

Emigrants' missing votes<sup>☆</sup>Yvonne Giesing<sup>a,b,c,\*</sup>, Felicitas Schikora<sup>d</sup><sup>a</sup> ifo Institute – Leibniz Institute for Economic Research at the University of Munich, Poschingerstr. 5, Munich 81679, Germany<sup>b</sup> LMU Munich, Germany<sup>c</sup> CESifo, Munich, Germany<sup>d</sup> German Institute for Economic Research (DIW Berlin), Mohrenstr. 58, Berlin 10117, Germany

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## ABSTRACT

What are the causal effects of emigration on election outcomes in the country of origin? Large emigration of high-skilled emigrants can lead to changes in the distribution of political preferences, which affect voting outcomes. Using administrative migration and voting data, we show that emigration from Poland following its accession to the European Union in 2004 caused an increase in vote shares for right-wing parties, while decreasing the vote share for left-wing parties due to emigrants' missing left-leaning votes. To account for endogenous migration patterns, we construct an innovative instrument that measures the distance to the closest open EU border. Our results highlight that emigration enhances stayers' trust in right-wing governments and increases stayers' voting for parties with pro-European positions. Exploiting a change in voting rules over time allows to disentangle different mechanisms. These results have important implications for the design of voting policies.

## 1. Introduction

Migration is a global phenomenon that is continuously increasing and has reached 281 million people or 3.6 percent of the world's population (UN DESA, 2020). Migration flows are highly asymmetric and certain countries, including China, India, and 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 in origin countries, 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.<sup>1</sup> Many governments have therefore started to run election campaigns in countries that have a large diaspora (Kernalegenn and van Heute, 2020; Burgess, 2020), two examples being the Turkish president Recep Tayyip Erdogan campaigning in Germany and the Mexican president Andrés Manuel

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\* Corresponding author at: LMU Munich, Germany.

E-mail addresses: [giesing@ifo.de](mailto:giesing@ifo.de) (Y. Giesing), [felicitas-schikora@gmx.de](mailto:felicitas-schikora@gmx.de) (F. Schikora).

<sup>1</sup> See Gamlen (2015) for examples of voting outcomes in New Zealand that were changed by the votes of the diaspora.

López Obrador visiting major U.S. cities. Depending on the political preferences of the diaspora, governments can also strategically choose specific registration and voting procedures to facilitate or complicate voting from abroad. For instance, there exists anecdotal evidence from the Polish diaspora that the recent government has changed voting procedures and modes that regulate voting from abroad to make it 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 in the country of origin.

The case of Poland is an interesting setting to study the effects of emigration on election results in the origin-country. Especially after the accession to the European Union (EU) and the subsequent introduction of free labour mobility to other EU countries, Poland has experienced large emigration rates, resulting in 4.8 million Polish citizens currently living abroad (12.5 percent of the total population according to UN DESA (2020)). This is not surprising, given the huge wage differentials within the EU. Polish citizens living abroad are much less likely to participate in elections in Poland. Across different destinations and years, the turnout of Polish citizens abroad in elections in Poland is rarely larger than 10 percent, as opposed to an average of 50 percent of Polish citizens in Poland. Factors like desire for political participation, moral values, future plans, time and effort costs, and attention to politics can explain the low turnout of nonresident eligible citizens in voting back home (Szulecki et al., 2021). In addition, Polish citizens residing abroad vote very differently in Poland. 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 country of origin, which has important consequences for voting there.

This paper asks the following research question: What are the causal effects of emigration on origin-country election outcomes? In particular, does the selected emigration of high-skilled labour migrants lead to changes in the distribution of political preferences in a democratic origin country? The different election outcomes we focus on are: vote share for the right-wing and left-wing parties, for pro-European parties, as well as incumbents. We use detailed administrative emigration data and merge it with official election results of all elections between 2001 and 2019 at the county level in Poland. To account for endogeneity, for instance resulting from unobserved economic conditions, we instrument emigration from Poland with distance to the closest EU border and add time variation by exploiting the gradual opening of different EU destination labour markets. The gradual opening of EU labour markets is important for two reasons. First, it is this opening that has led to the large emigration of Poland and to the strong selection patterns of Polish emigrants. Due to this large emigration wave, we have missing parts in the distribution of political preference in Poland, which affect voting outcomes. Second, this gradual opening allows us to construct an instrument for emigration allowing us a causal impact evaluation. Our first stage results show that the distance to the closest open EU border (instrument) is a strong predictor of emigration, both when we measure distance in kilometres and when we use travel time. We argue that our instrument is exogenous because a county's distance to a specific border is pre-determined and we consider it very unlikely that individual counties within Poland were able to influence the labour market opening decisions of destination countries. Our results consistently show that larger emigration rates increase the vote share for the right-wing party (Law and Justice PiS, Civic Platform PO or earlier existing right-wing parties and coalitions), while decreasing the vote share for left-wing parties in Poland. This is consistent with a change in the structure of the remaining population which is older and less educated after the emigration of the young and well educated Poles. These findings hold both when using an Ordinary Least Squares regression (OLS) and when relying on the instrumental variable (IV) approach. In general, the effects of emigration on voters' preferences are stronger using an IV approach.

As an alternative outcome, we show that stayers' trust in Polish right-wing governments also increases in counties and periods affected by large emigration. This analysis is implemented with the Life in Transition Survey, conducted by the European Bank for Reconstruction and Development (EBRD) and the World Bank in 2006, 2010, and 2016 in Poland. It provides information on values and attitudes for Polish citizens at the county-level and shows that Polish counties with above-average emigration numbers have more trust in right-wing parties in Poland due to the selective emigration of those that are more left-leaning.

In addition, we analyse voting for parties with pro-European positions and voting for the incumbent in Poland. We find that emigration increases voting for parties with pro-European positions. Given that emigrants are more likely to be pro-European, one could have expected 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, reduced labour market competition, and remittances. Furthermore, we do not find any robust or significant effects for vote shares for the incumbent parties in Poland.<sup>2</sup>

There are different reasons why emigration affects voting outcomes in the country of origin. The central hypothesis of this paper is that emigration results in a selected group of voters being absent. 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 which 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 family and friends back home and remit money, knowledge and social norms to their origin. Fackler et al. (2020), for instance, find that emigration increases knowledge transfer and thus innovation in the home country. Rapoport et al. (2021) show that migrants disseminate cultural values and norms from destination to origin countries. Paarlberg (2017) highlights the role of having family members abroad for political activism. All of the above mentioned reasons can have different implications for voting. The fact that our estimates are particularly large in the earlier time period, when voting by post was not possible, provides suggestive evidence that missing votes are a crucial channel.

<sup>2</sup> One may expect that those who disagree with the current government are more likely to emigrate, leading to increased vote shares for the incumbent. 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 like Poland.

We provide a number of robustness checks to emphasise that the findings are not driven by inherent differences between counties and that the instrument is valid. The results are robust 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 and their interaction. Moreover, our findings remain robust to using alternative specifications of the instrument and applying a matching technique to compare only similar counties. In addition, we use an alternative party classification system to show that results do not depend on a specific classification system.

The most closely related paper is by [Anelli and Peri \(2017\)](#). Similar to us, they find evidence for the so-called “exit effect”, i.e., 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.<sup>3</sup> 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 origin country. In contrast to us, their main outcomes of interest are characteristics of local elected politicians. We instead focus on national parliamentary election outcomes in the home country and use a different instrumental variable. In addition, the emigrants in our context are not fleeing from a recession and are therefore differently self-selected.

