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Masters Thesis

**The effect of outward migration on election outcomes in Estonia,
Latvia, and Lithuania after accession to the European Union**

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AUTHOR'S DECLARATION

I, Helen Winifred Kristina Wright, have written this Master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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ABSTRACT

Since 2004, hundreds of thousands of people have emigrated from Estonia, Latvia, and Lithuania to work and live abroad in other European Union member states. Once outside of their countries these citizens - like the majority of emigrants around the world - stop taking part in home elections. This thesis examines what could have happened if these voters had stayed in their home countries and continued to vote. Would election outcomes have changed if these people had participated in them? I look specifically at one election from each country, all of which took place between 2014 and 2016, and their outcomes. My time frame for emigration from Estonia, Latvia, and Lithuania started in 2004 after all three countries joined the European Union, and ended the year of, or year before, the election I have chosen to study. Using an impact assessment and counterfactual model, I calculated my results using data from each country's national statistics office and the European Social Survey. My results show that election outcomes in Estonia and Lithuania would have remained broadly the same, but in Latvia the political party which received the highest vote share would have changed. In Estonia and Latvia, the centre-right parties would have been strengthened with these extra votes, in Lithuania centre-left parties would have gained more support than they did in the real election. This thesis adds to the narrow genre of literature that already exists and looks at the impact of emigration on politics and elections in home countries. It is the first, to my knowledge, that looks specifically at election outcomes in the Baltic states or any of three countries.

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KEYWORDS: Estonia, Latvia, Lithuania, European Union, EU8, Emigration, Elections, Voting, Migration, Politics,

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INTRODUCTION

Around the world, in the last three decades, external voting has “boomed” (Lafleur, 2011) as governments have extended the right to vote to their citizens who live beyond their home countries borders. But there has been a downside to this extension of democratic rights - turnout data shows that emigrants do not vote. “There has been a noteworthy gap between the policy aims and the policy outcomes, characterised by low turnout and marginal electoral impact” say Hutcheson and Arrighi (2015). Research suggests high-levels of emigration have impact on sending countries’ labour markets, demographics, and political institutions. But what happens to a sending country’s elections when a large amount of emigrants stop voting? Does this voluntary disenfranchisement have an impact on a country? This what this thesis seeks to find out.

In 2004, Estonia, Latvia, and Lithuania joined the European Union alongside five other countries - the Czech Republic, Hungary, Poland, Slovakia, and Slovenia - which, collectively, became known as the EU8. As well as gaining places at the decision making tables in Brussels and Strasbourg, their citizens gained the right to freedom of movement to live and work throughout the European Union. In the Baltics, unlike in Poland, access to freedom of movement did not have an immediate effect and pre-accession levels of outward migration increased by only around 1,000 each year, in each country (Hazans and Phillips, 2011). But the impacts that followed the global financial crash in 2008 hit these three countries hard. As their economies stalled and shrank, tens of thousands of people began to use their new found rights to leave and find better opportunities elsewhere. But when these economies started to grow again, emigration rates continued to rise instead of fall. Latvia and Lithuania still have high levels of emigration and in 2017 more than 50,000 people left Lithuania (BNS/

Lithuania Tribune, 2018). In the same year, Estonia recorded positive net migration for the third year in a row (a gain of 3,070 people or 0.2%), but 12,358 people emigrated (Statistics Estonia, 2018; Tammur, Tammaru and Puur, 2017).

Today, in 2019, more than 10% of the workforce of Latvia and Lithuania, and at least 6% of Estonians, live outside of their home countries. These are estimates at best because accurate migration data is hard to obtain, and some organisations say these figures are too low. But whatever the exact number, this is several times higher than the average number of EU citizens living outside of their countries, which is between 2-3% (Golubeva et al, 2016). When people emigrate, their participation in elections decreases and many people become disengaged from their home country and its subsequent elections. Data shows that a maximum of 10% of Latvian emigrants - around 23,053 voters, an increase of more than 8,000 from the previous election - (Latvian Ministry of Foreign Affairs, 2014) and Lithuanian emigrants (Ramonaitė, 2009) participated in recent elections. The figure is lower for Estonians, who also have the ability to easily cast their votes online instead of only by post or at an embassy, unlike Latvians or Lithuanians (Oll, 2015). For the 2015 election 11,273 votes from abroad were submitted or 2% of total votes (Solvak & Vassil, 2016).

But why does voter abstention and non-participation behaviour matter to these three countries? It matters because the governments of Estonia, Latvia, and Lithuania believe that the best way to stall demographic decline in each country is to get emigrants to return. But if these emigrants do not feel connected to their homeland, or if governments who do not stand for their values are in power, are they still likely to return? By emigrants not voting in home country elections, specific policies and parties can become stronger due to the rapid and non-random change in voter composition which is taking place as these emigrants withdraw from the democratic process. For example, if fewer young people vote - as younger people are more likely to emigrate - parties may create policies directed at older people who do vote, and ignore the views of younger people. As a result, it is possible that society has moved in a different direction than it

would have otherwise done had these people not emigrated and continued to vote. Different parties could have received the majority vote share in elections or enacted different policies without support from others. So, if this is the case, if society has moved too far away from a place these young emigrants want to live, will they return permanently again?

This **aim** of this thesis is to examine the effect of outward migration from Estonia, Latvia, and Lithuania on election outcomes after the three countries joined the European Union in 2004. It focuses on how outward migration altered the demographics of each country, and how this has changed the composition of eligible voters. It examines if this change in voter demographics has had any effect on election outcomes, and, if so, determines what those changes could have been. It seeks to find out which, if any, political parties have gained or weakened in strength since 2004 due to the change in voter composition. The elections selected for study are three recent national elections which took place in Estonia, Latvia, and Lithuania from 2014 to 2016. The most recent for Estonia (2015) and Lithuania (2016), but not for Latvia (2014) as the 2018 election took place while this thesis was being written. My **research questions** are as followed:

1. How have voting demographics changed in Estonia, Latvia and Lithuania since 2004?
2. What political forces have been strengthened as a result of outward migration?

Estonia, Latvia, and Lithuania were selected for study because they all joined the European Union at the same time in 2004 and so each country's migration patterns share some common characteristics with the other two. A second reason is that each country has a higher proportion of emigrants living outside of their home country than average. Thirdly, compared to emigrants from central European countries who joined the European Union at the same time, Baltic migrants have been shown to be more mobile since accession (Hazans and Philips, 2011; Golubeva et al, 2016).

The **methodology** used in this thesis will be an impact assessment and counterfactual analysis which will test what the impact of a large non-random section of society not participating in elections is. Non-random is defined as people who share the same socio-demographic characteristics, such as age, gender, or education level. A random section of society would be a representative sample of the population which would then see similar results across all areas of society rather than in just one, or several, specific areas. Demographic characteristics - such as age, gender, employment, and marital status - have been shown to affect the way people participate in elections, so when a large non-random group of people withdraw from the electoral process this should have effects on the outcome of elections. This is because there have been changes to the overall voting population which should, at least potentially, create an impact on the elections' results.

