} + \gamma \Delta X_{t,i} + \tau_i + \Delta \epsilon_{t,i}, \tag{2}$$

where $\Delta Y_{t,i}$ is the difference in electoral preferences over an electoral cycle, $\Delta emig_{t,i}$ is the difference in the stock of emigrants over election years, $\Delta X_{t,i}$ represents the change in the respective regional level char-

acteristics and $\Delta\epsilon_{t,i}$ is the error term. While we consider taking first differences beneficial to control for unobserved differences across areas, this approach reduces the number of elections in our estimations, because first differences can only be formed for the period from 2004 to 2015.[19] The results are displayed in Table A23 and Table A24 respectively. Consistent to previous estimates, we find that a positive change in the stock of emigrants has a negative and significant effect on the votes to right-wing parties. Across different specifications, the estimate ranges from 0.156 percent to 0.087 percent. Furthermore, the estimates suggest that a positive change in the stock of emigrants increases the share of votes to the incumbent (Table A24). In contrast to our main specification, we find no effect of emigration on the share of votes to left-wing parties. This may, however, be partly attributable to a smaller sample size.

The instrumental variable approach may suffer from bias in case of a weak instrument or on the over-identified case (Poi 2006). Although none of these conditions is met, we estimate Equation 1 using the jackknife re-sampling technique to strengthen the robustness of our findings. The jackknife estimator is obtained by systematically dropping one observation from the dataset, calculating the estimate, and finally build the average of these calculations. Table A25 demonstrates that the results resemble our main specification to a great extent.

Lastly, we show that our results are robust to an alternative definition of the parliamentary term t (see Section 3.2) including information on emigration up to the year of the current election. For instance, if we consider the parliamentary election in 2007, we now use information on emigration in years 2006 and 2007 rather than 2005 and 2006. Estimation results are depicted in Table A26. For both outcomes, including the share of votes to right-wing and left-wing parties, we find that results are very similar to previous estimates strengthening the robustness of our estimation results.

8   Conclusion

This paper highlights that voting for right-wing parties increases as a result of emigration. Emigrants are selected on political preferences and typically vote less for right-wing parties. Emigrants also participate much less in the electoral process, which can be due to lower interest or higher hurdles to cast a vote. Therefore Polish municipalities with larger emigration rates experience stronger voting for the right-wing parties. Effects are stronger in Western Poland, i.e. closer to the border with Western EU member states. We find that social preferences, in particular trust in political institutions, serve as an underlying mechanism driving our results. Results are robust to estimating the regression equation using first differences and including different controls that capture changes in the industry, age, gender or education structure.

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[19]Since county-level electoral results are not available before 2001, we cannot build first differences for electoral results in 2001. Further, because migration data are only available until 2018, we cannot use the 2019 electoral results either.

These insights are important beyond Poland. As migration is increasing worldwide, more and more countries experience large emigration waves. These can be due to economic recessions, a lack of economic opportunities, political oppression, conflict or climate change. We highlight that this influences election outcomes and can contribute to increasing votes for right-wing parties. Paradoxically, migrants seem to increase voting for right-wing parties both in their origin and their destination country.[20] While the effect at the origin is mostly due to a changing composition of the voting population at the origin, the effect at the destination is due to cultural, labour market or public finance concerns of the hosting population.

More detailed data and further research is needed to analyse the role of cultural change and return migration as a transmission mechanism. How do indirect effects resulting from the transfer of money, knowledge, and social norms interact with our results?

One clear policy implication from this work is that voting of emigrants from abroad should be facilitated so that all citizens have a fair chance to cast their vote. As long as emigrants have the citizenship of their home country and are not eligible to vote in their destination, they should have easy access to participate in elections in their home country. There have already been efforts that go in this direction such as the introduction of voting by post. However, this is often not possible for all kind of elections and for all destination and origin countries.

In the second round of the 2020 Polish presidential elections, the populist right-wing candidate Andrzej Duda won with only 51.0 percent to the opposition candidate Rafal Trzaskowski. The difference was just 422,385 votes. Among the Polish diaspora, however, the opposition had a much stronger result and won 74 percent of votes. However, turnout abroad was much lower and only 415,951 votes from abroad were counted (there are approximately 4 million Polish citizens living abroad, see UN DESA, 2019). This corresponds to a turnout of 10.4 percent. Had the turnout among the diaspora been close to the one of Polish citizens (68 percent), the opposition would have won. After the election there have been numerous complaints filed with the courts from citizens abroad that their voting documents have not arrived or arrived too late. They accused the government of suppressing voting from abroad.[21] This anecdote illustrates that migrants matter for election outcomes and can represent the tipping point.

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[20]Papers that show that immigration leads to increasing voting for right-wing parties are, for instance, Barone et al. (2016), Edo et al. (2019), and Halla et al. (2017). There are, however, also papers that show opposite effects in the special case of refugees (Steinmayr 2020) or when immigrants can vote (Mayda et al. 2020).

[21]The New York Times: https://www.nytimes.com/2020/07/16/world/europe/poland-election.html.

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A Tables

Table A1: Elections in Poland, 1997-2019

No	Year	Type	Elected parties	Government
0	1997	SJM	AWS, MN, PSL, ROP, SLD, UW	AWS, UW
1	2001	SJM	LPR, MN, PiS, PO, PSL, SLD-UP, SRP	SLD-UP
2	2004	PUE	LPR, PiS, PO, PSL, SLD, SRP, SDPL, UW	.
3	2005	SJM	LPR, MN, PiS, PO, PSL, SLD, SRP	LPR, PiS, SRP
4	2007	SJM	LiD, MN, PiS, PO, PSL	PO, PSL
5	2009	PUE	SLD-UP, PiS, PO, PSL	.
6	2011	SJM	MN, PiS, PO, PSL, RP, SLD	PO, PSL
7	2014	PUE	KNP, PiS, PO, PSL, SLD	.
8	2015	SJM	Kukiz, MN, Modern, PiS, PO, PSL	PiS
9	2019	PUE	European Coalition*, PiS, Wiosna	.
10	2019	SJM	KORWin, MN, PiS, PO, PSL, SLD	PiS

Note: Table A1 chronologically lists all parliamentary and European parliament elections from 1997 to 2019, including the election's year, the type of election (European parliament, sejm), a list of parties elected into parliament, and the governing parties. Incumbent parties are parties, who were forming the government in the preceding parliamentary election (t-1).
*The coalition *European Coalition* comprises the parties Modern, PO, PSL, SLD, and ZL. Source: Polish National Electoral Commission (PKW).

AWS	Solidarity Electoral Action
KORWin	Coalition for the Renewal of the Republic – Liberty and Hope
KNP	The New Right Election Committee
Kukiz	Electoral Committee of Voters of Kukiz'15
LiD	Left and Democrats
LPR	League of Polish Families
MN	German Minority
Modern	The Ryszard Petru's Election Committee
PiS	Law and Justice
PO	Civic Platform
PSL	Polish Peasants' Party
ROP	Movement for the Reconstruction of Poland
RP	Palikot Movement Election Committee/Twoj Ruch
SDPL	Social Democracy of Poland
SLD	Democratic Left Alliance
SLD-UP	Coalion of the Democratic Left Alliance and the Union of Labour
SRP	Self-Defence of the Polish Republic
UW	The Freedom Union
Wiosna	Spring

Table A2: OLS: Relation between emigration and the share of right-wing votes

	(1) Voting share b/se	(2) Voting share b/se	(3) Voting share b/se	(4) Voting share b/se
Log emigration per county	0.040***	0.048***	0.029***	0.033***
	(0.004)	(0.003)	(0.004)	(0.003)
Constant	-5.609***	-5.199***	-3.232***	-5.261***
	(0.385)	(0.276)	(0.356)	(0.302)
Regional characteristics	✓	✓	✓	✓
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	3312	3312	3312	3312

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A3: OLS: Relation between emigration and the share of left-wing votes