There is a larger economic literature that analyses the effects of emigration on democratisation in the home country.<sup>4</sup> 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 ([Spilimbergo, 2009](#); [Docquier et al., 2016](#)) show that emigration can promote democracy and improve political quality at the origin for a large set of countries. [Mercier \(2016\)](#) studies the migration experience of political leaders across different countries between 1960 and 2004 and concludes that leaders who 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 for a democratic party. [Pfütze \(2012\)](#) 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 U.S. in the nineteenth century increased labour movement membership, strike participation and voting for left-wing parties. [Batista and 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 in the home country resulting from emigration. Populist right-wing parties are on the rise all over Europe and we contribute by providing a new determinant that can explain their increasing importance.<sup>5</sup> Second, we look at a developed and democratic EU member state. The results from most of the previous literature are based on non-democratic countries and highlight progress in democratisation. In a country that is already democratic, one would expect different results. 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 governments.<sup>6</sup> The paper also has implications for the creation of fair voting policies in the context of globalisation. As migration is increasing, so is the number of citizens that are casting their vote from abroad. The voting procedures and modes 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 mail 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 voter turnout rates of migrants, effectively disenfranchising parts of the population ([Peltoniemi, 2016](#)). Governments should therefore ensure that citizens with foreign residence can cast their vote in an easy way. Voting by mail 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, incumbents know if citizens residing abroad are voting in their favour or not and can thus strategically facilitate or hinder the voting process abroad ([Hutcheson and Arrighi, 2015](#); [Wellman, 2021](#); [Umpierrez de Reguero et al., 2021](#)).

This paper is structured as follows. The next section describes our conceptual framework and 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 Section 6 provides guidance on the underlying mechanisms. Section 7 shows the implemented robustness checks. Section 8 concludes with policy implications.

<sup>3</sup> [Harka and Rocco \(2022\)](#) also find that higher education reduces voter turnout in Italy, which is a result they attribute to the condition of Italy in the years of crisis.

<sup>4</sup> [Lodigiani \(2016\)](#) provides an informative overview of this literature.

<sup>5</sup> There is a large literature that explains right-wing voting with increasing immigration (for example, [Barone et al., 2016](#); [Halla et al., 2017](#); [Edo et al., 2019](#)) but so far no one has linked right-wing voting to emigration.

<sup>6</sup> It is important to note, however, that emigrants are not always left leaning. [Jakobson et al. \(2021\)](#) provides us with an example of a populist right party (EKRE) in Estonia which was also the most popular party among people who voted from abroad. This example shows that emigrants do not always vote for the left party, and institutionalisation of the party abroad plays a great role in emigrants’ voting behaviour.

## 2. Conceptual framework and institutional background

### 2.1. Conceptual framework

The central hypothesis of this paper is that emigration may result in cutting a specific part of the distribution of political preferences in the origin country. As emigrants are less likely to participate in elections in their home country, their votes are missing. Therefore, emigration can be an important determinant of voting outcomes in the origin country. Which parties benefit from emigration depends on the type of selection and the country context. The following three main conditions need to be met in order for emigration to impact elections:

1. Emigrants need to be selected in terms of political preferences.
2. Emigrants need to have lower turnout rates in elections in their origin country compared to a hypothetical scenario in which they did not emigrate.
3. The number of emigrants needs to be sizeable compared to the home country population in order to have a substantial effect.

We investigate and apply this hypothesis in the case of Poland. Poland is the perfect laboratory to study our hypothesis as it fulfils all three conditions. First, we show that emigrants from Poland are a highly selected group in the descriptive statistics (Section 3.5). Emigrants are twice as likely to be highly educated than stayers. In addition they are more likely to be young adults. These characteristics make them more likely to be left-leaning. We can show with voting data from ballots casted outside of Poland, that emigrants are more likely to vote for the left. At the same time, emigrants' turnout rate is much lower (10 percent) than the average turnout rate in Poland (50 percent). This leads to missing votes for left-wing parties in Poland. Poland also provides the perfect context to study our hypothesis as a large proportion of the population has emigrated. Following the accession of Poland to the European Union in 2004, emigration from Poland has skyrocketed. As all three conditions are met, our central hypothesis is that high emigration rates in Polish counties lead to increasing vote shares for the right-wing parties due to emigrants' missing left-leaning votes.

We can derive a number of additional secondary hypotheses from this. Our second hypothesis is that high emigration rates in Polish counties lead to decreasing vote shares for the left-wing parties due to emigrants' missing left-leaning votes. This follows directly from the central hypothesis. Our third hypothesis is that political preferences – measured by trust in the government – is also affected. If left-leaning individuals are missing in the origin counties, this implies that stayers' trust in right-wing governments has increased.

### 2.2. 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 (Sejmu, 2020; Polish National Electoral Office, 2020). Since then, the Polish government has consisted of two chambers, the *Sejm* (parliament) and the *Senate*, which jointly take the responsibility of Poland's legislative power: the parliament drafts legislative proposals, whereas 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 effectiveness of the parliament, parties that 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.<sup>7</sup>

Since the eastward enlargement of the European Union in 2004, Polish citizens are further allowed to vote for representatives in the European Parliament (EP). The first 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.<sup>8</sup> 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 in 2019 was 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 as to 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 coming

<sup>7</sup> National minorities are excluded from this rule and therefore the German minority party (MN) is represented in the parliament.

<sup>8</sup> 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](https://sejmsenat2019.pkw.gov.pl/sejmsenat2019/en/organy_wyborcze/obwodowe/pow/149900).

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.

### 2.3. Background on the political party landscape

Poland has experienced substantial changes in the leadership of government in recent decades. Following its communist legacy, the government was composed of left-wing and socialist parties from 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 has been primarily formed by the right-wing populist Law and Justice (PiS) party. The following gives a brief chronological overview of the respective governments.

The Democratic Left Alliance (SLD) has been the dominant player in the Polish party landscape for many years. In 2001, it formed a coalition with the smaller social-democratic Union of Labour (UP) and won the 2001 parliamentary elections with 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 2007, 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.

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 across the population (Pankowski, 2010). Examples 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 as a proponent of a culturally anti-liberal policy. Fomina and Kucharczyk (2016) therefore classify the PiS, which began as a centre-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 eight years of opposition (2007–2015), PiS has been in a majority government since 2015.

The Civic Platform (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 the better-educated winners of the post-communist era, while PiS attracts voters from the poorer and less successful part of society (Dzięciołowski, 2017).

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 between 1995 and 2018. It is based on official registrations of permanent emigrants and immigrants, i.e., persons registering for permanent departure (or residence in Poland respectively) for a minimum duration of 12 months.<sup>9</sup> We focus on the years 1997 up to 2019, which correspond to the time 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. Furthermore, it is likely that not every permanent emigrant reports his or her absence to the Polish authorities.<sup>10</sup>

Poland is divided into 12 federal states (*voivodships*) and 380 counties (*powiats*).<sup>11</sup> The great advantage of this dataset is that it captures the aggregate number of permanent international migrants per county over an extensive time period. Each county 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.

<sup>9</sup> Statistics Poland defines a permanent emigrant as 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 the 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 months basis (Figure A4). 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.

<sup>10</sup> A comparison of emigration data from Statistics Poland and Eurostat's immigration to the EU data (migr imm1ctz) shows that Polish immigration numbers to the EU are roughly five times larger compared to Statistics Poland. This could be due to (1) the fact that the Eurostat measure also includes temporary migration and (2) underreporting in Statistics Poland data. As long as underreporting is similar across Polish counties, this does not bias our results. Eurostat data cannot be disaggregated at the county level and has many missing observations, which is why we do not use it in this paper.

<sup>11</sup> The biggest state Mazowieckie consists of 42 counties, the smallest state Opolskie consists of 12 counties. On average, each state has 24 counties.

**Table 1**

List of Polish parties.

Source: Polish National Electoral Commission (PKW).

Name	Abbreviation	Type	Classification
Left and Democrats	LiD	coalition	left
Coalition 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	centre
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	centre
Electoral Committee of Voters of Kukiz 15	Kukiz	party	right
The Ryszard Petru's Election Committee	Modern	party	centre
KORWiN Electoral Committee	KORwin	party	right
European Coalition	KE	coalition	centre
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 and 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).

### 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 parliament elections from 2004 to 2019 (see Table A1)<sup>12</sup>. 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 from the two datasets using official district codes. For this purpose, we collapse the migration data based on legislative periods in the first step, using the total number of emigrants per county in year  $t$  of the preceding election up to year  $t-1$  of the following election. We then merge both datasets using information on county and election year.