To calculate these results quantitative emigration data from statistics agencies in Estonia, Latvia, and Lithuania have been used to create an impact assessment using a counterfactual model. This model measures the estimated impact of outward migration on elections in each country. To create the model a series of demographic profiles of these emigrants based on their age and gender - factors shown to influence voting behaviour and characteristics collected by statistics agencies - have been made. These profiles were then matched against similar people who stayed in their home countries and voted in elections. The total number of emigrants over the age of 18 were added to each demographic of home country voters and assumed that they would have voted in the same way had they not emigrated. The results of this method shows the likely effect of outward migration on election outcomes based on empirical evidence and what effects are felt when a large non-random section of the electorate stop voting. These results indicate the possible policy differences but this will not be the main outcome of this thesis. The results have not be used to further speculate on the impact of different policies that could have been introduced if the hypothetical scenario shown in the impact assessment had actually happened, or claim that they would have been introduced instead of policies that were.

There are several **limitations** to using this approach because a counterfactual can only ever be regarded as an estimate of what might have happened, and the data I have selected to use is nowhere near ideal. However, this is an issue with the collection of migration and emigration data as a whole which I alluded to above, rather than just the data I have chosen to use. These limitations are thoroughly explained and expanded upon in section three.

Migration and emigration have a high degree of visibility and saliency in domestic media and are regularly discussed by politicians in the Baltic states. From time-to-time the issue of emigration, particularly from Latvia and Lithuania where the population decline has been steepest, is also written about by the international media. In countries which receive high levels of immigration - such as the UK, Germany, Finland, Sweden, and Ireland - the media shows an interest in what has happened to the countries that their new migrant populations have left, with varying degrees of accuracy. But these reports mostly focus on the labour market rather than the effect on these countries' politics. Governments from all three Baltic countries have publicly launched campaigns to attract migrants back home, especially Latvia (LSM, 2018) although none to date have been particularly successful. These efforts have also been criticized by the domestic media in each country for not attracting people to return. Annual migration figures are reported by the media in each country when published, provoking wider debate. During Lithuania's 2016 national elections the outsider party, now known as the Greens and Farmers Union which went on to win the biggest vote share, put bringing back young emigrants at the centre of its manifesto (BBC, 2016). Lithuania will also hold a referendum on dual citizenship in 2019 in tandem with the presidential election (LETA/ The Baltic Times, 2018), and one of the motivating factors for this is because the government is worried that after the United Kingdom leaves the European Union, many Lithuanians will trade their citizenships for a British passport, and will then never permanently return (AFP /Euractiv, 2017). In 2018, Latvia started a year-long pilot project to encourage families to return to the country, which at the time of writing, has

seen 130 families (or 330 people) move to Latvia (LSM 2018; Baltic Course, 2018). In December 2018, the chairman of the Reform Party, Kaja Kallas, said in an interview that Estonian needs to become more attractive to its emigrants to encourage them to return (Cavegn, 2018). These recent examples, and the other reasons laid out above, combine to show that the issue of emigration and its impact have a high degree of saliency among public debate in Estonia, Latvia, and Lithuania is, therefore, a relevant topic for further research.

The structure of this thesis will be divided into seven chapters. The **first** chapter will summarise the literature relating to turnout demographics, voting behaviour, and the the effect of emigration on election outcomes. The **second** will layout recent migration trends in the Baltic states since 2004. The **third** will outline the methods, data, and limitations. An explanation of how I calculated my results and made my migrant profiles is the focus of the **fourth** chapter, the **fifth** will show the results of these calculations. The **sixth** chapter will be a discussion about this thesis and answer the my research questions, finally, the **seventh** will conclude this thesis.

CHAPTER ONE

LITERATURE REVIEW

This thesis will review several genres of literature. The first section looks at external voting, the second will focus on the effect of demographics on voting behaviour, thirdly literature concerning voting behaviour will be discussed, and finally the effect of emigration on sending countries. The research which justifies my variable selection will also be discussed.

(1.1) External Voting

External voting, although known by several different names, such as an absentee ballot, is the act of a citizen voting in a home country election from abroad. It is a relatively new phenomenon and was only expanded to the majority of citizens in applicable countries after the Second World War (Ellis, 2007) and there has been “sharp increase” (Hutcheson and Arrighi, 2015) globally in the last three decades. Previously it was mainly reserved for military forces stationed outside of their home countries. But as the world becomes more interconnected, and increasing numbers of people travel for business and pleasure, or emigrate either temporarily or permanently, external voting is increasing in saliency (Ellis, 2007). Today, more than 190 countries allow their citizens to vote from abroad, and only two European Union countries (Ireland and Greece) deny their citizens the right to vote when they leave the country. Considering how widespread the practice is, and that there is no rule stipulating that people who leave their home

country must continue to have voting rights, this is fairly remarkable (Lafleur 2015). However, as there is no international standard, many countries do limit their citizens access to voting in some way. Examples include being allowed to vote in local or presidential elections but not national, or having to vote in specific locations such as embassies, or well in advance of the actual election day. Some countries, such as Denmark and the United Kingdom, restrict voting rights if a person has left the country for more than a certain number of years. Some of the processes can be complicated and time consuming, such as having to apply for special identification beforehand. Hartmann (2015) argues that migration patterns, remittances, domestic institutional structures, and partisan politics, play a role in whether external voting are introduced by a country, and finds evidence from countries in sub-Saharan Africa supporting his claims.

External voting is seen as a symbolically significant way to keep citizens engaged with their home country while they do not live there (Collyer and Vahti, 2007). Especially if it is hoped these citizens will one day permanently return home. It can also be seen as a way for emigrants to express their national identity, patriotism, and sense of belonging (Boccagni and Ramirez, 2013). Expatriate voting is more likely to occur in places with a higher concentration of migrants, and there is an increased likelihood of participation in home country elections in countries which rely on remittances to boost their economies (Collyer and Vahti, 2007). However, high levels of emigration could also impede the introduction of external voting if migrants are not relied on for remittances or are more likely to belong to a specific ethnic group (Hartmann, 2015). If emigrants are denied voting rights while they live abroad it can be seen as denying them their full citizenship rights (Collyer and Vahti, 2007). Governments have also sought to limit voting from abroad in case it “unexpectedly” (Hutcheson and Arrighi 2015) affect election outcomes. Emigration has long been thought of as a safety valve (Pearlman, 2013) through which troublemakers or dissidents are encouraged to leave the workforce, state, or nation. If a large part of the diaspora have negative feelings towards the government then limiting their right to take part in home country elections is

beneficial to the party that wants to remain in power. But the arguments against introducing external voting focus on whether votes from citizens living abroad should hold the same weight as citizens who live inside the country and whether they should have the same amount of representation (Hutcheson and Arrighi, 2015). For countries that want their emigrants to return, such as Estonia, Latvia, and Lithuania, I'd argue they must be seen on the same footing. Research has shown that emigrants voting in home country elections can affect the outcomes of elections. In Moldova, emigrants who moved to the west were more likely to, and also encourage family members to, vote for non-communist and pro-EU candidates in national elections in the 2009 election (Mahmoud et al, 2013). The opposite occurred in areas where the majority of migrants went to work in Russia. The authors argued that values transmitted from host countries helped to overthrow the communist government. Currently, in 2019, there is an ongoing debate in Ireland as to whether the several million strong diaspora should be given the right to vote in presidential elections. Critics fear emigrants, or people who have never even lived in the country, will strongly influence the vote in a negative way (Erben et al, 2017). Granting external voting rights can also be seen partly as restorative justice to communities who have been excluded from their homelands when regimes change or fall (Pogonyi, 2014).