	(1) Voting share b/se	(2) Voting share b/se	(3) Voting share b/se	(4) Voting share b/se
Log emigration per county	-0.153***	-0.081***	-0.131***	-0.048***
	(0.007)	(0.005)	(0.007)	(0.006)
Constant	-3.760***	-0.051	-7.935***	-1.001*
	(0.733)	(0.569)	(0.682)	(0.584)
Regional characteristics	✓	✓	✓	✓
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	2903	2903	2903	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of left-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A4: Effect of emigration on voters' preferences, SJM vs PUE

	(1) Share right SJM b/se	(2) Share right PUE b/se	(3) Share left SJM b/se	(4) Share left PUE b/se
Log emigration per county	0.407**	0.299	-0.467**	-0.358
	(0.173)	(0.272)	(0.183)	(0.425)
Registered unemployed persons	-0.000**	-0.000	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	0.000	0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001*	0.000	-0.002***	-0.001
	(0.000)	(0.001)	(0.001)	(0.001)
Share of female residents	-10.189	-2.468	17.582***	1.183
	(6.702)	(8.895)	(6.722)	(13.887)
Percentage working in agricultural sector	-0.020**	0.006	0.051***	0.055***
	(0.009)	(0.007)	(0.011)	(0.010)
Percentage working in industrial sector	-0.020*	-0.021	0.045***	0.041
	(0.011)	(0.025)	(0.014)	(0.038)
Share of respondents aged 15-29	0.868	0.935	-0.648	-1.599
	(1.925)	(2.645)	(2.239)	(4.194)
Share of respondents aged 30-49	-7.689*	-3.982	12.739***	8.908
	(4.267)	(6.720)	(4.544)	(10.533)
Share of respondents aged 50-64	-0.868	-1.164	7.382***	13.383***
	(1.343)	(1.698)	(1.818)	(2.704)
Graduates from tertiary education	-0.000***	-0.000***	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	5.350	1.471	-13.746***	-7.969
	(4.819)	(6.851)	(4.941)	(10.722)
Time FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
N	2198	1114	1789	1114

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A5: Effect of emigration on voters' preferences, East vs West Poland

	(1) Share right West b/se	(2) Share right East b/se	(3) Share left West b/se	(4) Share left East b/se
Log emigration per county	0.349***	0.222***	-0.343**	-0.209***
	(0.121)	(0.038)	(0.138)	(0.057)
Registered unemployed persons	-0.000***	-0.000***	0.000**	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	0.000	0.000	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	-0.001*	-0.000	-0.001**	0.000
	(0.000)	(0.000)	(0.001)	(0.000)
Share of female residents	-11.728*	1.213	11.509	3.180
	(6.838)	(1.546)	(7.645)	(2.383)
Percentage working in agricultural sector	-0.004	-0.027***	-0.012***	0.026***
	(0.004)	(0.005)	(0.004)	(0.007)
Percentage working in industrial sector	-0.054***	-0.040***	0.027	0.043***
	(0.016)	(0.008)	(0.018)	(0.011)
Share of respondents aged 15-29	0.549	2.718***	-0.359	-5.954***
	(1.758)	(0.626)	(2.123)	(1.093)
Share of respondents aged 30-49	-11.502**	-3.035***	12.699**	7.337***
	(4.703)	(1.169)	(5.524)	(1.728)
Share of respondents aged 50-64	0.020	-1.289***	6.429***	9.487***
	(0.975)	(0.414)	(1.113)	(0.820)
Graduates from tertiary education	0.000**	-0.000***	-0.000**	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	8.578	-0.315	-9.837	-5.744***
	(5.423)	(1.226)	(6.136)	(1.766)
Time FE	Yes	Yes	Yes	Yes
N	1559	1753	1384	1519

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A6: Effect of emigration on the share of right-wing votes in different time periods

	(1) Baseline b/se	(2) Pre 2014 b/se	(3) 2014 - 2019 b/se
Log emigration per county	0.389**	0.395***	0.094
	(0.153)	(0.153)	(0.121)
Registered unemployed persons	-0.000**	-0.000**	-0.000
	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)
Per capita average income	0.000*	0.001**	-0.000
	(0.000)	(0.001)	(0.000)
Share of female residents	-8.640	-6.679	-2.706
	(5.711)	(5.242)	(5.374)
Percentage working in agricultural sector	-0.014**	0.003	-0.002
	(0.006)	(0.005)	(0.012)
Percentage working in industrial sector	-0.021**	-0.027**	0.006
	(0.010)	(0.013)	(0.017)
Share of respondents aged 15-29	0.880	-0.163	0.226
	(1.608)	(1.891)	(1.480)
Share of respondents aged 30-49	-7.050*	-7.003*	-1.894
	(3.792)	(3.796)	(2.487)
Share of respondents aged 50-64	-0.703	-2.019	-1.072*
	(1.055)	(1.425)	(0.549)
Graduates from tertiary education	-0.000***	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)
Constant	4.440	3.694	2.350
	(4.181)	(4.082)	(4.727)
Time FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	3312	2556	756

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A7: Effect of emigration on the share of right-wing votes in different time periods

	(1) Baseline b/se	(2) 1997-2003 b/se	(3) 2004-2011 b/se	(4) 2011-2019 b/se
Log emigration per county	0.389**	0.455**	0.390	0.182
	(0.153)	(0.195)	(0.343)	(0.279)
Registered unemployed persons	-0.000**	-0.000**	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.000*	-0.000	0.001	-0.000
	(0.000)	(0.002)	(0.001)	(0.000)
Share of female residents	-8.640	-2.779	-7.679	-4.888
	(5.711)	(5.735)	(11.886)	(12.668)
Percentage working in agricultural sector	-0.014**	0.006	-0.006	-0.030**
	(0.006)	(0.023)	(0.013)	(0.012)
Percentage working in industrial sector	-0.021**	0.040	-0.035	-0.006
	(0.010)	(0.038)	(0.032)	(0.020)
Share of respondents aged 15-29	0.880	-0.375	-0.548	0.093
	(1.608)	(3.644)	(3.151)	(3.625)
Share of respondents aged 30-49	-7.050*	-8.479*	-6.165	-3.018
	(3.792)	(4.947)	(8.259)	(6.208)
Share of respondents aged 50-64	-0.703	-8.495*	-0.992	-0.508
	(1.055)	(4.600)	(1.330)	(1.076)
Graduates from tertiary education	-0.000***	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	4.440	3.507	5.189	3.248
	(4.181)	(5.392)	(9.157)	(8.835)
Time FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
N	3312	715	1463	1134

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A8: Effect of emigration on the share of left-wing votes in different time periods

	(1) Baseline b/se	(2) Pre 2014 b/se	(3) 2014 - 2019 b/se
Log emigration per county	-0.459**	-0.542**	0.152
	(0.183)	(0.227)	(0.225)
Registered unemployed persons	0.000**	0.000**	-0.000
	(0.000)	(0.000)	(0.000)
GPD per capita	0.000***	0.000**	-0.000***
	(0.000)	(0.000)	(0.000)
Per capita average income	-0.001***	-0.002**	0.004
	(0.000)	(0.001)	(0.004)
Share of female residents	12.888**	10.595	-1.227
	(6.553)	(7.637)	(8.220)
Percentage working in agricultural sector	0.047***	0.035***	-0.042
	(0.008)	(0.008)	(0.033)
Percentage working in industrial sector	0.048***	0.055***	-0.644***
	(0.013)	(0.019)	(0.146)
Share of respondents aged 15-29	-1.143	3.150	-9.766***
	(2.065)	(2.824)	(2.472)
Share of respondents aged 30-49	12.580***	14.184**	2.867
	(4.531)	(5.633)	(3.545)
Share of respondents aged 50-64	9.614***	13.427***	8.334***
	(1.484)	(2.220)	(1.436)
Graduates from tertiary education	0.000	0.000	0.000***
	(0.000)	(0.000)	(0.000)
Constant	-12.014**	-12.520**	20.506***
	(4.901)	(6.000)	(4.723)
Time FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	2903	2525	378

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of left-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A9: Effect of emigration on the share of left-wing votes in different time periods