Given the minimum voting shares outlined above, we consider only parties or coalitions of parties who pass this threshold and classify them into a right-centre-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 for 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 scientists and have been used in the empirical literature before (Whitefield et al., 2007; Döring and Hellström, 2013; Döring and Manow, 2017; Potrafke, 2017; Huysmans, 2019; Medeiros et al., 2019; De Sio et al., 2016).

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, centre, and right-wing (cf. Table 1). Second, the Parliament and Government Composition Database (ParlGov)<sup>13</sup> 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-centre-left scheme<sup>14</sup> 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

<sup>12</sup> Results are robust to restricting the sample to national elections only and estimated coefficients do not differ significantly by election type.

<sup>13</sup> 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. We utilise the stable version of the data set (2018) for party classification in all elections.

<sup>14</sup> The ParlGov dataset classifies parties' position on 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.

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.

Most party classifications are straightforward. However, there is some controversy about the classification of the PO. The Comparative Political Data Set classifies PO as right-wing party. This classification may be considered controversial. Yet, ParlGov classifies PO as a conservative party as well. The Chapel Hill Expert Survey further assigns the PO a mean value of 6 on the left-right ideological stance scale (PiS 8), while centre parties are assigned values below 6. For the sake of consistency across party classifications, we consequently subsume the PO as a right-wing party.

As 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 has formed the government since 2015. There is no consistent classification of “populist parties” and there exist also left-wing populist parties. We have therefore decided to focus on a left- and right-wing classification and not on populist 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 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 1,000 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.<sup>15</sup> 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

Fig. 1 displays that emigration increased strongly in Poland in the last 25 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 (Fig. 1(b)). Nevertheless, average emigration flows differ greatly across counties in Poland (see Fig. 2). This holds true if we consider emigration rates measured as the share of emigrants in the population (see Figure A1). Moreover, Fig. 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 labour market access for a limited period of time (Kahanec et al., 2014). For instance, while the UK, Ireland, and Sweden opened their labour 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.<sup>16</sup> Figure A2a, Figure A2b, Figure A2c, Figure A3a and A3b show the selection pattern of emigrants. Following data from OECD DIOC, emigrants are mostly selected on education. Figure A2a compares the educational attainment of Polish citizens born and residing in Poland with individuals born in Poland living in OECD countries, highlighting positive selection of emigrants in terms of education. Emigrants are almost twice as likely (29% vs. 15%) to be highly educated. Emigrants are also selected on age and are especially more likely to fall into the age group of young adults (25–34) and slightly more likely to fall into the age group of 35–54 (see Figure A2b). Gender selections plays a minor role (see Figure A2c).

Turning to electoral results, Figure A5 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 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 vote 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, the average annual gross domestic product per capita in current prices has increased by 76 percent from 19,031 to 33,570 Złoty per state.<sup>17</sup> 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 A6. 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

<sup>15</sup> The LiTS dataset samples roughly 1,000 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.

<sup>16</sup> This can be explained by a large influx of Ukrainians, following the 2014 conflict between Russia and Ukraine.

<sup>17</sup> 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).

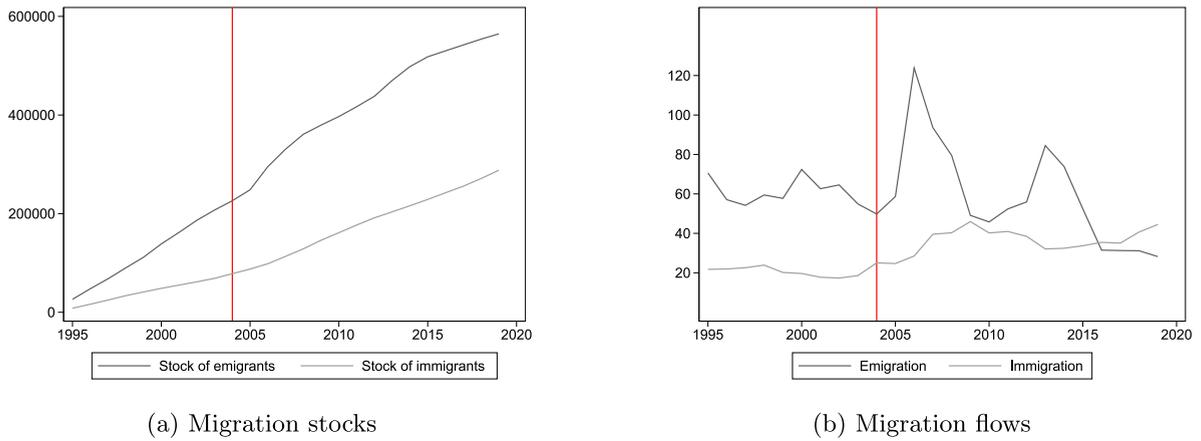


Fig. 1. Migration patterns in Poland.

Note: Fig. 1 displays migration patterns of emigrants and immigrants from 1995 to 2018. Fig. 1(a) sums the stock of emigrants and immigrants in Poland since 1995 and Fig. 1(b) displays the average number of emigrants and immigrants per county each year. The red line marks the year of Poland’s accession to the EU (2004).

Source: Statistics PL.

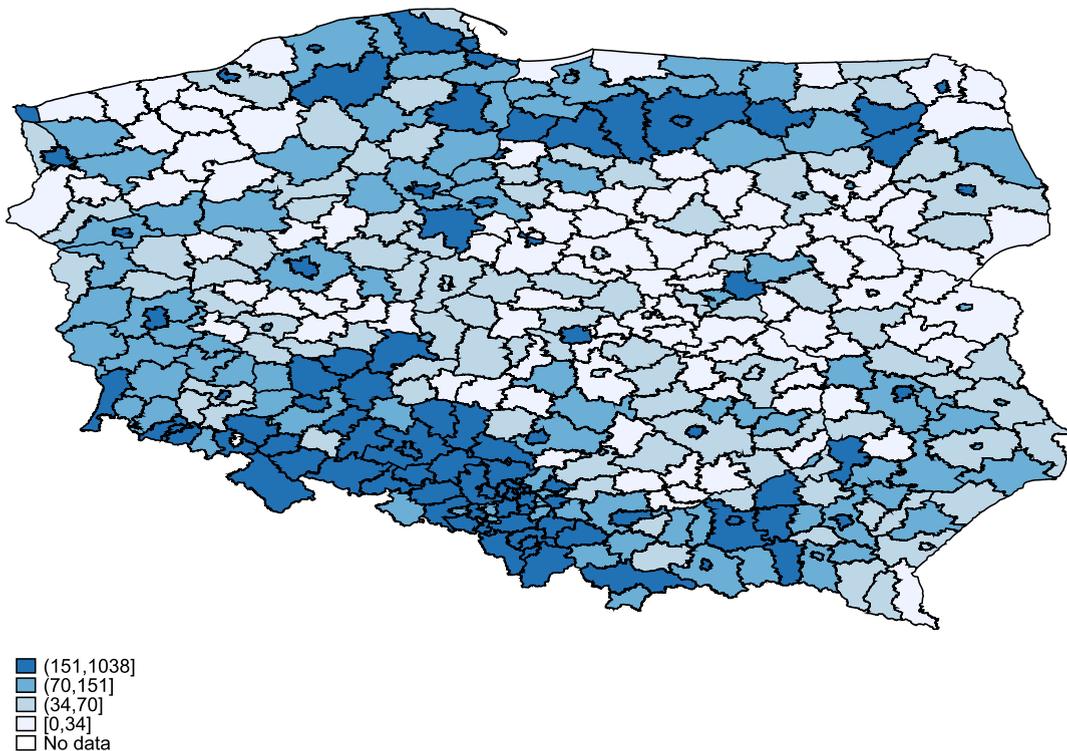


Fig. 2. Emigration flows across Polish counties in 2006.

Note: Fig. 2 displays emigration per county in 2006, which is characterised by a particularly large outflow of emigrants after the accession to the EU in 2004. The different shades of blue indicate the amount of emigrants in a given county in 2006. 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.

over all years, counties that experience higher rates of emigration, are also prone to a higher share of votes for right-wing parties. Figure A7 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 A8).