(1.2) Voting behaviour and Turnout

There is a lot of literature which deals with the subject of voting behaviour: why people do or do not vote, what influences their likelihood of voting, and who they vote for. Some characteristics or factors are well known to influence a person's likelihood of voting, such as age, gender, education, marital status and income (Smets and Van Ham, 2013). Others, are known to decrease the likelihood of voting, such as youth, cost, distance to polling station, and complexity of registration (Smets and Van Ham, 2013). But to date there is no one set of variables that fit into any theoretical model that has been constructed (Geys, 2006). Voting theories suggest that voters act rationally (Downs, 1957) in the knowledge that their vote matters and to bring change. However,

if people believe their votes will not make a difference then they will not participate (Geys, 2006). But social pressure from others - such as society, their workplace, or partner - have been shown to increase a voter's likelihood of participation (Smets and van Ham 2013) A sense of civic duty has also been shown to make people participate in elections (Smets and van Ham 2013) Other factors such as population size (Owen and Grofman, 1984) have been thought to have a significant impact on turnout level. The argument being the larger the population, the larger the likelihood of absenteeism because voters may believe that their single vote will make no difference to the outcome. Geys (2006) tested 28 aggregate level data estimation studies for turnout or absenteeism and found there to be a significant negative relationship between population size and turnout. Population stability - which is sometimes defined by a variable such as mobility or home ownership - was found to be an important determinant to turnout. In the context of emigration this seems likely to influence turnout, because most emigrants are young and unlikely to own property either in their home or destination country, weakening their ties to a specific area or political association. Population concentration - mostly used to argue that cities are more individualistic than rural areas and therefore voting is less likely due to weaker social bonds - was found to have no influence on turnout. This is interesting in relation to my thesis because many emigrants move from rural areas to bigger cities, or even from small cities, such as Tallinn or Riga, to bigger cities abroad.

Two of the variables I am going to use for my counterfactual are **gender** and **age**, and these both have an effect on electoral behaviour and turnout. Gender is, in most cases, “no longer a statistically significantly predictor of turnout in national elections” according to Smets and Van Ham (2013), although, when it is, there is some evidence that women turnout at higher rates than men. While men and women do tend to vote in roughly equal numbers there is a difference or “gender gap” (Giger, 2009) when it comes to each gender's behaviour (Abendschön and Steinmetz, 2014). Giger (2009) defines this as “the distance between the voting choices of men and women”. Since the 1980s in many western democracies women tend to vote for more left wing candidates,

but before then they voted for centre-right and conservative parties at a greater rate than men did (Abendschön and Steinmetz, 2014; Giger, 2009; Box-Steffensmeier, De Boef, and Lin 2004). Abendschön and Steinmetz (2014) argue this is because women are more likely to be found in “precarious” employment, and will support candidates with strong welfare policies. Evidence has been found to support this argument in western Europe (Giger 2009) and the USA (Box-Steffensmeier, De Boef, and Lin 2004) where there are high levels of women in the workforce. Giger also argues this development is down to “societal modernization” (2009). Abendschön and Steinmetz (2014) found that there is a gender voting gap in 25 European Union countries, but they differ for each country. Their research also showed that women in post-communist countries are more likely to vote for parties on the right. They suggest this could be because in these countries left-wing parties do not act like left-wing parties in western democracies. This is clearly a relevant finding in relation to my research.

Turning to age, Smets and Van Ham (2013), who reviewed and tested 90 empirical studies of individual level voter turnout, say that “young adults are notorious abstainers” and that turnout increases with age, before tailing off when people reach old age. Their research shows that age is a positive indicator of voting in most of the papers they review. Evidence is split on whether the voting age should be lowered to 16 or not, but Wagner, Johann, and Kritzing (2012) finds little evidence to suggest that 16 and 17 year olds are less able or less motivated than 18 year olds to participate in politics.

Regarding turnout, one of the main arguments of this thesis is that had more people voted, the results of each election could have been different. Of the research focusing on this subject, the results are mixed. If non-voters differ from voters, as some US elections-focused research suggests (Highton and Wolfinger, 2001), then elections with an increased turnout could have changed the outcomes of elections because different types of people, for example more minorities, would have voted for the non-winning candidate. However, unless electoral races are very close increased turnout may make no difference (Citrin, Schickler and Sides, 2003; 2008; Highton and Wolfinger 2001).

But in Australia, the introduction of compulsory voting was found to have increased turnout by 24%, increased working class participation, and affected public policy especially regarding spending on pensions (Fowler 2013). However, this is a case without many comparisons as few countries have compulsory voting.

(1.3) Voting Abroad Characteristics

External voting typically does not yield a high turnout rate which can be explained by a number of potential factors. Physical barriers to casting a vote include difficulty accessing polling stations, complexity of registration process, cost, or distance needed to travel to cast a ballot. These reasons have been shown to have a negative effect on voter turnout in home countries and therefore could explain why emigrants turnout in such low numbers when they live abroad. A lack of interest in home country affairs and politics, or dissatisfaction with the parties on offer, could also be a big reason for low turnout figures among emigrants. However, Lafleur and Chelius (2011), say migrants lack of interest and bureaucratic barriers to voting are not sufficient enough variables to completely explain low turnout amongst emigrants. Lafleur also argues, we do not know if low turnout of emigrants is caused by “classical indicators of voting behaviour” (Lafleur 2015), such as civic duty, and if these actually affect people voting from abroad as very little research has been carried out on this subject. However, there is a growing body of research that suggests new variables to measure turnout in diaspora communities and external voting, some of which are similar to classical indicators. Depth of integration of migrants in their host country has been shown to have an effect on transnational electoral engagement among the Polish diaspora in the UK who took part in the 2010 presidential election (Ahmadov and Sasse, 2016). More integration is linked to less home country engagement, and shown to have no effect on abstention. The same study suggested that older voters are more engaged with home country politics, potentially because they have more time and resources to set aside for political participation in comparison to young people and families. This is obviously similar to home country demographics. However, this could also be linked to migration age. If a

person migrates in their 60s or 70s they may have a stronger connection to their homeland than a young person in their 20s or 30s does. Or, it could be linked to the language level they have obtained of the host country language and which country's media they follow. Likelihood of voting is influenced by destination country (Ahmadov and Sasse, 2016; Lafleur & Sanchez-Dominguez, 2015), reasons for emigrating (Ahmadov and Sasse, 2016; Mahmoud, et al, 2013), whether the voter has migrated from an urban or rural area (Guarnizo, Portes, & Haller 2003; Lafleur & Sanchez-Dominguez, 2015, Ahmadov and Sasse, 2016) and length of stay (Ahmadov and Sasse, 2016). In south America, married male migrants have been found to be more engaged with home country politics (Guarnizo, Portes, and Haller 2003; Jones-Correa 1998). Higher education also been shown to positively influence political engagement of emigrants (Guarnizo, Portes, & Haller 2003) although Ahmadov and Sasse (2016) found this was not an influencing factor in their research. Occupation, such as having a white- or blue-collar job, has been shown to have a positive effect on political engagement in a home country (Ahmadov and Sasse 2016; Guarnizo, Portes, & Haller 2003). Much of this research has been carried out on emigrant communities from south America and Mexico, and less so on Europeans. But, diaspora networks are shown to strongly influence political engagement in some communities, such as Ukrainians but not others, such as Poles (Ahmadov and Sasse, 2016). We also do not know much about why people participate in external voting. But, what we do know, is that when citizens emigrate the majority stop actively participating in electoral activities in their home countries, and evidence for this is supported by low turnout rates of voters living outside of their home countries