	(1) Baseline b/se	(2) 1997-2003 b/se	(3) 2004-2011 b/se	(4) 2011-2019 b/se
Log emigration per county	-0.459**	-0.332**	-1.013	0.250
	(0.183)	(0.153)	(0.827)	(0.402)
Registered unemployed persons	0.000**	0.000*	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	0.000***	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	-0.001***	0.001	-0.004	-0.000
	(0.000)	(0.001)	(0.002)	(0.002)
Share of female residents	12.888**	2.417	27.251	-13.134
	(6.553)	(4.449)	(27.956)	(17.375)
Percentage working in agricultural sector	0.047***	-0.004	0.047	-0.029
	(0.008)	(0.018)	(0.030)	(0.022)
Percentage working in industrial sector	0.048***	0.023	0.104	0.035
	(0.013)	(0.028)	(0.078)	(0.057)
Share of respondents aged 15-29	-1.143	0.041	8.046	-12.533**
	(2.065)	(2.905)	(7.555)	(5.484)
Share of respondents aged 30-49	12.580***	10.714***	25.064	-2.829
	(4.531)	(3.846)	(19.915)	(8.425)
Share of respondents aged 50-64	9.614***	7.443**	13.677***	8.729***
	(1.484)	(3.674)	(3.595)	(1.872)
Graduates from tertiary education	0.000	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-12.014**	-5.524	-26.512	4.894
	(4.901)	(4.319)	(21.769)	(15.137)
Time FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
N	2903	715	1432	756

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of left-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A10: Migration patterns and trust in political institutions

	(1) Trust in people 2006 b/se	(2) Trust in people 2010 b/se	(3) Trust in people 2016 b/se	(4) Trust in gov 2006 b/se	(5) Trust in gov 2010 b/se	(6) Trust in gov 2016 b/se
Above mean emigration	0.002	0.071	-0.160	-0.185	0.268**	0.596***
	(0.147)	(0.118)	(0.126)	(0.140)	(0.131)	(0.137)
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	950	967	972	945	957	970
R-Squared	0.082	0.175	0.191	0.135	0.274	0.129

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Trust is measured on a 5-point likert scale from 1 'you can't be too careful' to 5 'most people can be trusted'. Source: Life in Transition Survey (2006, 2010, 2016).

Table A11: Migration patterns and trust in political institutions

	(1) Trust in people 2006 b/se	(2) Trust in people 2010 b/se	(3) Trust in people 2016 b/se	(4) Trust in gov 2006 b/se	(5) Trust in gov 2010 b/se	(6) Trust in gov 2016 b/se
Above mean emigration	0.023	-0.027	-0.108*	-0.088**	-0.009	0.169***
	(0.060)	(0.067)	(0.064)	(0.043)	(0.061)	(0.060)
State FE	Yes	Yes	Yes	Yes	Yes	Yes
N	950	967	972	945	957	970
R-Squared	0.079	0.110	0.193	0.123	0.186	0.099

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Trust is measured on a 5-point likert scale from 1 'you can't be too careful' to 5 'most people can be trusted'. Outcome variable, trustworthy, is equal to one if trust ≥ 4. Source: Life in Transition Survey (2006, 2010, 2016).

Table A12: Effect of emigration on the share of right-wing votes using alternative instruments

	(1) Duration in km b/se	(2) Distance in km b/se	(3) Over-identified IV b/se
Log emigration per county	0.389**	0.562*	-0.010
	(0.153)	(0.295)	(0.027)
Registered unemployed persons	-0.000**	-0.000*	0.000
	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	-0.000	0.000***
	(0.000)	(0.000)	(0.000)
Per capita average income	0.000*	0.001	-0.000
	(0.000)	(0.000)	(0.000)
Share of female residents	-8.640	-15.033	6.083***
	(5.711)	(10.942)	(1.067)
Percentage working in agricultural sector	-0.014**	-0.020*	-0.001
	(0.006)	(0.011)	(0.002)
Percentage working in industrial sector	-0.021**	-0.029*	-0.002
	(0.010)	(0.017)	(0.004)
Share of respondents aged 15-29	0.880	-0.860	4.889***
	(1.608)	(3.052)	(0.352)
Share of respondents aged 30-49	-7.050*	-11.286	2.706***
	(3.792)	(7.260)	(0.708)
Share of respondents aged 50-64	-0.703	-1.747	1.700***
	(1.055)	(1.906)	(0.290)
Graduates from tertiary education	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
Constant	4.440	9.163	-6.435***
	(4.181)	(8.037)	(0.777)
Time FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	3312	3312	3312

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A13: Effect of emigration on the share of left-wing votes using alternative instruments

	(1) Duration in km b/se	(2) Distance in km b/se	(3) Over-identified IV b/se
Log emigration per county	-0.459**	-0.540**	-0.159***
	(0.183)	(0.266)	(0.060)
Registered unemployed persons	0.000**	0.000**	0.000***
	(0.000)	(0.000)	(0.000)
GPD per capita	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Per capita average income	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)
Share of female residents	12.888**	15.768*	2.203
	(6.553)	(9.451)	(2.384)
Percentage working in agricultural sector	0.047***	0.050***	0.038***
	(0.008)	(0.010)	(0.004)
Percentage working in industrial sector	0.048***	0.053***	0.033***
	(0.013)	(0.017)	(0.006)
Share of respondents aged 15-29	-1.143	-0.299	-4.274***
	(2.065)	(2.922)	(0.842)
Share of respondents aged 30-49	12.580***	14.550**	5.274***
	(4.531)	(6.524)	(1.580)
Share of respondents aged 50-64	9.614***	10.165***	7.570***
	(1.484)	(2.013)	(0.711)
Graduates from tertiary education	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Constant	-12.014**	-14.184**	-3.962**
	(4.901)	(7.096)	(1.677)
Time FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
N	2903	2903	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of left-wing votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A14: Effect of stock emigration on voters' preferences

	(1) Share right b/se	(2) Share left b/se
Stock of emigrants since 1997 in logs	0.460**	-0.584**
	(0.185)	(0.245)
Registered unemployed persons	-0.000**	0.000**
	(0.000)	(0.000)
GPD per capita	-0.000	0.000***
	(0.000)	(0.000)
Per capita average income	0.001*	-0.001***
	(0.000)	(0.000)
Share of female residents	-14.779*	21.865**
	(8.196)	(10.570)
Percentage working in agricultural sector	-0.013**	0.050***
	(0.006)	(0.008)
Percentage working in industrial sector	-0.014	0.041***
	(0.009)	(0.012)
Share of respondents aged 15-29	0.099	-0.034
	(1.988)	(2.624)
Share of respondents aged 30-49	-8.783*	15.783**
	(4.635)	(6.210)
Share of respondents aged 50-64	-0.842	9.909***
	(1.160)	(1.732)
Graduates from tertiary education	-0.000***	0.000
	(0.000)	(0.000)
Constant	7.570	-16.908**
	(5.498)	(7.187)
Time FE	Yes	Yes
State FE	Yes	Yes
N	3373	2962

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the stock of emigrants per county since 1997. Source: Statistics PL and National Electoral Commission (PKW).

Table A15: Effect of the share of emigrants on voters' preferences

	(1) Share right b/se	(2) Share right b/se	(3) Share left b/se	(4) Share left b/se
Share of emigrants in logs	0.264***	0.375***	-0.246***	-0.006
	(0.034)	(0.080)	(0.054)	(0.080)
Registered unemployed persons	0.000***	-0.000	0.000**	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000***	-0.000*	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001***	0.001***	-0.003***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Percentage working in agricultural sector	0.005**	-0.005	-0.024***	0.046***
	(0.002)	(0.004)	(0.003)	(0.004)
Percentage working in industrial sector	-0.012***	-0.018**	0.012***	0.036***
	(0.002)	(0.007)	(0.003)	(0.007)
Graduates from tertiary education	0.000***	-0.000***	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	1.195***	2.396***	-1.984***	-2.078**
	(0.317)	(0.806)	(0.478)	(0.816)
Time FE	No	Yes	No	Yes
State FE	No	Yes	No	Yes
N	3312	3312	2903	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants as percent of the population in logs. We abstain from using a full set of covariates and forgo control variates which relate to the size of the population per county (the share of female residents, the share of respondents aged 15-29, the share of respondents aged 30-49, and the share of respondents aged 50-64) to avoid over-identification. Source: Statistics PL and National Electoral Commission (PKW).