Figure A9 provides descriptive evidence that emigrants participate less in elections. As outlined above, this can be due to a lack of interest or larger institutional hurdles. Evidence from Mexican immigrants in the U.S. has illustrated what kind of institutional

**Table 2**  
Descriptive statistics.  
Source: Statistics PL.

	(1)	(2)	(3)
	Total mean/sd	Pre EU-enlargement mean/sd	Post EU-enlargement mean/sd
Share right-wing votes	0.635 (0.174)	0.279 (0.104)	0.678 (0.124)
Log share right-wing votes	-0.509 (0.369)	-1.340 (0.360)	-0.408 (0.205)
Share left-wing votes	0.202 (0.175)	0.585 (0.107)	0.155 (0.113)
Log share left-wing votes	-1.728 (0.727)	-0.554 (0.199)	-1.894 (0.612)
Mean emigration per county	63.322 (110.893)	59.542 (163.876)	63.785 (102.586)
Mean immigration per county	30.935 (60.892)	19.759 (30.369)	32.302 (63.495)
Mean net migration per county	32.387 (95.438)	39.783 (153.078)	31.483 (85.773)
Mean population per county	100791.807 (113796.798)	99152.434 (84216.096)	100992.204 (116909.893)
Registered unemployed persons	5778.593 (4635.939)	6130.366 (3792.782)	5735.592 (4727.442)
GDP per capita, current prices	32113.792 (13282.178)	19030.684 (4468.770)	33749.180 (13111.318)
GDP per capita, constant prices	28624.087 (7566.302)	25057.242 (5883.921)	29515.798 (7678.163)
Average monthly per capita income	995.144 (335.650)	578.563 (65.465)	1047.217 (319.064)
Share of female residents	0.511 (0.009)	0.510 (0.008)	0.511 (0.009)
Percentage working in agricultural sector	15.214 (8.449)	19.046 (9.343)	14.735 (8.207)
Percentage working in industrial sector	30.496 (5.586)	31.404 (6.459)	30.382 (5.458)
Share of respondents aged 15–29	0.226 (0.024)	0.234 (0.012)	0.225 (0.025)
Share of respondents aged 30–49	0.283 (0.014)	0.291 (0.018)	0.282 (0.013)
Share of respondents aged 50–64	0.187 (0.029)	0.140 (0.014)	0.192 (0.025)
Graduates of higher education institutions	28911.405 (18651.956)	17533.029 (10973.578)	30333.702 (18925.290)
Share of incumbent parties	0.216 (0.232)	0.000 (0.000)	0.242 (0.233)
<i>N</i>	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.

hurdles explain low turnout (Finn and Besserer Rayas, 2022). While the turnout of voters in Poland averages around 50 percent, Polish citizens residing abroad have turnout rates below 5 percent. These low turnout rates are not due to selection as emigrants are on average more educated than non-emigrants and educated people have a higher turnout than the average citizen. We can therefore claim that the votes of emigrants are “missing”. This is important because Polish citizens residing abroad are voting differently. Figure A11 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.

#### 4. Empirical strategy

##### 4.1. Estimated regressions

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

$$\Delta Y_{t,i} = \alpha + \beta \sum_{k=1}^4 emig_{t-k,i} + \gamma X_{t-1,i} + \delta_t * \tau_s + \epsilon_{t,i} \quad (1)$$

In Eq. (1),  $\Delta Y_{t,i}$  is the change in the outcome variable for county  $i$  between year  $t$  and the previous election year. The main outcome variables are the share of votes for right-wing parties and the share of left-wing votes, both measured in logs.<sup>18</sup>  $\sum_{k=1}^4 emig_{t-k,i}$  measures the number of emigrants per county for all years since the preceding election up to the current election in logs.<sup>19</sup>  $X_{t-1,i}$  is a vector of regional characteristics in county  $i$  in year  $t-1$ , 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.<sup>20</sup>  $\delta_t * \tau_s$  are year\*state fixed effects. These fixed effects are important to capture changes over time in different states, for instance in the party landscape, due to inherent historical differences between states (for instance border states vs. non border states), or events that affected the whole state such as, for instance, the annexation of Crimea that increased European identity in Eastern European countries (Gehring, 2021). We cluster standard errors at the county level.

The coefficient of interest is  $\beta$ , which measures the effect of a one percent increase in emigrants per parliamentary term  $t$  on changes in political preferences in county  $i$ . If emigration is uncorrelated with the error term  $\epsilon_{t,i}$ , Eq. (1) provides a consistent estimate. Considering the presence of potential omitted variables, which may jointly determine both emigration and changes in political preferences, OLS regressions could 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 changes in 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  $emig_{t-k,i}$  are correlated and the OLS estimates are biased. To address these concerns, we are implementing an IV estimation strategy. We extend an instrument for emigration that has already been validated in the economic literature (Dustmann et al., 2016): distance to border. For this purpose, we measure the distance from each Polish county's centroid to the next border crossing point to a country with free labour mobility.<sup>21</sup> The main idea is that the closer a county is to an open border, the more likely it is that emigration is taking place. We expand this distance instrument in two dimensions to increase its exogeneity and relevance.

First, we introduce a time dimension by only measuring the distance to “opened” borders, i.e., borders of countries that allowed free labour mobility with Poland. This implies that borders to EU countries are closed before Poland's accession to the EU in 2004. Starting in 2004, Sweden (sea ports in the North), Lithuania, Czech Republic, and Slovakia allowed free labour mobility with Poland and from 2011, Germany allowed free labour mobility with Poland.<sup>22</sup> Thus, the different timing for the introduction of free labour mobility with Poland adds time variation to the instrument. For instance, a county that is close to the German border, has a high value for the IV before Germany allows free labour mobility as we measure the distance to the closest open border, which might be the Czech Republic border between 2004 and 2011. Once Germany introduced free labour mobility in 2011, we use the distance to the German border as the value of the IV. Second, we add the distance to the closest international airport in Poland.<sup>23</sup> For airports, we use 2004 as the opening time, which is when Poland first had access to several EU labour markets, most notably, Ireland, Sweden and the UK. For every county in Poland, the value of the IV is calculated every year as the minimum distance between this county and the next open border or international airport. Due to time variation in the opening of borders to labour mobility and airports, the IV also has a time dimension. The IV thus measures how far potential emigrants have to travel within Poland before labour emigration is possible. This captures variation in the costs of emigration.

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 open 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 kilometres). Figure A12 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 A13 shows the same when we measure distance in kilometres. 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 or airport. Kahanec et al. (2009), Constant (2011) and

<sup>18</sup> While taking the log of a share returns a negative value, by taking the difference between two logged vote shares, an increase in a vote share still corresponds to a positive value.

<sup>19</sup> For instance, if we consider the parliament elections in 2019, emigration in this parliamentary term includes the years 2015, 2016, 2017 and 2018. In most cases, these are four consecutive years.

<sup>20</sup> Results are robust to using a two-year lag or fixing all control variables to the year 2000. In this way, we avoid the problem of including “bad controls” in the regression.

<sup>21</sup> A centroid is defined as the mean position of all the points in all of the coordinate directions, i.e., the county's centre. To compute geographical distances, we use the Stata program `osrtime`, which allows the calculation of distance and travel time between two points using latitude and longitude information (Huber, 2016).

<sup>22</sup> Germany did not allow Polish workers to access the German labour market at the time of accession in 2004 because it was worried about the influx of cheap labour.

<sup>23</sup> The opening of airports after Poland's accession to the EU could be endogenous to migration decisions. We therefore exclude international airports that have been opened after 2004 to account for this kind of endogeneity (N=3, opening dates in 2012 and 2014). Furthermore, none of the airports in Poland were build during the negotiations for potential EU membership (in the period from 1998 to 2002).

**Table 3**  
First stage: County-level emigration and distance to border or airport.  
Source: Statistics Poland.

	(1)	(2)	(3)
	b/se	b/se	b/se
Distance in km, in logs	-0.094*** (0.030)		0.201* (0.103)
Duration in hours, in logs		-0.143*** (0.035)	-0.365*** (0.119)
State*Time FE	Yes	Yes	Yes
Regional covariates	Yes	Yes	Yes
N	2955	2955	2955
N counties	380	380	380
R-Squared	0.702	0.703	0.703
F-Stat	32.112	51.527	30.612

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 kilometre, respectively. Standard errors are clustered at the county level.