(1. 4) Effect of Emigration on Elections in Sending Countries

As the literature above shows demographics, distance, ease of access, and cost (Dyck and Gimpel, 2005) matter when it comes to voting - and this, surely, is especially so when it comes to voting from outside of a home country. But this leaves the question of how, or if, emigration affects home country elections unanswered. It should be pointed out that there is only a small body of literature on this subject, with most researchers arguing it is an understudied area. The foremost cited reason for this is that emigration and migration data are hard to accurately source because emigrants are not surveyed and deregistering from a home country is usually optional. But several researchers have looked at the impact of emigration on election outcomes and also political development (how political institutions have been affected). Hirschman (1970, 1978) theorized that emigration played a role in democratisation, and there is now evidence that high levels of outward migration can speed up or slow down political change depending on the country (Anelli & Peri, 2016; Moses, 2005; Pfutze, 2012; Pearlman, 2013). It can strengthen the power that workers who stay behind have over employers (Karadja & Prawitz, 2016) and encourage elites to liberalise institutions to retain workers (Landgrave and Nowrasteh, 2016). It can, and has, lead to the formation of workers unions and new political parties (Karadja & Prawitz, 2016; Moses 2011). Emigration can also change institutions because it “decreases the cost of dissent” as the dissenter can leave (Landgrave and Nowrasteh, 2016). However, research also shows that emigration can cause home country politics to stagnate and suppress political change, such as in Lebanon where up to 20% of the population lives abroad (Pearlman, 2013). It can also strip society of people pushing for change (Moses 2011) and Hirschman (1978) argued that outward migration reduces the likelihood of voting by offering the option of an exit. Pearlman echoes this line of thought, stating “the dream of leaving lessens the imperative of working to relieve that misery” (2013). This way of thinking, she says, can also affect people who haven’t even emigrated yet if they believe they will in the near future enabling “political apathy” (2013) and reducing the “perceived need for political change” (2013). Research from Mexico and Lebanon show

that families receiving financial remittances also do not need to seek money from the government and can therefore afford to ignore the domestic political situation as they are provided for in other ways by other people (Adida and Girod, 2011; Pearlman, 2013). Pearlman quotes a Lebanese interviewee as saying: “money from abroad gives people the luxury of complaining about politics without doing much” (2013). However, Pfutze (2012) found that municipalities with a high level of emigrant households in Mexico were more likely to vote for opposition parties if they were not already in power, concluding that international migration is influential in the process of democratisation. Even in the “overwhelming majority” (Hutcheson and Arrighi 2015) of cases where emigrants do vote from abroad it has “failed” to “significantly” (Hutcheson and Arrighi 2015) alter expected election outcomes. European exceptions to this are Italy’s 2006 election and Romania in 2009, where voters from abroad voted heavily for opposition parties (Hutcheson and Arrighi 2015). Destination country has been found to have a positive impact on home countries (Batista and Vicente, 2011; Pfutze, 2012; Chauvet and Mercier, 2014) but Lodigiani argues this is only true as long as the host country allows emigrants to integrate (Lodigiani, 2016). Values can be transferred from democratic or autocratic host countries to sending countries via emigrators, influencing election outcomes (Mahmoud et al, 2013; Pfutze, 2012). Political institutions can also be positively improved by emigration to democratic countries through the “transfer of new ideas and political norms, return or circular migration, and remittances” (Lodigiani, 2016). But emigration to non-democratic countries can also bring about negative effects in home countries too (Lodigiani, 2016; Mahmoud et al, 2013). There is a lack of research that tries to determine what exact amount of emigrants need to have left in order to bring about institutional change (Landgrave and Nowrasteh, 2016). In Moldova, emigration paths to Europe and Russia influenced if votes were cast for the communist party or not in the 2010 elections (Mahmoud et al, 2013). In Italy, votes for the Five Star Movement (Anelli and Peri, 2016) increased in areas of high migration and decreased the chance of a female politicians being elected in several areas of the country. In areas of high youth emigration there was an increased likelihood of regional governments collapsing after corruption claims were made against them. These two

studies are particularly relevant to my research as they use counterfactual methods to determine their results, and both use models to calculate that if more people had voted a different outcome could have been achieved backing up my claim that emigration does have an effect on election outcomes. This argument is also supported by Pfutze's work in Mexico (2012), although his findings were not determined with a counterfactual model. Emigration can also lower turnout (Kostelka 2017) and is thought to have done so in the countries that joined the European Union in 2004, as well as Bulgaria and Romania which joined later. Kostelka (2017), using a counterfactual model, estimated the likelihood of turnout in these 10 countries had high levels of emigration not occurred. He calculated that voting turnout had been negatively influenced. His study is obviously relevant to this thesis, not just because the results were determined using a counterfactual, but because it is the first work to look at the influence of emigration on elections in the Baltic states.

(1.5) What will my research add?

What we can see from the studies discussed above is that there is limited research on both emigrants voting from abroad, and the effect that their lack of participation may have on home country election outcomes. As far as I am aware, no one has attempted to study this in Estonia, Latvia, or Lithuania. Therefore, this research is the first attempt to address this subject and would add to the small amount of literature already available. It will show examples of when a specific voter segment is removed and how society could take a slightly different direction as a result. Secondly, generally, if researchers have studied emigration or external voting they have focused on one country, such as Italy, Ecuador, Mexico, or Moldova. They have usually studied both national and regional elections, whereas I will only be studying national elections. Others have also not attempted to compare results from different countries, or in a geographical region. This is something I do in this thesis by comparing data from Estonia, Latvia and Lithuania. They are valid countries for comparison because their populations are small, each country has seen a high level of migration, and the starting points - 2004 and 2007 - for

this most recent emigration waves are the same in all three countries. Thirdly, there is also a lack of research, published in English at least, of how migration from the Baltic states, or other countries which joined the European Union in 2004, has affected home countries populations when not solely related to the labour market. Plenty of studies centre on remittances and the labour market, but research on the social effects and how these affect society and politics are less well researched. Instead, much of the literature looks at the impact of migration from EU8 countries on host countries in western Europe, including how migration impacts on voting intentions and the outcomes of elections on the native populations.