Table A16: Effect of emigration on voters' preferences, distance to border vs distance to international airport

	(1) Share right Border b/se	(2) Share left Border b/se	(3) Share right Airport b/se	(4) Share left Airport b/se
Log emigration per county	0.061**	-0.034	0.039*	-0.374***
	(0.028)	(0.055)	(0.024)	(0.075)
Registered unemployed persons	-0.000*	0.000	-0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	0.000*	0.000***	0.000**	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.000	-0.001***	0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Share of female residents	3.480***	-2.236	4.282***	9.842***
	(1.123)	(2.176)	(0.992)	(3.054)
Percentage working in argricultural sector	-0.003*	0.034***	-0.003	0.045***
	(0.002)	(0.004)	(0.002)	(0.006)
Percentage working in industrial sector	-0.006	0.027***	-0.005	0.044***
	(0.004)	(0.005)	(0.003)	(0.009)
Share of respondents aged 15-29	4.180***	-5.575***	4.398***	-2.036*
	(0.354)	(0.784)	(0.329)	(1.071)
Share of respondents aged 30-49	0.982	2.239	1.513**	10.498***
	(0.752)	(1.496)	(0.650)	(1.992)
Share of respondents aged 50-64	1.275***	6.721***	1.406***	9.032***
	(0.284)	(0.672)	(0.270)	(0.880)
Graduates from tertiary education	-0.000***	-0.000	-0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-4.513***	-0.617	-5.105***	-9.719***
	(0.816)	(1.540)	(0.714)	(2.169)
Time FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
N	3312	2903	3312	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Column (1) and column (2) instrument emigration with duration to the nearest border in hours (main specification). Column (3) and column (4) instrument emigration with an over-identified instrument (distance in hours, duration in km) to reach a sufficient F-Statistics. Source: Statistics PL and National Electoral Commission (PKW).

Table A17: Effect of emigration on voters' preferences, excluding non-European border crossing points

	(1) Share right b/se	(2) Share left b/se	(3) Share incumbent b/se
Log emigration per county	0.401***	-0.580***	0.027**
	(0.106)	(0.152)	(0.013)
Registered unemployed persons	-0.000***	0.000***	-0.000**
	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
Per capita average income	0.001**	-0.002***	0.000***
	(0.000)	(0.001)	(0.000)
Share of female residents	-9.206**	14.701**	-0.901*
	(4.252)	(5.870)	(0.507)
Percentage working in agricultural sector	-0.013**	0.049***	0.002**
	(0.006)	(0.009)	(0.001)
Percentage working in industrial sector	-0.026***	0.068***	-0.002*
	(0.009)	(0.016)	(0.001)
Share of respondents aged 15-29	0.484	4.598**	-0.596***
	(1.344)	(2.201)	(0.160)
Share of respondents aged 30-49	-7.408***	14.788***	-0.477
	(2.714)	(3.920)	(0.324)
Share of respondents aged 50-64	-0.882	14.017***	0.020
	(0.934)	(1.668)	(0.111)
Graduates from tertiary education	-0.000***	0.000*	-0.000
	(0.000)	(0.000)	(0.000)
Constant	2.251	-22.827***	0.740*
	(3.571)	(5.103)	(0.426)
Time FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
N	2608	2199	2608

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A18: Effect of emigration on voters' preferences, covariates as of 2000

	(1) Share right b/se	(2) Share left b/se
Log emigration per county	0.234***	-0.292***
	(0.035)	(0.060)
Registered unemployed persons	-0.000***	0.000***
	(0.000)	(0.000)
GPD per capita	0.000***	0.000
	(0.000)	(0.000)
Per capita average income	-0.003***	0.002
	(0.001)	(0.001)
Share of female residents	1.293	0.447
	(0.959)	(1.635)
Percentage working in agricultural sector	-0.010***	0.002
	(0.001)	(0.002)
Percentage working in industrial sector	-0.011***	0.009***
	(0.002)	(0.003)
Share of respondents aged 15-29	-0.074	0.211
	(0.707)	(1.233)
Share of respondents aged 30-49	-3.181***	12.823***
	(0.638)	(1.124)
Share of respondents aged 50-64	-2.761***	9.496***
	(0.498)	(0.867)
Graduates from tertiary education	0.000	-0.000***
	(0.000)	(0.000)
Constant	0.652	-6.619***
	(0.893)	(1.526)
Time FE	Yes	Yes
NUTS-1 FE	Yes	Yes
N	3248	2848

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Covariates are fixed as of 2000, before EU accession. Regional fixed effects capture NUTS-1 level, because otherwise we loose covariates due to collinearity. Source: Statistics PL and National Electoral Commission (PKW).

Table A19: Effect of emigration on voters' support to the left-right dimension

	(1) Left-right dimension b/se	(2) Left-right dimension b/se	(3) Left-right dimension b/se	(4) Left-right dimension b/se
Log emigration per county	0.096***	0.096***	0.071	0.082**
	(0.019)	(0.013)	(0.052)	(0.038)
Registered unemployed persons	-0.000***	-0.000***	-0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000***	-0.000	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.001***	-0.000	0.001***	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Share of female residents	-1.642*	-2.016***	-0.136	-1.542
	(0.884)	(0.629)	(1.864)	(1.428)
Percentage working in agricultural sector	0.001	0.000	-0.013***	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)
Percentage working in industrial sector	-0.008***	-0.008***	-0.044***	-0.007***
	(0.002)	(0.001)	(0.008)	(0.003)
Share of respondents aged 15-29	0.999***	0.293	1.884***	0.643
	(0.292)	(0.188)	(0.574)	(0.402)
Share of respondents aged 30-49	-3.378***	-3.462***	-2.762**	-2.550***
	(0.565)	(0.452)	(1.192)	(0.958)
Share of respondents aged 50-64	-0.582**	-0.819***	-0.655	-0.793***
	(0.249)	(0.173)	(0.564)	(0.273)
Graduates from tertiary education	0.000***	0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.933***	3.374***	3.401**	2.823***
	(0.624)	(0.422)	(1.610)	(1.044)
Time FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
N	3312	3312	3312	3312

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Party classifications follow the Parliament and Government Composition Database (ParlGov, http://www.parlgov.org/). The ParlGov dataset classifies parties position in the left-right position on a scale from 0 'left' to 10 'right' with data from Castles and Mair (1983), Huber and Inglehart (1995), Benoit and Laver (2006), and CHES (2010). To utilise this scale, we generate the average position in each county using weighted averages. Considering a county with three parties in a given election, we compute county i's stand on the left-right position as $LR_i = ShareParty1_i * PositionParty1 + ShareParty2_i * PositionParty2 + ShareParty3_i * PositionParty3$. The higher the weighted average of the left-right dimension, the higher the support for right-wing parties. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A20: Effect of emigration on voters' preferences, alternative party classification

	(1) Conservative b/se	(2) Liberal b/se	(3) Agrarian b/se	(4) Socio-demographic b/se
Log emigration per county	0.383**	0.809	-1.511*	-0.220**
	(0.150)	(0.925)	(0.885)	(0.101)
Registered unemployed persons	-0.000**	-0.000	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
GPD per capita	-0.000	-0.000	0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Per capita average income	0.000*	0.001	-0.002	-0.001*
	(0.000)	(0.002)	(0.001)	(0.000)
Share of female residents	-8.650	-11.603	27.434	12.279***
	(5.653)	(31.564)	(31.174)	(3.609)
Percentage working in argricultural sector	-0.012**	-0.055**	0.035	0.036***
	(0.006)	(0.027)	(0.027)	(0.006)
Percentage working in industrial sector	-0.015*	-0.072	0.070	0.035***
	(0.008)	(0.051)	(0.044)	(0.008)
Share of respondents aged 15-29	0.615	-1.191	11.640	-0.720
	(1.603)	(6.802)	(9.201)	(1.323)
Share of respondents aged 30-49	-6.825*	-11.378	25.689	11.854***
	(3.649)	(22.682)	(21.485)	(2.602)
Share of respondents aged 50-64	-0.716	1.240	9.177	8.721***
	(0.992)	(6.579)	(6.711)	(1.195)
Graduates from tertiary education	-0.000***	-0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	4.220	7.732	-23.968	-12.215***
	(4.031)	(24.058)	(23.057)	(2.716)
Time FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
N	3303	1093	2995	1458