Kahanec (2013) show that the EU accession and especially the labour market openings have increased emigration from new Eastern European members. Due to their early opening, the UK and Ireland became the most important EU destination countries for Polish emigrants. Kahanec et al. (2016) argue that emigration would have been larger if all labour markets had opened instantaneously.

Table 3 shows the corresponding first stage regressions.<sup>24</sup> The F-Statistic is well above 10. Therefore, we conclude that the instrument is relevant.

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, 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. We also conduct a large number of robustness checks to corroborate the validity of the exclusion restriction, such as adding immigration or temporary emigration as additional control variables.

It is also important to note that many other changes that came with EU accession such as free trade, facilitated investment, regional funds and others happened right at accession in 2004 (thus captured by time fixed effects) or before and did not follow the same staggered introduction as labour mobility. Figure A10 shows the vote share for the right in 2001 (before the increase in emigration) for counties in Poland and illustrates that there are no specific spatial patterns in support for right-wing parties with respect to counties at the borders and the centre of the country (especially once state\*time fixed effects are accounted for).

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, using distance to 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 labour 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) uses it for the immigration status of Mexicans to the U.S., and Ruiz and Vargas-Silva (2015) measure the proximity of Tanzania's 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

### 5.1. Voting for right-wing and left-wing parties

This section examines the effect of emigration from Poland on voters' support for right-wing and left-wing parties in the home country using both an OLS and an IV estimation strategy. In both specifications, we include state\*time fixed effects. We do not report results for parties that are classified as "centre" (cf. Section 3.3), because (1) only very few Polish parties are classified as such and (2) besides the Polish Peasants' Party (PSL), centre Polish parties generally receive a very low share of votes. Therefore, in line with our expectations, we do not find significant and interesting results for "centre" parties.

Column 1 from Table 4 indicates that an increase in the county-level emigration rate is positively correlated with the vote share for right-wing parties in the origin country, such as PiS. The relationship is statistically significant at the one percent level and indicates that a one percent increase in the county-level emigration rate increases the share of right-wing parties by 0.019 percent. This result confirms our central hypothesis.

<sup>24</sup> We report the F-Statistic provided by the first stage regressions from the Stata program `ivregress` controlling for a vector of regional-level characteristics (see Section 4).

**Table 4**

Effect of emigration on the share of right-wing and left-wing votes.

Source: Statistics PL and National Electoral Commission (PKW).

	(1)	(2)	(3)	(4)
	Share right-wing	Share right-wing	Share left-wing	Share left-wing
	OLS	IV	OLS	IV
	b/se	b/se	b/se	b/se
Log emigration per county	0.019*** (0.004)	0.249** (0.126)	-0.050*** (0.010)	-0.569** (0.266)
State*Time FE	Yes	Yes	Yes	Yes
Regional covariates	Yes	Yes	Yes	Yes
Mean right-wing	0.635	0.635		
Mean left-wing			0.202	0.202
N	2955	2955	2546	2546
N counties	380	380	380	380

Note: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. The outcome variable in column 1 and 2 (column 3 and 4) 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. Standard errors are clustered on the county level and are displayed in parentheses. The number of observations drops for the share of votes to left-wing parties in columns 3 and 4, because no left-wing party reached the required 5 (8) percent threshold in the 2015 parliamentary elections. To control for county-level characteristics, we include the following covariates: registered unemployed persons, GDP per capita, per capita average income, share of female residents, percentage working in agricultural sector, share of respondents aged 15–29, aged 30–49, aged 50–64, graduates from tertiary migration, and net internal migration.

In contrast to the OLS results, we may interpret IV estimation result in column 2 causally, which shows that increasing emigration leads to rising vote shares for right-wing parties in the origin-country due to emigrants' missing left-leaning votes. 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 0.249 percent. Control variables go in the intuitive direction (see Table A2). With respect to voters' preferences to left-wing parties, the OLS regression in column 3 illustrates that a higher level of county-level emigration is correlated with a statistically significant decline in votes to the left-wing parties (0.050 percent). This confirms our secondary hypothesis. Similarly to previous results, 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 0.569 percent. These results are in line with the argument 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.

The following back-of-the-envelope calculations further quantify the treatment effects. For instance, the more conservative OLS estimation suggests that a one percent increase in the county-level emigration rate decreases the vote share for left-wing parties by 0.05 percent; i.e., doubling emigration (a 100 percent increase) decreases the share of votes for left-wing parties by 5 percent. If the number of emigrants per county doubled in a 4-year period before an election, this would correspond to 1,260 additional emigrants per county.<sup>25</sup> A 5 percent decrease in the vote share for left-wing parties consequently represents a reduction of 504 votes per county.<sup>26</sup> We consider these votes missing.

There are several reasons why the IV estimates are larger than the OLS estimates. The first and most likely reason is measurement error in the emigration data, for instance due to unrecorded emigration. This 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. Second, 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 an expected economic downturn that 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. Third, the group of compliers could be different from the average migrant. Compliers are reacting to labour market openings, so they are more likely to be labour migrants than – for instance – family migrants. Migrants under 18 years, e.g., are not likely to be affected by labour restrictions and are not influencing voting outcomes. Moreover, 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. The direction of the bias depends on whether the right- or the left-wing parties won the election. However, we think this is unlikely to drive the difference in the results due to the time structure of our data, considering that emigration is measured in the years preceding the election. Thus, OLS estimates could be interpreted as a conservative lower bound of the true effect, whereas IV estimates might be interpreted as the upper bound.

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 A3 shows that there exist differences between counties with low (control group) and counties with

<sup>25</sup> This estimate is based on administrative records from Statistics Poland: the average population size per county amounts to 100,791 residents, while on average 63 people emigrate per county per year. In a 4-year period, this amounts to 252 emigrants per county. Comparing administrative emigration data with Eurostat data on arrivals indicates that administrative emigration data is underreported by a factor of 5 (Statistics Poland, 2018). Accounting for underreporting in our data, we therefore estimate that on average 1,260 people emigrate per county in a 4-year period.

<sup>26</sup> This number is based on an average population size per county of 100,791, an average turnout of 50 percent and an average vote share for left-wing parties of 20 percent.

Table 5

Effect of emigration on attitudes towards Europe and the share of votes to the incumbent parties (IV estimation results).

Source: Statistics PL, ParlGov, CHES (2002–2019), and National Electoral Commission (PKW).

	(1)	(2)	(3)	(4)	(5)	(6)
	Favouring integration b/se	Importance of integration b/se	Favouring cohesion b/se	Favouring intl. market b/se	Pro EU b/se	Share incumbent b/se
Log emigration per county	0.109 (0.084)	0.161* (0.088)	0.077* (0.045)	0.173* (0.102)	0.094 (0.058)	−0.027 (0.063)
State*Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Regional covariates	Yes	Yes	Yes	Yes	Yes	Yes
Mean	0.046	−0.149	0.145	0.008	1.837	
Mean Incumbent						0.216
N	2955	2955	2955	2955	2955	2955
N counties	380	380	380	380	380	380

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 columns (1) to (4) were standardised. Outcome variable “Favouring EU” is measured on a scale from 0 “anti EU” to 10 “pro EU”. Outcome variable “share incumbent” is the share of votes for the incumbent parties per county and election year. Emigration is measured as the number of emigrants per county in logs. Standard errors are clustered on the county level and are displayed in parentheses. To control for county-level characteristics, we include the following covariates: registered unemployed persons, GDP per capita, per capita average income, share of female residents, percentage working in agricultural sector, share of respondents aged 15–29, aged 30–49, aged 50–64, graduates from tertiary migration, and net internal migration.

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 A3 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. We re-estimate Eq. (1) using Polish counties with common support only. Estimated results are displayed in Table A4. The estimates are remarkably similar to our baseline specification.