CHAPTER TWO

EMIGRATION FROM ESTONIA, LATVIA, AND LITHUANIA, SINCE 2004

(2.1) Definitions of Migrant and Emigrant

I will follow the European Commission's migration glossary for a definition of what a migrant or emigrant is because most European countries have differing definitions and the length of time spent abroad to qualify as one. Regarding, Latvia, Lithuania, and Estonia, the definitions vary slightly (United Nations 2015) from country to country, but all, specify a migrant is someone who lives outside of their country for at least one year. The European Commission also uses this length of time, so this is the definition of migrant, which I am also using interchangeably to mean emigrant, that I will use.

The full definition of ‘migrant’ as defined by the European Commission is reproduced in full below:

In the *global context* , a person who is outside the territory of the State of which they are nationals or citizens and who has resided in a foreign country for more than one year irrespective of the causes, voluntary or involuntary, and the means, regular or irregular, used to migrate.

In the *EU/EFTA context* , a person who either: (i) establishes their usual residence in the territory of an EU/EFTA Member State for a period that is, or is expected to be, of at

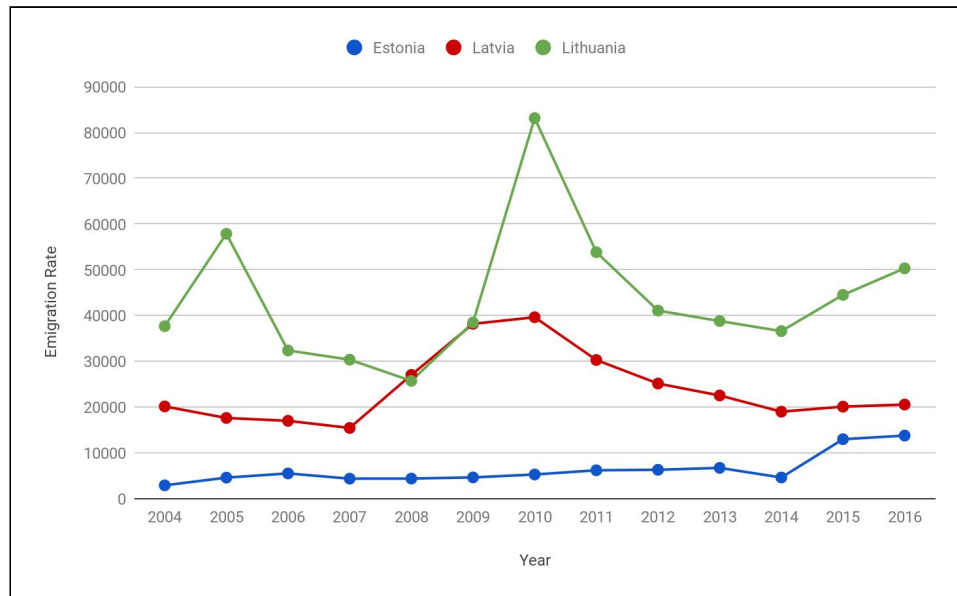
least 12 months, having previously been usually resident in another EU/EFTA Member State or a third country ; or (ii) having previously been usually resident in the territory of the EU/EFTA Member State, ceases to have their usual residence in the EU/EFTA Member State for a period that is, or is expected to be, of at least 12 months.

(2.2) Freedom of Movement and EU Migration

Freedom of goods, capital, services, and labour are the four freedoms of the European Single Market and were introduced in 1957 in the Treaty of Rome. The free movement of citizens to live and work in other countries is enshrined in European Union law and guarantees the rights of citizens of member states to equal treatment throughout the European Union. In 2004, the three Baltic states became part of the European Union but did not become part of the Schengen Zone, which allows visa free travel in every member state, until 2007. Only three countries - the United Kingdom, Ireland, and Sweden - allow complete freedom of movement of labour to the Baltic states in 2004 (Koikkalainen, 2011). In 2007, restrictions were lifted from the other European Union countries and EU8 emigrants had the right to live and work freely in them.

(2.3) Estonian, Latvian, and Lithuanian Emigration After 2004

From 2007 citizens could easily move to any other European Union country to seek better opportunities, but until 2008 relatively few took this opportunity. Data from each country's statistics agencies shows that there was only an annual increase of around 1,000 emigrants from each country to another member state from 2004 to 2007 (Hazans and Phillips, 2011) which is displayed in table 1 and graph 1, below on page 19. The only exception to this is Lithuania in 2005 when emigration rose by 20,000 but then declined by almost the same amount the following year and hovered around 30,000 in total until 2010. Reporting of migration statistics changed in Estonia in 2015, giving a more accurate and higher rate of emigration than had previously been reported, which is why migration rose from around 4,000 in 2014 to more than 13,000 in 2015.



Source: Statistics Estonia, Statistics Lithuania, Central Statistical Bureau of Latvia

Graph 1: Annual emigration year-by-year 2004 - 2016 from Estonia, Latvia and Lithuania

Table 1: Annual emigration year-by-year 2004 - 2016 from Estonia, Latvia and Lithuania

Year	Estonia	Latvia	Lithuania
2004	2927	20,167	37,691
2005	4610	17,643	57,885
2006	5527	17,019	32,390
2007	4,384	15,463	30,383
2008	4,406	27,045	25,750
2009	4,658	38,208	38,500
2010	5,294	39,651	83,157
2011	6,214	30,311	53,863
2012	6,321	25,163	41,100
2013	6,740	22,561	38,818
2014	4,637	19,017	36,621
2015	13,003	20,119	44,533
2016	13,792	20,574	50,333
Total	82,513	312,941	571,024

Source: Statistics Estonia, Statistics Lithuania, Central Statistical Bureau of Latvia

But in 2008 as the world fell into recession, the economies of Estonia, Latvia, and Lithuania, which had been experiencing huge growth after joining the EU, were hit badly. Latvia was the worst affected with an 18% drop in GDP. Now, with fewer opportunities at home, workers started to take up their right to free movement. As with many other countries which suffer from a lack of economic opportunity, migration became an escape valve (Anelli & Peri, 2016). Combined, the three countries saw hundreds of thousands of people leave their home countries and move abroad. These emigrants were mostly young, under 45, and both low and high skilled. Latvia and Lithuania experienced a “brain drain” of highly educated workers (LSM, 2018; Kazlauskienė and Rinkevicius, 2006), while Estonia saw less highly educated people leave (Anniste et al. 2012). They mostly moved to the UK, Ireland, Finland, Norway, Sweden, and Germany, but migration patterns differed for each country. Finland was the destination country for the majority of Estonians, while the UK and Ireland were the most common destination for Latvians and Lithuanians. Many of these emigrants work in industries such as construction, food production, and agriculture and took opportunities below their educational level because the pay was still several times higher than in their home countries (Longhi and Rokicka, 2012). This has caused alarm amongst politicians and has become a much discussed topic in the media in all three countries. Efforts to bring people back home have been in vain. Net migration is still negative in Latvia and Lithuania, although since 2014 it has been positive in Estonia but only by several thousand. The amount of the population working in other countries is several times higher than in most European countries and many have not yet returned. Like the majority of other European countries, the Baltics have aging populations and a birth rate below the replacement level. The most visible trends which can be noticed across all three countries by demographers is that it is mostly young people who have left. This means that the populations that have stayed behind have a higher proportion of older people than young people, which is continuously exacerbated by the declining birth rate. The Latvian demographer Mihails Hazans argues this is starting to be reflected in political outcomes in his country “since the young leave and the old stay,

the electorate gets more conservative... further exacerbating anti-immigrant leanings” (Ragozin, 2018).