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of votes to conservative (1), liberal (2), agrarian (3), and socio-demographic parties (4) per county and election year. Party classifications follow the Parliament and Government Composition Database (ParlGov, `http://www.parlgov.org/`). Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A21: Descriptive statistics in matched counties

	(1) Control districts mean/sd	(2) Treated districts mean/sd	(3) Matched treated districts mean/sd
Emigration per 10,000 inhabitants	3.141	13.780	15.605
	(3.579)	(14.746)	(16.191)
Immigration per 10,000 inhabitants	2.149	4.364	4.565
	(1.847)	(2.957)	(3.011)
Population per county	77124.883	174561.463	127139.460
	(38650.825)	(197222.669)	(89893.255)
Registered unemployed persons	5066.081	7938.254	6530.009
	(3202.164)	(7241.318)	(4221.560)
GDP per capita	33424.025	32524.379	32338.153
	(14130.454)	(10966.354)	(10707.300)
Average monthly per capita income	1041.341	1039.596	1040.212
	(370.193)	(346.835)	(345.549)
Share of female residents	0.509	0.518	0.515
	(0.007)	(0.010)	(0.008)
Percentage working in agricultural sector	16.200	10.289	10.235
	(8.097)	(7.269)	(6.823)
Percentage working in industrial sector	29.375	34.427	34.267
	(5.150)	(5.048)	(4.639)
Share of respondents aged 15-29	0.225	0.221	0.222
	(0.023)	(0.032)	(0.028)
Share of respondents aged 30-49	0.282	0.292	0.292
	(0.015)	(0.014)	(0.013)
Share of respondents aged 50-64	0.181	0.192	0.189
	(0.031)	(0.031)	(0.032)
Graduates of higher education institutions	29453.501	26748.845	25690.251
	(19842.178)	(14674.747)	(13658.624)
N	6342	2000	1452

Note: Means (standard deviations). Source: Statistics PL.

Table A22: Effect of migration on voting outcomes in matched counties

	(1) Share right b/se	(2) Share left b/se
Log emigration per county	0.543**	-0.666**
	(0.266)	(0.301)
Registered unemployed persons	-0.000*	0.000**
	(0.000)	(0.000)
GPD per capita	-0.000	0.000***
	(0.000)	(0.000)
Per capita average income	0.001	-0.002***
	(0.000)	(0.001)
Share of female residents	-11.017	15.931*
	(8.575)	(9.170)
Percentage working in agricultural sector	-0.019*	0.054***
	(0.010)	(0.012)
Percentage working in industrial sector	-0.022	0.052***
	(0.014)	(0.019)
Share of respondents aged 15-29	-0.026	1.435
	(2.589)	(3.315)
Share of respondents aged 30-49	-10.871*	17.356**
	(6.558)	(7.385)
Share of respondents aged 50-64	-2.723	12.922***
	(2.308)	(3.051)
Graduates from tertiary education	-0.000***	0.000
	(0.000)	(0.000)
Constant	6.743	-15.409**
	(6.519)	(7.203)
Time FE	Yes	Yes
State FE	Yes	Yes
N	3032	2656

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Source: Statistics PL and National Electoral Commission (PKW).

Table A23: Effect of emigration on voters' preferences, first differences

|	(1) Share right b/se	(2) Share right b/se	(3) Share left b/se	(4) Share left b/se
Δ Stock of emigrants, in logs	0.156***	0.087*	-0.015	0.073
	(0.044)	(0.047)	(0.072)	(0.079)
Δ Registered unemployed persons	-0.000**	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Δ GPD per capita	0.000***	0.000***	-0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Δ Per capita average income	0.003***	0.000	0.001**	-0.001
	(0.000)	(0.001)	(0.001)	(0.001)
Δ Share of female residents	19.387	-15.631	-64.825**	-6.119
	(22.932)	(20.138)	(27.708)	(25.712)
Δ Percentage working in agricultural sector	-0.018	-0.011	-0.076***	-0.062**
	(0.011)	(0.010)	(0.026)	(0.027)
Δ Percentage working in industrial sector	-0.083***	-0.064***	-0.067***	0.010
	(0.015)	(0.015)	(0.025)	(0.027)
Δ Share of respondents aged 15-29	62.862***	29.426***	-26.308**	-5.376
	(4.828)	(6.972)	(10.589)	(9.811)
Δ Share of respondents aged 30-49	-5.719	13.466**	-11.612	-6.065
	(6.022)	(6.255)	(10.844)	(11.015)
Δ Share of respondents aged 50-64	11.199***	16.292***	-35.682***	-29.019***
	(3.696)	(4.615)	(4.295)	(4.682)
Δ Graduates from tertiary education	0.000	0.000	-0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-3.393***	-2.813***	-3.273***	-2.503***
	(0.165)	(0.253)	(0.263)	(0.414)
Time FE	No	Yes	No	Yes
N	2035	2035	985	985

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the difference between emigration stock per county from one electoral cycle to another, in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A24: Effect of emigration on the share of incumbent parties, first differences

	(1) Share incumbent b/se	(2) Share incumbent b/se
Δ Stock of emigrants, in logs	0.115***	-0.017
	(0.039)	(0.035)
Δ Registered unemployed persons	-0.000***	-0.000
	(0.000)	(0.000)
Δ GPD per capita	0.000**	-0.000
	(0.000)	(0.000)
Δ Per capita average income	0.005***	-0.001*
	(0.001)	(0.001)
Δ Share of female residents	81.385***	-34.097*
	(23.512)	(19.744)
Δ Percentage working in agricultural sector	-0.027***	-0.012
	(0.010)	(0.009)
Δ Percentage working in industrial sector	0.116***	-0.014
	(0.015)	(0.013)
Δ Share of respondents aged 15-29	13.186***	-10.460**
	(4.662)	(5.253)
Δ Share of respondents aged 30-49	-43.712***	-18.609***
	(6.951)	(4.671)
Δ Share of respondents aged 50-64	-1.653	12.219***
	(4.124)	(2.911)
Δ Graduates from tertiary education	-0.000***	-0.000
	(0.000)	(0.000)
Constant	-3.143***	-0.210
	(0.216)	(0.242)
Time FE	No	Yes
N	1273	1273

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of votes to the incumbent parties per county and election year. Emigration is measured as the difference between emigration stock per county from one electoral cycle to another, in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A25: Effect of emigration on voters' preferences, jackknife estimation

	(1) Share right b/se	(2) Share left b/se
Log emigration per county	0.389**	-0.459**
	(0.156)	(0.187)
Registered unemployed persons	-0.000**	0.000**
	(0.000)	(0.000)
GPD per capita	-0.000	0.000***
	(0.000)	(0.000)
Per capita average income	0.000*	-0.001***
	(0.000)	(0.000)
Share of female residents	-8.640	12.888*
	(5.811)	(6.681)
Percentage working in agricultural sector	-0.014**	0.047***
	(0.006)	(0.008)
Percentage working in industrial sector	-0.021**	0.048***
	(0.010)	(0.013)
Share of respondents aged 15-29	0.880	-1.143
	(1.636)	(2.107)
Share of respondents aged 30-49	-7.050*	12.580***
	(3.861)	(4.624)
Share of respondents aged 50-64	-0.703	9.614***
	(1.073)	(1.513)
Graduates from tertiary education	-0.000***	0.000
	(0.000)	(0.000)
Constant	4.440	-12.014**
	(4.255)	(5.000)
Time FE	Yes	Yes
State FE	Yes	Yes
N	3312	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