A common limitation of studies about voting behaviour is the fact that we often do not observe who individuals vote for. Thus, we try to make inferences by observing a larger group (in our case emigrants and non-emigrants in a county). This could constitute an ecological fallacy, as an aggregate correlation is not equal to the relevant individual correlation ([Alabrese et al., 2019](#); [Kramer, 1983](#); [Robinson, 1950](#)). In this paper, we treat the emigrants and the left behind voters in a county as a homogeneous group, instead of exploring heterogeneities within the groups. This is due to the fact that we do not have information on individual voting behaviour. Therefore, all arguments relate to aggregate group voting and we cannot make any inferences on the voting of individuals.

## 5.2. Voting for pro-European parties and the incumbent

Besides analysing votes for certain parties, it is also interesting to analyse whether emigration causes voters to prefer parties with certain positions. One particularly interesting party position in this context is the party’s stance towards 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 5 shows weak evidence that emigration causes voters to elect parties with positive attitudes towards the European Union. This is robust to using different indicators and different datasets. Columns (1) to (4) use different EU-related indicators from the CHES dataset and column (5) uses an EU indicator from the ParlGov dataset. The IV estimation results show that emigration causes voters left behind 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.<sup>27</sup> 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.

<sup>27</sup> 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.

Another interesting voting outcome is the vote share that goes to the incumbent. We define the incumbent as those parties that formed the government in the preceding national parliament election, i.e., to estimate the causal effect of emigration on the incumbent, we compute the share of votes to the incumbent parties per county in a given election year.

In most election years, this is a coalition of different parties. There are two different hypotheses 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 who 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 column 6 in [Table 5](#), 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](#)) which found that increasing emigration leads to more voting for the opposition and thus less voting for the incumbent.

### 5.3. Trust in political institutions

Besides direct voting outcomes in Poland, we also consider the trust of the left-behind in political institutions in Poland as an alternative outcome that corroborates our voting results. We analyse whether increasing emigration affects stayers' trust in political institutions, 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 versus trust in political institutions. For the respective analysis, we draw information from the LiTS survey data, which provides information on values and attitudes of Polish residents in 2006, 2010 and 2016 (cf. [Section 3](#)). Importantly, its repeated cross-sectional design covers the different periods in the lead of government. Thus, because we only have three cross-section variations and because we do not observe surveys in all counties, we do not run IV regressions on trust.

We regress stayers' 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 otherwise.<sup>28</sup> Moreover, we control for an individual's sex, age, and education, as well as the same set of regional-level covariates including regional fixed effects. If social preferences work in the same way as voting patterns, we would expect that high levels of emigration have different effects 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 have left Poland and their voice is thus missing. 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 have left their country of residence and the left-behind are more likely to be right-leaning.

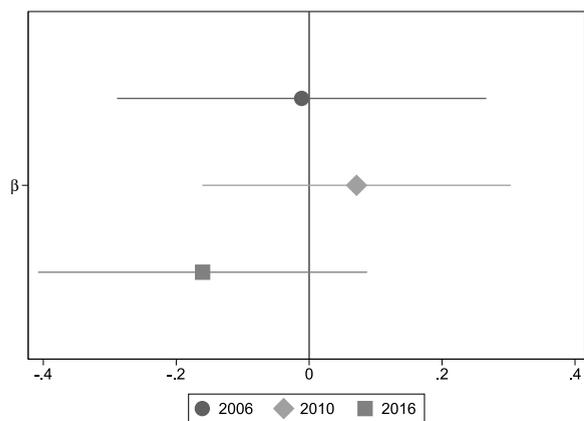
[Fig. 3](#) strongly supports our previous results and our third hypothesis. The respective figure illustrates the effect of increasing emigration on stayers' trust in people, trust in government, trust in parliament, trust in parties, trust in courts, and trust in the president in Poland. For all variables capturing trust in authorities, we consistently find a change in trust levels over time periods ([Fig. 3\(b\)](#) to [Fig. 3\(f\)](#)). For instance, while high levels of emigration decrease stayers' trust in government by 0.2 units in 2006, the estimate is positive and statistically significant in 2016 (+ 0.6 units, see [Table A6](#))<sup>29</sup>. It is important to highlight that this is a composition effect due to the selected emigration of those that have trust in left-leaning governments. In contrast, the effect of emigration on stayers' 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 stayers' trust in political institutions behaves in the same way like stayers' voting patterns.

## 6. Mechanisms

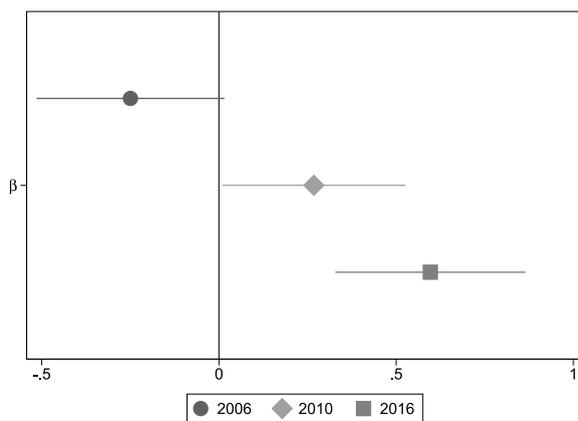
Our central hypothesis is that the increase in right-wing voting in Poland can be explained by missing votes due to the selection of emigrants. We have shown that emigrants are more high-skilled than the stayers, are selected from the young working age population and have left-leaning political preferences. We have also seen that their turnout rate is on average 10 percent for elections in Poland, significantly lower than the 50 percent turnout of stayers. In addition, emigrants constitute around 11 percent of the Polish population. Therefore, the large amount of left-leaning emigrants' votes are missing in Polish elections. This leads to increasing votes for the right-wing parties in Polish elections. Emigration is thus an important determinant of election outcomes in Poland and can be decisive in close elections. An alternative mechanism could be changing votes of the population left behind due to financial, cultural or political remittances. Our central hypothesis implies that those left behind do not change their voting behaviour. The alternative potential mechanism emphasises that those left behind change their voting patterns due to their interaction with emigrants. We exploit a change in the voting mode in 2014 to disentangle the two potential mechanisms. We find stronger evidence for our central hypothesis on missing votes in Poland due to selection effects.

<sup>28</sup> 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".

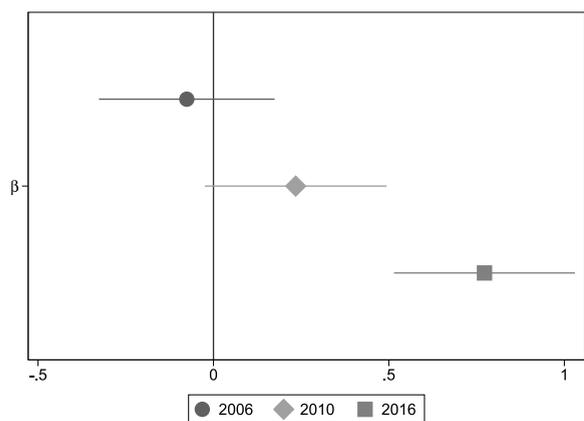
<sup>29</sup> The results are also robust to using a linear probability model, where we define the outcome variable, trustworthy, to be equal to one if trust  $\geq 4$ . Results are available upon request.