(2.4) Voting from abroad differences in Estonia, Latvia and Lithuania

Rules for the regulation of voting from abroad are different in Estonia, Latvia, and Lithuania. Each country allows its citizens to vote from overseas by post and in embassies, but Estonians can also vote online and around 90% of those that do, choose to do so (Solvak and Vassil, 2016). The one similarity is that all potential voters must register to vote, rather than be automatically enrolled by a local authority. But where those votes are counted is another matter.

Estonia

Residents living abroad or temporarily have the right to vote in elections. Each person will be sent an electronic voter card in advance of the voting day. If a voter is permanently living abroad their votes are cast in the district of their former place of residence, or their ancestors, in Estonia. Online voting is permitted and arguably encouraged, as postal voters have to bear the costs of voting by post themselves. Registering by post entails sending a form and copy of your identity document to the foreign mission in your adopted country at least 30 days before election day. A postal vote and candidate list is then sent to the voter, who fills this in, and sends it back to the foreign mission by a set date. The vote is not counted if the name, personal identification code and the number of the Riigikogu electoral district are not written on the outer envelope.

The procedure is the same for people who are temporarily abroad, and voters who live permanently or temporarily abroad and did not vote by post can vote at the foreign mission. A foreign embassy must also allow voting at the premises on at least two days in the period between fifteen days and ten days before the election day. Ballots are then sent to Estonia by election day to be counted.

Latvia

Latvians living abroad can vote by post or in foreign embassies. Their votes will be redirected to the Riga constituency rather than be counted in the constituency of their previous place of residence. If they vote by post, their completed ballot paper must have reached the foreign mission at least 30 days before the election. In order to register to vote abroad by post a Latvian passport must be presented along with the application form, by the voter or a third party. The passport will then be stamped with a mark regarding participating in elections. A Latvian citizen temporarily abroad may vote at any foreign mission as long as they present a passport.

Lithuania

Residents living abroad or temporarily have the right to vote in national and local elections. Voting registration must be completed online, and voters only need an ID to do so. As there are two rounds for each Lithuanian national election, citizens must register for each vote separately and then vote twice, once in each round. It is not mandatory to vote in both rounds. Online applications to vote will then be sent to the closest foreign embassy to where the voter lives, and that is where they can then send their vote by mail. Voting online does not exist in Lithuania, so the only way to vote in a foreign election is to do so by postal vote or by physically going to the embassy in person to do so. Turnout results suggest that Lithuanian residents who live abroad tend to vote in higher numbers in the first round of voting than the second.

(2.5) Electoral Systems in Estonia, Latvia, and Lithuania

It should briefly be mentioned that Estonia, Latvia, and Lithuania all have some form of proportional electoral system. This means that even a small vote gain for any party could turn into extra seats in parliament, unlike in a majoritarian system. Lithuania has a mixed system, and two rounds of voting, because of this I shall use the second round of voting as it determines the formation of the government more than the first.

CHAPTER THREE

METHODOLOGY

In this chapter I will explain the methodology which will determine the results of this thesis. An impact analysis using a counterfactual model will be used to estimate the likelihood of election outcomes in Estonia, Lithuania, and Latvia had mass migration not taken place in the years following 2004. Demographic data has been taken from the national statistics agency in each country and the European Social Survey. Voting data has been taken from each country's electoral commission. I will be studying one election from each country and these took place in 2014 (Latvia), 2015 (Estonia), and 2016 (Lithuania). Below I have outlined the methods and data used, as well as the limitations with both. Once again, I have listed my research questions below to remind readers what I am trying to find out:

1. How have voting demographics changed in Estonia, Latvia and Lithuania since 2004?
2. What political forces have been strengthened as a result of outward migration?

(3.1) Impact Evaluation and Counterfactual Models

An impact evaluation measures the potential positive and negative effects of an implemented, or planned, change, such as introducing a new policy against the present day reality of not having the new policy. Using quantitative data it is possible to estimate the likely outcomes and impact the new policy could have and whether it is worth implementing in the future. Or whether it was worth implementing in the first

place. The drawback of using an impact evaluation is that we can never have both scenarios - reality and a time when a new policy has been introduced - co-existing in the same space at the same time. Thousands of people did emigrate after 2004, so we cannot possibly know what would have happened if they had not. So the way to get around this problem is to create one of the scenarios - also known as counterfactual model - while keeping it as realistic as possible at the same time using available data. Counterfactual models rely on assumptions, but the fewer assumptions and the more facts, such as data, they include the better. This is because it makes the counterfactual model more accurate and based on evidence rather than assumptions. For example, because statistics agencies collect data on the age and gender of emigrants I can use this data to calculate how this affects men and women of different ages and match it with home country election outcome data. Both characteristics have been shown to influence the likelihood of casting a vote so having firm data on these two characteristics, and an approximate amount of people, makes my counterfactual model more accurate because I can calculate an increased likelihood of voting for a specific group of people rather than assuming for everyone or no-one.

Using an impact analysis and a counterfactual model are relevant methods for this thesis because I am trying to estimate the impact that migration has had on voting turnout and election outcomes. Therefore, I need to use a method that measures the impact that this has had. The counterfactual model is needed to create my alternative scenario and I cannot complete this analysis without one, since I could not know what would have happened if emigration had not occurred.

In the literature I have read, and discussed above, regarding emigration and migration several studies have also employed these techniques in relation to measuring the impact of emigration on election outcomes. One of the most relevant methods for my thesis have been those used by Kostelka (2017) who looked at the impact on turnout in home country elections in the EU8 countries and Bulgaria and Romania after they joined the European Union. Using an impact evaluation and counterfactual model, he

calculated what turnout could have been in elections had people not emigrated. He did this by calculating the amount of emigrants who were likely to vote and then adding this to the total nationwide turnout rate in the sixth democratic election of each country. This is similar to what I am doing in this thesis. His results are conservative and based on data which is likely to have underestimated the true amount of emigration, which is also an issue I face. Mahmoud et al (2013), who researched the effect of emigration on Moldova, also used a counterfactual model. But unlike this thesis, they make an assumption that all emigrants who moved to the west voted for opposition parties to get their results, which I am not going to do as it does not seem realistic to make that assumption.

More information about how I created my counterfactual and the data needed for the models is outlined below in section 4.