Table A26: Effect of emigration on voters' preferences, alternative delta

	(1) Share right b/se	(2) Share left b/se
Log emigration per county	0.322***	-0.406**
	(0.111)	(0.160)
Registered unemployed persons	-0.000***	0.000**
	(0.000)	(0.000)
GPD per capita	0.000	0.000**
	(0.000)	(0.000)
Per capita average income	0.000	-0.001***
	(0.000)	(0.000)
Share of female residents	-6.523	12.688**
	(4.369)	(6.119)
Percentage working in agricultural sector	-0.016***	0.059***
	(0.006)	(0.008)
Percentage working in industrial sector	-0.019***	0.056***
	(0.007)	(0.011)
Share of respondents aged 15-29	1.237	-1.697
	(1.297)	(1.958)
Share of respondents aged 30-49	-5.429*	11.290***
	(2.864)	(4.198)
Share of respondents aged 50-64	0.018	8.246***
	(0.758)	(1.260)
Graduates from tertiary education	-0.000***	0.000**
	(0.000)	(0.000)
Constant	2.990	-11.837***
	(3.180)	(4.573)
Time FE	Yes	Yes
State FE	Yes	Yes
N	3312	2903

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Outcome variable is the share of right-wing (left-wing) votes per county and election year. Emigration is measured as the number of emigrants per county in logs. Source: Statistics PL and National Electoral Commission (PKW).

B   Figures

Figure A1: Educational levels in Poland
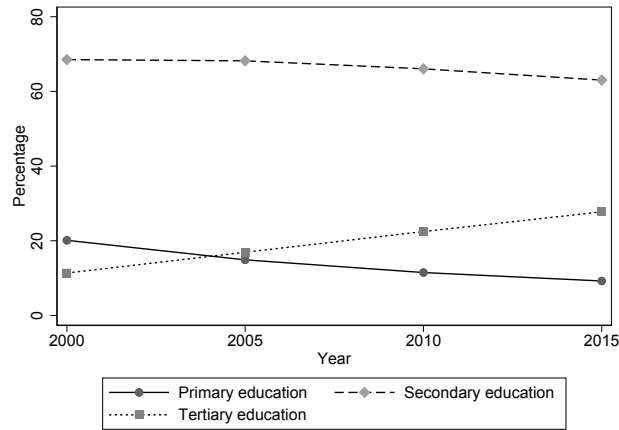
(a) Educational attainment of Polish natives
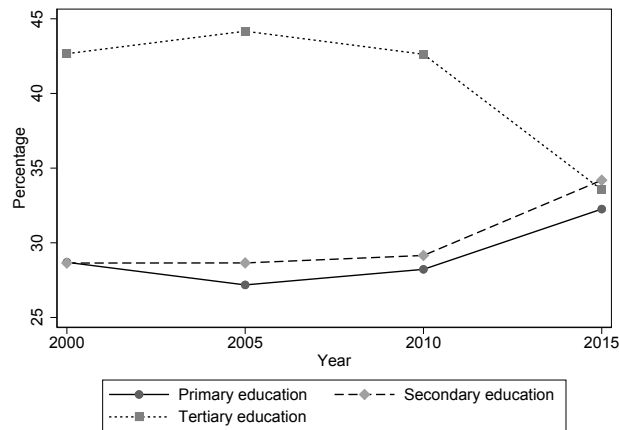
(b) Educational level as a percentage of all Polish Emigrants over time

Note: Figure A1a displays the share of population aged 15 and above attaining primary, secondary, and tertiary education in Poland over the period from 2000 to 2015. Figure A1b illustrates the educational level as a percentage of all polish emigrants over time. Sources: OECD (2020), Education at a Glance 2020 and Database on Immigrants in OECD Countries (DIOC), 2000 - 2015.

Figure A2: Permanent versus temporary migration over time
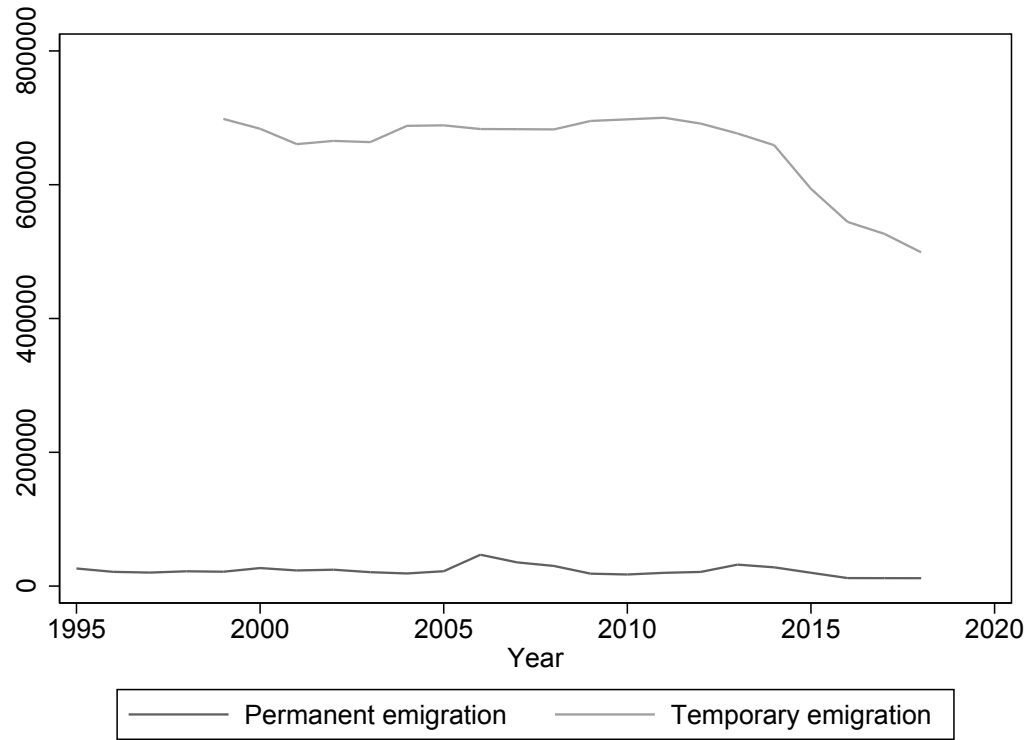
Note: Figure A2 illustrates the number of permanent versus temporary emigrants in Poland from 1995 to 2019. Data on temporary migration is only available from 1999 to 2018. Source: Statistics PL.

Figure A3: Election results in Poland, 2001-2019
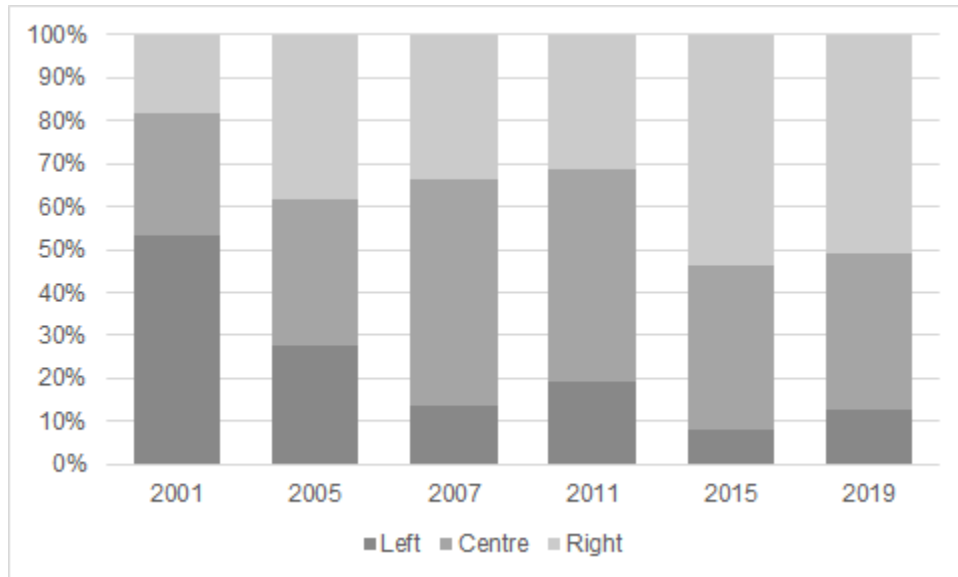
Note: Figure A3 illustrates the share of right-wing, center, and left-wing votes in Poland across election years from 2001 to 2019. Source: Statistics PL.