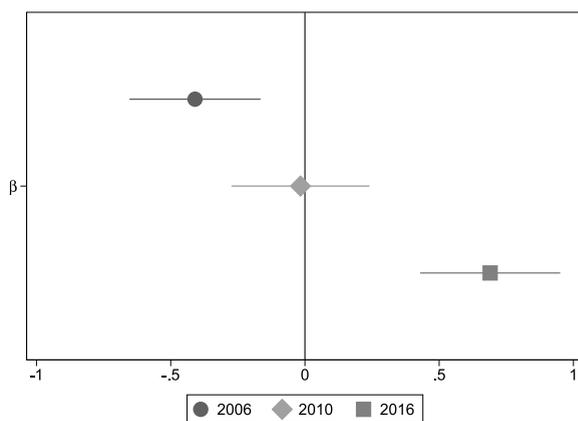
(a) Trust in people



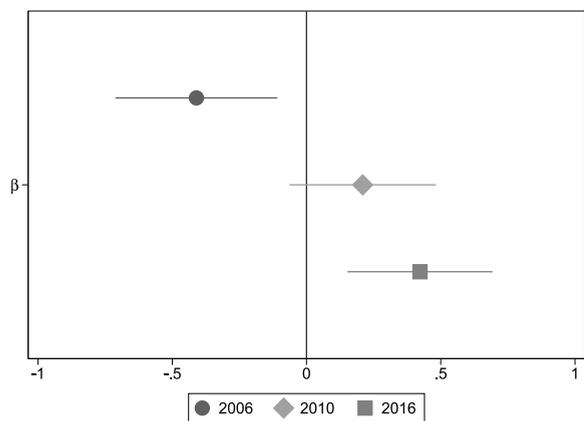
(b) Trust in government



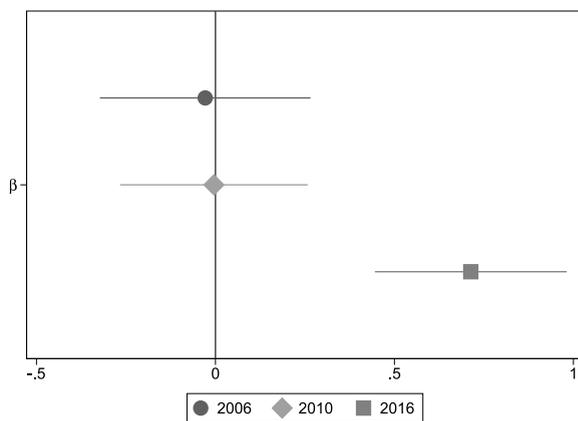
(c) Trust in parliament



(d) Trust in parties



(e) Trust in courts



(f) Trust in president

Fig. 3. The effect of high emigration on trust in political institutions of individuals left behind in Poland.

Note: Figs. 3(a) to 3(f) display visual results for trust in institutions of individuals left behind. 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 6**

Effect of emigration on voting in different time periods (IV results).

Source: Statistics PL and National Electoral Commission (PKW).

	(1) Pre 2014 Share right-wing b/se	(2) 2014–2019 Share right-wing b/se	(3) Pre 2014 Share left-wing b/se	(4) 2014–2019 Share left-wing b/se
Log emigration per county	0.269** (0.132)	0.095 (0.066)	−0.651** (0.315)	−0.034 (0.112)
State*Time FE	Yes	Yes	Yes	Yes
Regional covariates	Yes	Yes	Yes	Yes
Mean right-wing	0.635	0.635		
Mean left-wing			0.202	0.202
N	2199	756	2168	378
N counties	380	380	380	380

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. Standard errors are clustered on the county level and are displayed in parentheses. To control for county-level characteristics, we include the following covariates: registered unemployed persons, GDP per capita, per capita average income, share of female residents, percentage working in agricultural sector, share of respondents aged 15–29, aged 30–49, aged 50–64, graduates from tertiary migration, and net internal migration.

### 6.1. Evidence from a change in voting rules

To dig deeper and investigate the central hypothesis of missing votes, we exploit a change in voting rules: for elections before 2014, it was impossible to cast postal votes from abroad, making it much harder for emigrants to participate in elections. In 2014, casting a vote from abroad has been facilitated both by the introduction of postal voting and the increase in polling stations abroad, which could have reduced the opportunity costs of voting and thereby may have decreased the effects of missing votes.

Table 6 indicates that the results are indeed heterogeneous over time, suggesting that the results are driven by earlier periods. This is what we would expect once voting from abroad was facilitated if our central hypothesis is true. For instance, a one percent increase in the number of emigrants per county decreases the share of right-wing votes by 0.269 percent for elections until 2014. For the period from 2014 to 2019, the estimate drops to 0.095 percent.<sup>30</sup> This pattern holds for the share of left-wing votes, too.

If it is indeed selective emigration and emigrants' missing votes that drives our estimation results, we would further expect emigration to have an effect on the composition of the population in origin counties, i.e., in terms of age, gender, and education. We therefore estimate the effect of emigration on these characteristics, controlling for the same variables as in our main specification (excluding the relevant covariate). Table A5 shows that emigration increases the share of female residents per county, decreases the number of graduates with tertiary education, and decreases the number of young working-age adults. We take this as suggestive evidence for our central hypothesis.

### 6.2. Alternative mechanisms

There exist several alternative mechanisms such as financial remittances, return migration or cultural remittances. For instance, if family members benefit from financial 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. Unfortunately, we do not have data on remittances at the county level.<sup>31</sup>

Other alternative transmission channels could be return migration or cultural remittances. While there is literature that shows the existence of each individual mechanism in a given context, we lack individual-level migration data, which may provide further evidence on the relative importance of these channels. Unfortunately, we also do not know the destination of emigrants at the county level.

However, the presented evidence from the change in the voting mode does not support the idea that these alternative mechanisms are the main driver behind our results. There was no change in these alternative mechanisms in 2014. This is in contrast to some previous literature that finds evidence on those channels. One reason for this is that the cultural, social and political differences between origin and destination countries are much smaller in our context than in previous papers which often considered across-continent migration or migration from non-democratic countries to democracies. Our paper thus expands this literature and provides evidence that the selection mechanism dominates various remittance mechanisms if origin and destination are similar and there is less scope for cultural, social or political remittances.

It is important to disentangle these two mechanisms as the lessons learned and take-aways for policy makers and politicians are very different. If voting outcomes in the origin are affected due to emigrants' missing votes, then politicians can strategically

<sup>30</sup> For the period from 2014 to 2019, we consider only elections where postal voting has been available to the general public (see Section 2).

<sup>31</sup> The Polish Labour Force Survey which potentially would have such data does not have representative migration data at the county level.

influence voting outcomes by facilitating or deterring voting from abroad. This is important for countries with large diasporas. If, however, cultural, social or knowledge remittances were the driving factor, then policies engaging the diaspora in closer contact with stayers could be more important.

## 7. Robustness checks

Our results show that a higher county-level emigration rate has a strong and positive effect on the vote 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 and their interaction. In this section, we provide additional robustness checks to support the respective results.

### *Robustness to using alternative ways to measure emigration*

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 A9 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: a one percent increase in the number of emigrants increases the share to right-wing parties by 0.187 percent. Alternatively, we define emigration as log shares of emigrants (number of emigrants as percent of the population in logs, cf. Table A10). In line with our main results, a one percent increase in the share of emigrants increases the share of votes for right-wing parties by 0.318 percent. The effects of emigration on the share of votes for left-wing parties are slightly smaller compared to the main results. Furthermore, Table A11 shows that the results are robust to controlling for additional types of migration, including net internal migration (migration across counties), temporary emigration, and permanent immigration.<sup>32</sup>

A potential concern in our data is the fact that emigrants who leave Poland for a period of 12 or more months may not necessarily report their absence to the local authorities. Hence, permanent emigration numbers provided by Statistics Poland may serve as a lower bound (underreporting). For instance, if we compare the number of permanent versus temporary emigrants reported by Statistics Poland (cf. Figure A4), temporary emigration numbers are roughly thirty times as large as the number of people registering for permanent departure. While temporary migrants may move back and forth, this suggests that underreporting is indeed present. To account for the presence of underreporting, we thus relate both numbers in an additional robustness check: We first compute the ratio of temporary and permanent emigrants per state and year and, subsequently, multiply the number of permanent emigrants per county in a given year by this factor.<sup>33</sup> We then reestimate the effect of emigration on electoral outcomes in Poland. Table A12 illustrates that estimates are robust to rescaling the number of emigrants by this underreporting factor.

### *Robustness to using alternative ways to measure distance*

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 individuals are 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 rationale 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 types of exit points. Table A13 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 both specifications are in line with previous specifications: larger emigration rates increase the share of votes for right wing parties, while decreasing the vote share to left-wing parties.

### *Robustness to using different instruments*

Our instrument relies on the assumption that the closer a county is to an opened 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 kilometres or by using an over-identified instrument (see [Table 3](#)). Tables A7 and A8 demonstrate that the estimation results are robust to the usage of alternative instruments. Compared to our baseline estimation, the estimates tend to increase in size if we instrument emigration by geographical distance

<sup>32</sup> While the inclusion of further migration-related variables allows us to purge the estimates from potential confounders, which strengthens the validity of our approach, we find that county-level migration rates (immigration & emigration) are strongly correlated. Hence, considering that the F-Statistics are strongest if we abstain from adding these alternative controls in our specifications, we do not include them in the main specification, but show the robustness of our results in a robustness check.