(3.2) Country Selection

As outlined in the introduction, Estonia, Latvia, and Lithuania have been selected for this study as they are the countries which have seen the biggest decline in population through outward migration after joining the EU in the Baltic Sea region. Poland, which also joined in 2004, has seen more people migrate but it calculates as a smaller share of the population as a whole. I wanted to carry-out a comparative study because, as far as I know, only a small amount of research has been carried out on the effect of emigration on European countries and their political systems. Making the study comparative will enable me to draw more relevant conclusions and see if there any trends reflected in more than one country. Emigrants from the Baltic states have also been more mobile than those in central Europe so it makes sense to compare these countries (Hazan and Philips 2011). I will compare the way in which emigration has affected election outcomes to see if there are any similarities or differences in each country. For example, which forces - if any - have strengthened and how voter demographics have changed. Lithuania and Latvia are interesting countries to study regarding migration as significant

amounts of their populations have emigrated since 2008, around 10% in Latvia and approximately 15% from Lithuania who mostly leave to work in the UK or Ireland. Estonia is an interesting comparison to these countries because fewer people have left. There has also not been a significant case of brain drain in Estonia, and the migration destination is different with more Estonians going to Finland instead of Ireland or the UK. The three Baltic countries also have different ways of, and rules concerning, voting from abroad which could influence people when deciding whether or not they will vote. This is especially true for emigrants who have moved to the United Kingdom because after accession eastern European migrants spread out all over the country, and did not cluster in the capital where it is easy to access an embassy and cast a vote. (Longhi and Rokicka, 2012). This was not a problem for Polish migrants, who can open temporary polling stations abroad and across the relevant country, but Latvia, and Lithuania, do not do this meaning if citizens want to vote in person they have to travel across the county, potentially, taking time off work and paying a lot of money to do so.

(3.3) Data

Two kinds of data have been used in this thesis: demographic and ballots cast. The demographic data has been taken from Statistics Estonia, the Central Statistical Bureau of Latvia, Statistics Lithuania, and the European Social Survey. The data collected from each country's statistics agency shows how many people have emigrated each year from each country and their age and gender. To be categorised as an emigrant a person must have left their home country for at least one year or deregistered from the population list in their home country. There are limitations to using this data which I have outlined below.

I am comparing and using data that was gathered from 2004 onwards and until the year of, or before, the election I studied for each country. This is because I need to create an as accurate picture as possible of the hundreds of thousands of people who have left since 2004 and mostly not returned. Each year must be added together to give

a total migration figure to work with for each election. The data gathered by each agency has improved overtime and after 2011 each country's estimates became more accurate. More characteristic details were also collected, such as marital status, citizenship and ethnicity. Before this date most countries only registered the age or gender of the person who had left and very few other details, if any. This extra demographic data gathered after 2011, as shown above, can influence the likelihood of casting a vote or selecting a political party. Therefore, it makes sense to use what is available from this data to create my migrant profiles because it will help me calculate a more accurate probability of voting for each outcome, even if I can only use the information to add descriptive details. As expected, the data collected by national statistics offices varies between countries and not all of it is comparable. Lithuania has more detailed emigration data starting in 2004 than Latvia and Estonia.

European Social Survey (ESS) data is needed to gauge a likelihood of how people would have voted, and who they would have voted for. It is integral to constructing voter and emigrant profiles. I have used data from the most recent surveys for each country on questions concerning political participation, which gathers data on people's feelings towards political parties, their likelihood of voting and who they voted for at the last election. The ESS takes place every two years and the most recent survey completed by each country are 2016 for Estonia and Lithuania, and 2008 for Latvia. The data for Estonia and Lithuania are particularly useful as data for each country was gathered during or just after an election so will have captured voters reflections on political engagement while they were still caught up in the election cycle. This means the questions may well have had more salience with interviewees' answers as the topic would have had an increased presence in the media at the time and their answers are quite likely to have reflected how they actually voted. The data for Latvia is less useful as national elections took place in 2006 and 2010, although municipal elections did take place the following year, in 2009.

Turning to election data, this thesis uses data from the Estonian National Electoral Committee, Central Election Committee of Latvia, and the Central Electoral Commission of the Republic of Lithuania. The data shows how many citizens voted in each election and the outcome of each election. The elections I will study were held in 2014 (Latvia), 2015 (Estonia) and 2016 (Lithuania).

So in summary, emigration data gathered after 2004 from sending countries (Estonia, Latvia and Lithuania) has been used to create profiles of those immigrants who migrated. While European Social Survey data is needed to create profiles of the home country population who did not emigrate. Election results data has also been used to calculate how election results could have changed.

(3.4) Variable Selection

Data regarding age, gender, marital status, ethnicity, citizenship, education and place of origin are collected by statistics agencies in Estonia, Latvia and Lithuania and therefore have potential to be used as variables. However, the form that this data is freely available to the public, and therefore data I can access, does not always match up with the information I need to create my calculations. Initially I planned to use age, gender, marital status, and citizenship as independent variables for this thesis. But after looking at the data for all three countries, which is categorized and collected in different ways, I could only use age and gender in a comparative format. In order to calculate my predictions, I needed data for marital status, citizenship and education broken down by age and gender categories, so that I can work out how many men and women of each age left and how they voted. But most of the characteristic data is not available in that format. Or at least, not for free. All countries can provide data on how many married persons or people with citizenship left, but cannot then provide information on how old they are and in some cases what gender they are. Age and gender are strong predictors of voting likelihood and so are essential variables in my calculations - if I do not have

those categorizations I cannot use the data. Reasons for selecting these two variables were outlined previously in the literature review, but are also recapped below.

Age: the likelihood of voting is connected to how old a person is. Young people are known to be less likely to vote, whereas it is statistically more likely that older people will vote. But this likelihood decreases as a person reaches old age and started to withdraw from society (Smets and Van Ham 2013). This is born out in turnout statistics.

Gender: in the past, men were thought to vote more than women. But in recent years this has changed. In elections in the USA more women have voted than men since 1980 (Dittmar 2018). But overall, voting is fairly evenly split between men and women. Research also suggests that a voting gap exists between the genders and that women are more likely to for left-wing parties (Abendschön and Steinmetz 2014). As education and voting are connected, the increase in women in higher education, and the decrease in men studying at a higher level, may be one of the reasons for higher turnout amongst women.

Some of the data that was not specific enough to be used to create variables can still be used to answer my research question: How have voting demographics changed in Estonia, Latvia and Lithuania since 2004?

A second factor in my variable selection is that I need all the data to be of the same type because this is a comparative study. If I were to have marital data categorized into sex and gender for Lithuania and Latvia but not Estonia, I could not use it anyway because I could not compare all three countries to each other. Thirdly it must match data collected by the European Social Survey. So, with those limitations in mind, I have chosen to use 'gender' and 'age' as my independent variables from the demographic data provided by each country. I have grouped them into age groups of five years and started at 20, to make sure the demographics are all voters. Data from the European

Social Survey has been used to create my dependent variable which is 'voted'. This variable was made using data from the question "voted in the last election" to which interviewees could answer 'yes', 'no', or something else. I then created a binary variable of this data coded 0 or 1 for yes or no. A second variable I made with this data was "party voted for", which came from the question "which party did you vote for at the last election?" This was needed to predict what party emigrants may have voted for.

So in summary, my dependent variables are 'voted' and 'party voted for', and my independent variables are 'gender' and 'age'.

(3.5) Limitations

There are limitations with the migration and European Social Survey (ESS) data. In outward migration literature researchers have used several types of data and disagree on which is the most accurate. Data is usually either gathered by the receiving or sending countries. Neither can claim to be entirely accurate as they both rely on individuals to register in their new country or deregister from their home country themselves. For example, exit data relies on individuals telling the government they are leaving. This is not a mandatory process and many people do not do this. Whereas data gathered in the receiving country is usually made up of applications for work permits or national insurance schemes which are needed to work legally, so the majority of people do register. But this assumes that everyone in these countries is registering upon arrival, and this has been shown to be not true. It also does not suggest how long people will stay abroad. Using receiving country data would mean having to find data from each receiving country in Europe and then combine it together to get a total estimate - which would still be incomplete because not everybody registers. Using sending country data simplifies the process, as it would be a single data set for each country, but this data is considered by many researchers to be of an inferior quality as it significantly underestimates the numbers of people who have left. One of the data sets other researchers have used is national insurance or work permits issued to foreign nationals.