Figure A4: Share of right-wing populist votes in counties with different emigration rates
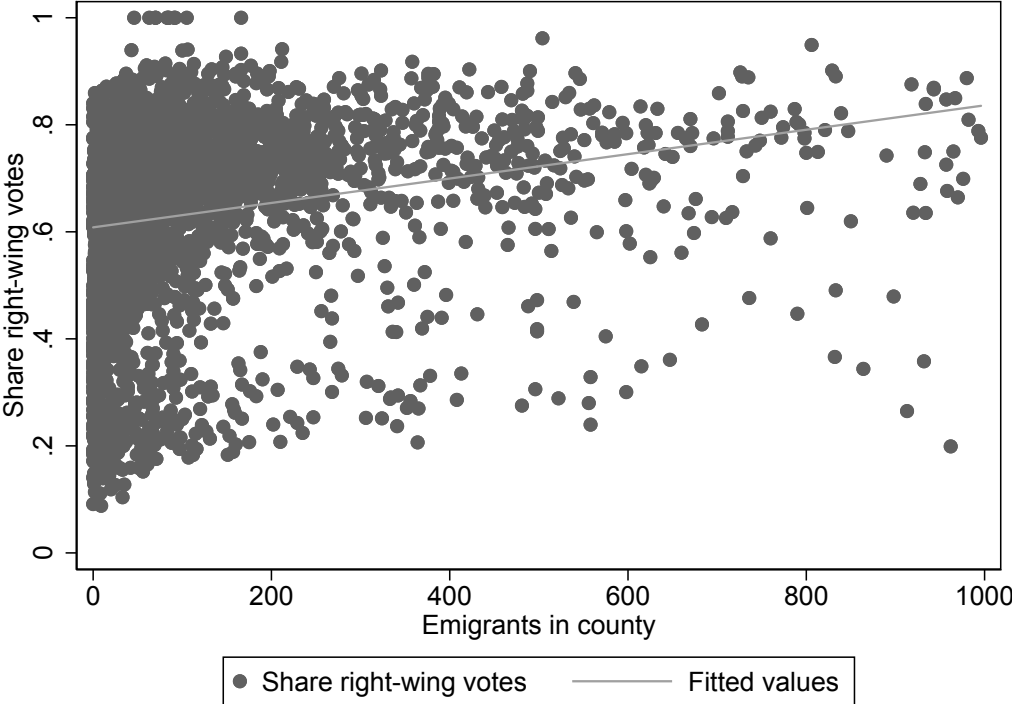
Figure A5: Share of right-wing populist votes in counties with different emigration rates, disaggregated by election years
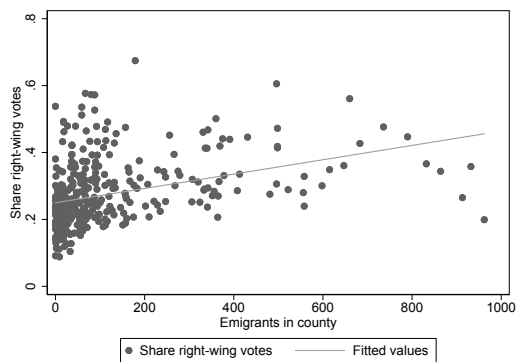
(a) 2001
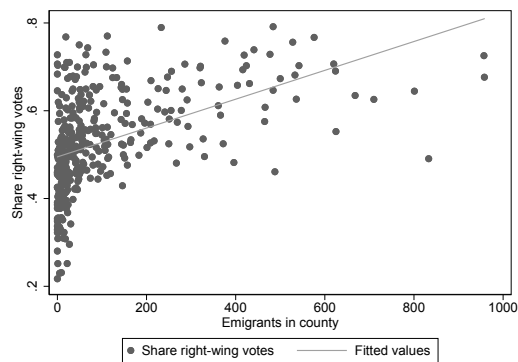
(b) 2005
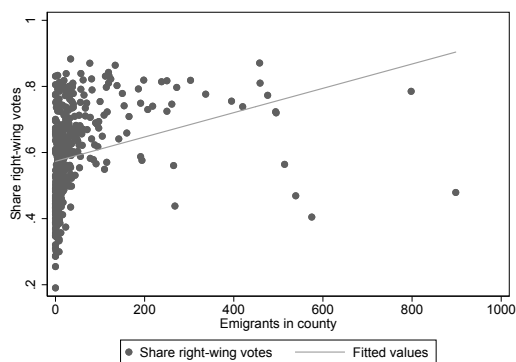
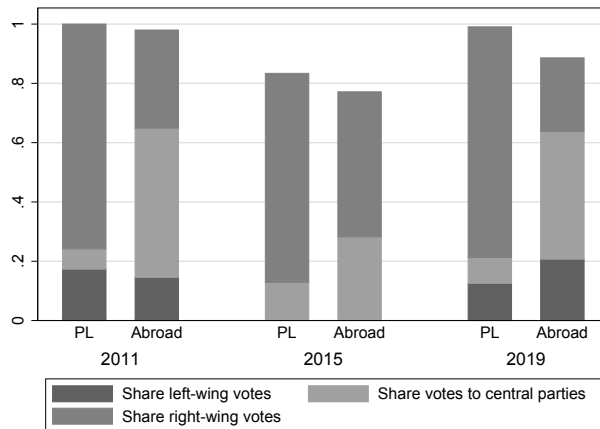(c) 2007
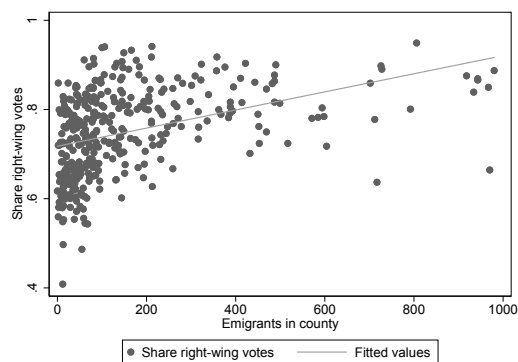
(d) 2009
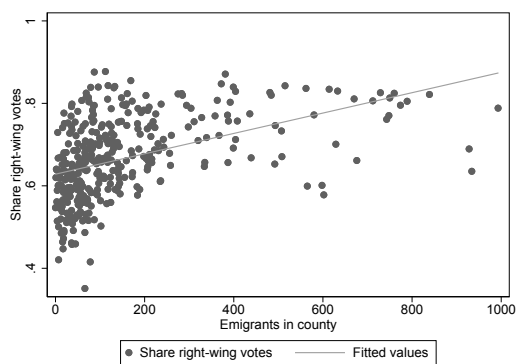
(e) 2009
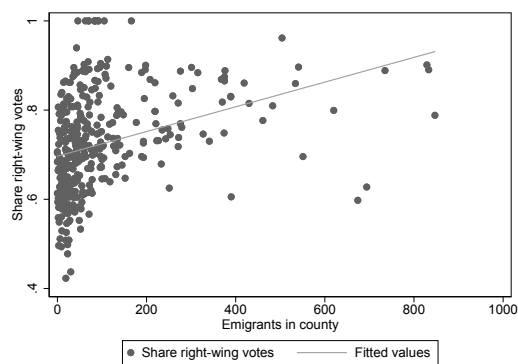
(f) 2014

Note: Figure A5 illustrates the relationship between emigration per year and county and the share of right-wing populist votes. Source: Statistics PL and National Electoral Commission (PKW).