<sup>33</sup> Ideally, we would like to compute this rescaling factor at the county level for each year. Given that the number of temporary emigrants are only available at state level, this is unfortunately impossible. Furthermore, we would have liked to cross-check our emigration data with other administrative data sources provided by Eurostat, the OECD or the UN. Due to data limitation reasons (e.g., emigration numbers are not provided for many host countries and years), however, this creates more problems than it solves.

and decrease in the over-identified case. Only for the share of right-wing votes, the over-identified instrument returns a statistically insignificant estimate.

#### **Omitted unobservable factors and weak IV test**

To investigate the concern that our results are driven by omitted unobservable factors, we perform the robustness check following the method proposed by Oster (2019). For our main results in the OLS models, we separately calculate Oster's delta, which indicates the degree of selection on unobservables relative to observables that would be needed to fully explain our results by omitted variable bias. Following Oster (2019), we use the rule of thumb of  $R_{\max} = 1.3 \cdot R\text{-squared}$  and partial out state\*time fixed effects. High delta values indicate that the unobservables have a smaller effect on our coefficient of interest than the observables. To be able to argue that unobservables cannot fully explain the treatment effect, Oster's delta needs to exceed a value of one. For our main specification for the share of right-wing voting, Oster's delta is 1.89 and for the share of left-wing voting it is 8.45. Therefore, we conclude that our results are unlikely to be driven by omitted-variable bias.

We have also conducted two tests for weak instruments. The test by Olea and Pflueger (2013) indicates that we can reject the null hypothesis and the instrument is valid, i.e., the bias is not greater than 10 percent (Effective F-statistic: 33.491). We further can show that the Kleibergen-Paap rk Wald F-Statistic for a test of weak instruments equals 16.869 for clustered standard errors.

#### **Robustness to excluding borders to non-European countries**

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 suggests that the effect should be more prevalent if we consider the distance to fellow EU member countries only. Table A14 illustrates estimation results using an alternative distance measure, which includes border crossing points to non-European neighbours. In line with our expectations, the estimates are similar in size, but statistically insignificant, indicating that our results are driven by the distance to the European border.

#### **Robustness to accounting for potentially "bad controls"**

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.<sup>34</sup> In this specification, we may argue that control variables are exogenous. Table A15 illustrates that a one percent increase in the number of emigrants per country increases the vote share to right-wing parties, while decreasing the vote share to left-wing parties at the same time.

#### **Robustness to using alternative party classifications**

Our main specification classifies parties into a right-centre-left scheme based on the Comparative Political 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 A16 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 0.129 percent towards the right (column 5, Table A16). Furthermore, Table A17 shows the respective regression results based on party families. In line with our previous estimations, we find a strong positive effect of emigration on the share of votes for conservative parties (column 1). Considering that both social-democratic and agrarian parties are classified as left-wing parties, we further expect a negative and statistically significant effect for these two party families. Columns 3 and 4 confirm our expectations. While increasing emigration decreases the share of votes for social-democratic parties by 0.399 percent, the effect is even stronger for parties from the agrarian party family (−1.001 percent). For the share of votes for liberal parties, however, we find no statistically significant effect.

#### **Relationship between emigration and turnout**

Section 3.5 highlights that turnout rates in Poland are moderate to low and that turnout among emigrants is even lower. If these votes are "missing" in the electoral process, emigration should influence absolute turnout. Turnout is, however, strongly correlated with population size (see Table A18). Likewise, more densely populated counties experience stronger migration flows. It is therefore not surprising that we find a moderate positive relation between emigration per county and absolute turnout. Figure A14b then illustrates the relationship between emigration per county and turnout per 1,000 inhabitants. In this specification we find a negative and significant correlation between emigration and relative turnout.

#### **Robustness to using jackknife re-sampling**

The instrumental variable approach may suffer from bias in case of a weak instrument or in the over-identified case (Poi, 2006). Although none of these conditions are met, we estimate Eq. (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 building the average of these calculations. Table A19 demonstrates that the results resemble our main specification to a great extent.

#### **Robustness to using the European parliamentary elections in 2019**

<sup>34</sup> 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 therefore include time fixed effects in this specification only.

In 2019, Poland experienced a novelty. In contrast to all other election years, eligible voters could participate in two elections: the parliamentary and European parliamentary elections. For our main specification, we focus on electoral outcomes for the national parliament (sejm). However, Table A20 illustrates that our results are robust to considering the European parliamentary electoral outcomes.

#### **Robustness to using an alternative definition of the parliamentary term**

Finally, we show that our results are robust to an alternative definition of the parliamentary term (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 A21. For both outcomes, including the share of votes for 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**

Using Poland as a laboratory, this paper highlights that the vote share for right-wing parties increases in the country of origin due to emigrants' missing left-leaning votes. The empirical analysis thereby confirms our central hypothesis. Emigrants are selected with respect to their 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 casting a vote. Therefore, Polish municipalities with larger emigration rates experience stronger voting for right-wing parties. We find that social preferences, in particular stayers' trust in political institutions in the home country, corroborate our results. Using heterogeneity across time, we find suggestive evidence that the underlying mechanism is emigrants' missing votes. Results are robust to estimating the regression equation including different controls that capture changes in the industry, age, gender or education structure.

These insights are important beyond Poland. Two examples where a large diaspora already has the potential to matter for voting outcomes are Mexico and Turkey. However, 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 rise in migration influences election outcomes. In which way election outcomes in the origin are affected depends on the selection of emigrants and the context of the origin country. If emigrants are more likely to vote for left-leaning parties, then their missing votes can contribute to increasing votes for right-wing parties in the origin country.<sup>35</sup> Paradoxically, in this context migrants seem to increase voting for right-wing parties both in their origin and their destination country.<sup>36</sup> While the effect at the origin is mostly due to a change in the 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 host population.

One of the principles of democracies is that all citizens who have the right to vote should be able to exercise this right. Our work highlights the political consequences of emigrants not being able to exercise this right at a reasonable cost. One clear policy implication from this work is that governments need to implement easy registration and voting procedures and modalities also for emigrants. There have already been efforts that go in this direction including e.g., the introduction of voting by post and increasing the number of places where emigrants can cast their vote abroad. However, it is often not implemented in all kinds of elections and for all destination and origin countries.

In the second round of the 2020 Polish presidential election, the populist right-wing candidate Andrzej Duda won with only 51.0 percent to the opposition candidate Rafal Trzaskowski. The difference was only 422,385 votes. Among the Polish diaspora, however, the opposition had a much stronger result and won 74 percent of votes. Yet, turnout abroad was much lower and only 415,951 votes from abroad were counted (there are approximately 4.8 million Polish citizens living abroad, see UN DESA (2020)). This corresponds to a turnout of 10.4 percent. Had the turnout among the diaspora been close to that of Polish citizens (68 percent), the opposition would have won.<sup>37</sup> After the election, there have been numerous complaints filed with the courts from citizens abroad whose voting documents did not arrive or arrived too late. They accused the government of suppressing voting from abroad.<sup>38</sup> This anecdote illustrates that emigrants may matter for election outcomes and can represent the tipping point.

#### **Declaration of competing interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### **Data availability**

Data will be made available on request.

<sup>35</sup> Nowakowski (2021) suggests that the general dissatisfaction with one's well-being could also be related to this surge in right-wing party votes.

<sup>36</sup> 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, in other contexts, also papers that show opposite effects in the special case of refugees (Steinmayr, 2021) or when immigrants can vote (Mayda et al., 2022).

<sup>37</sup> This assumes that abroad-living abstainers would have voted in the same way as abroad-living voters.

<sup>38</sup> The New York Times: <https://www.nytimes.com/2020/07/16/world/europe/poland-election.html>.

## Appendix A. Supplementary material

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.ejpoleco.2023.102398>.

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