Figure A6: Share of left-wing votes in counties with different emigration rates

Figure A7: Turnout rates of Polish citizens over time, in Poland and from Abroad
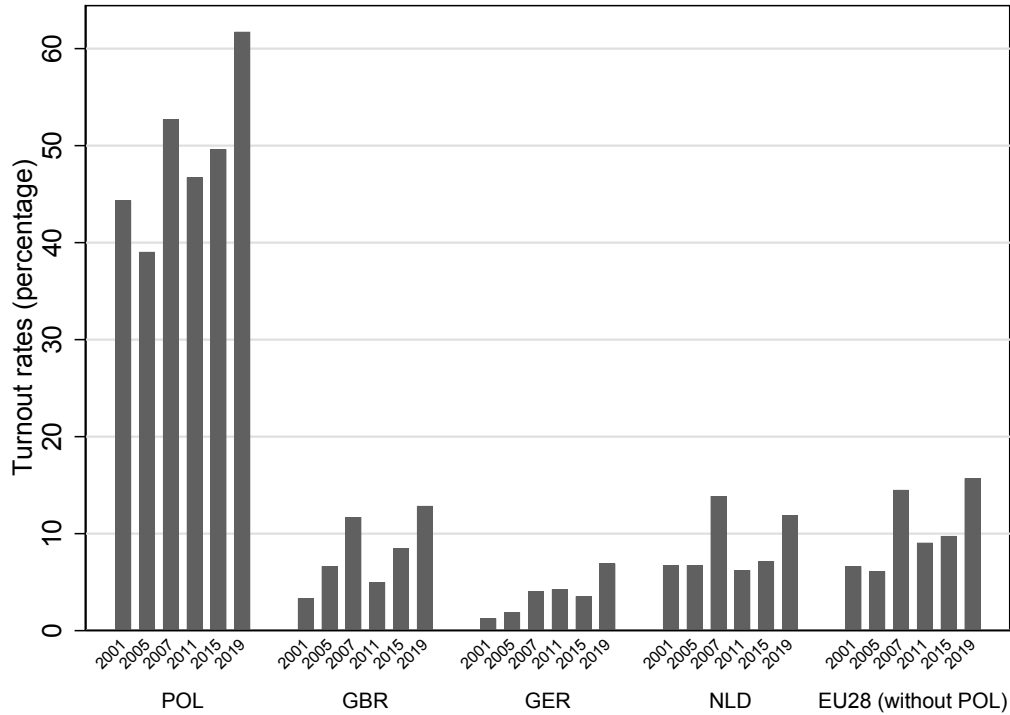
Note: Figure A7 illustrates the percentage of eligible voters who cast their vote for those residing in Poland and for Polish citizens in the United Kingdom, Germany, the Netherlands and the EU28 countries excluding Poland (2001-2019). It is important to note that official statistics often report extremely high participation rates from abroad. This is due to the fact that they base eligible voters on those that registered to vote and not on the entire eligible population of Polish citizens residing abroad. Therefore, the numbers of eligible voters are estimated for the observed countries using Eurostat data on population by age group and citizenship. Source: National Electoral Commission (PKW) and Eurostat.

Figure A8: Differences in electoral outcomes in Poland and abroad

Note: Figure A8 displays the share of votes to left-wing, centre, and right-wing parties in Poland and abroad for national parliamentary elections from 2011 to 2015. Source: National Electoral Commission (PKW).

Figure A9: Number of emigrants in counties with different travel distances to closest border crossing points
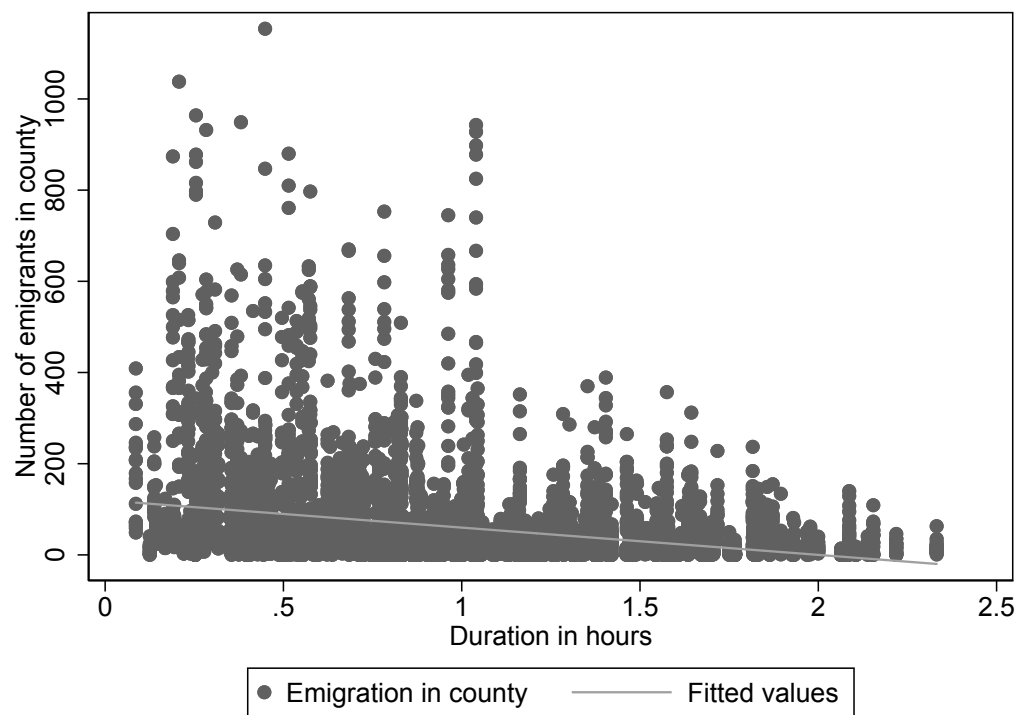
Note: This figure illustrates the relationship between emigration per year and county and the distance to the closest border crossing point measured in duration in hours. Source: Statistics PL.

Figure A10: Number of emigrants in counties with different travel distances to closest border crossing points
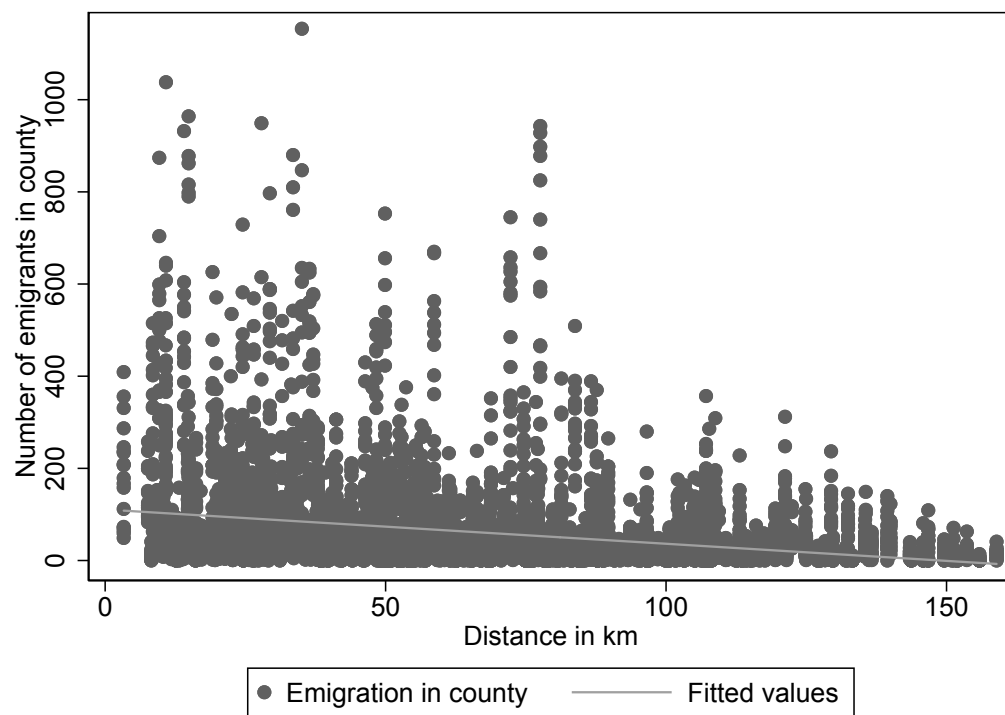
Note: Figure A10 illustrates the relationship between emigration per year and county and the distance to the closest border crossing point measured in distance in kilometer. Source: Statistics PL.