But this data is still not perfect as some workers only come to work for a short time and then leave again, but have still been issued a unique ID card or number which increases the total numbers of permanent arrivals. For example, 80,000 Personal Public Service numbers have been issued to Lithuanians living in Ireland since 2004, but looking at the census data in 2016 less than half of that number are recorded as living in Ireland permanently. Census data can, and often have been used, but as many censuses are taken only once a decade their estimates could also be out of date. So, in conclusion, whichever set of data I use none can claim to be absolutely 100% accurate. But I have chosen to use the data sets created by each sending country because the other option is combining data sets from 27 different countries which may not define a migrant or emigrant in the same ways, and therefore may not be comparable.

As mentioned above, the ESS data for Latvia is not up-to-date and is 10 years old, it would have been preferable to have newer data that was collected recently. However, the questions asked in 2008 are the same as asked in the newer data, and therefore is comparable with the 2016 survey data from Estonia and Lithuania.

Another problem with the ESS data is that Latvia had parties merge in to coalitions or collapse in between elections. Therefore, I have had to assign the votes of parties that have become coalitions to the relevant party grouping. In this case the party formerly known as the New Era Party has joined the Unity Coalition, so these votes are added to the votes cast in the 2012 election for the Unity Coalition. Another party, For Fatherland and Freedom/LNNK, has become a member of National Alliance, so the votes for FFF/LNNK will be added to the vote share for National Alliance. This was not a problem for Estonia and Lithuania as the ESS data was collected the same year, or the year before, elections took place so the parties people say they voted for are the same as the parties in the government or opposition.

My models are counterfactual, although based on empirical evidence. This means they can only ever be considered estimates of what might have happened, so this is a

further limitation. It would also have been better to have more specific demographic data, but my reasons for my selection are outlined in the data section above.

(3.6) Parties

As mentioned above, to create my counterfactual I have used data from the ESS which polled people on how they voted in the most recent elections. For my model I am going to use the four parties in each country which attracted the most ballots from voters at the elections I am studying and would, therefore, probably most likely have been voted for by most emigrants if they had voted. In Estonia, this means I am using data concerning the Reform Party, Centre Party, Social Democratic Party, and Pro Patria Res Publica. In Lithuania, I will look at the probability of voting for Farmers and Greens Union, Homeland Union, Social Democrats, and the Liberal Movement. As mentioned above in my limitations section, Latvia is problematic as the European Social Survey data is from 2008 and the election I selected for study is 2012, and several parties collapsed between those two dates. Therefore, the four parties I have included are: Union of Greens and Farmers, Unity Coalition, Harmony, and National Alliance.

CHAPTER FOUR

EMIGRANT AND VOTER PROFILES

In order to create my counterfactual and carry out the impact analysis, I made a series of emigrant and voter profiles using the data available from statistics agencies and the European Social Survey. These are needed to take the assumptions out of the counterfactual and to make them evidence based which will give a more accurate result. Below I have outlined how these profiles have been made and what they show.

Emigration Data

I used emigration data from each country's office of national statistics, relying on their totals for migration. For age and gender this data is categorised annually in five-year groupings from 0 to 85 plus or 95 plus and by male and female. But for other characteristics sometimes only a total of each gender, or total of males or females, is available. The data is rarely broken down into age groups, gender, or citizenship for every characteristic. Where applicable for the data I selected to use, I removed data groups of emigrants who were aged 0-19 from the migration totals. My data starts with the 20-24 years of age category meaning everyone included has the possibility of voting. I collected emigration data from statistics agencies from 2004, until the year before or of the most recent election for people aged 0 to 85 plus. As Estonia's elections take place in March I used data from 2004 until 2014, the year before the election. There were also several other reasons for this. The first is because in 2015 a new reporting method was introduced to more accurately measure emigration and migration by Statistics Estonia, and as a result, emigration is around twice the level it was for the preceding years. Emigration is seasonal, with people generally leaving in the summer

and autumn months for jobs or to study abroad, so the majority of those who emigrated from Estonia in 2015 probably did so after the election, so I have chosen not to include these statistics. But for Latvia and Lithuania I also included data from the year of the election because they took place in October, more than three-quarters of the way through the year. Many emigrants from Latvia and Lithuania do work in seasonal jobs, so I think it is fair to make an assumption that most emigrants do leave at the start of the summer, and so would be more likely to be out of the country if an election took place in the later part of the year. There is also a higher likelihood that they may not have registered to take part in elections if they were outside of the country during the registration period. This is also the case for students who study abroad, as their school year would start in September or October. Emigration data is not available month by month so I had to include data sets for whole years. In the below table, the emigration total is shown and the total when under 20 year olds are removed. These are the figures that went into determining my probabilities and are shown in table 2.

Table 2: Emigration Data for Relevant Years, Totals and Over 20 Years Old*

Emigration	Estonia	Latvia	Lithuania
Total	55,718	272,248	571,024
20+	43,664	222,031	451,813

*Source: Statistics Estonia, Statistics Lithuania, Central Statistical Bureau of Latvia
Estonia 2004-2014, Latvia 2004-2014, Lithuania 2004-2016

This data was categorized into gender by all three countries, with everyone counted being registered as either male or female. This age and gender data has been used to create my profiles, variables, and probabilities. Other data collected by statistics agencies includes region of origin, marital status, citizenship, and education level. However, these are not available in a comparable format for all three countries so I cannot include them in my calculations. For example, while each country categorized marital status as - at least - married, single, or widowed, no country specified both the age and gender of these people. Likewise, the citizenship of emigrants was not always

categorized by age and gender. This data can, however, be used descriptively to add detail to my profiles.

Looking at the data discussed above in this form, there are some visible trends I can see. It is possible to see that emigration rose after the financial crisis; very quickly for Latvia and Lithuania in 2008 and 2009, but more gradually for Estonia which didn't see a significant increase until 2010 and 2011. None of these emigration levels have yet fallen to their pre-2008 levels. In Latvia and Lithuania slightly more men than women emigrate, but it hovers around the 50% mark for both. But in Estonia more women have migrated in total than men, with the figures showing 46% for men and 54% for women, and this has consistently been the case for several years. Most emigrants are aged between 20 and 50 in all countries, with 25-29 year olds being the most mobile and leaving in the highest quantities. However, in all countries from the age of 55 onwards women emigrating vastly outnumber men, in some years by as much as three times higher. In all three cases the dominant ethnic group (Estonians, Latvians, and Lithuanians) make up the majority of emigrants each year and overtime. The majority of emigrants are single, at least 50% of those that leave, then around 24% are married and the rest are categorised as divorced, widowed or unknown. Most emigrants migrate to another European Union country.

European Social Survey Data Profiles

To make the profiles of home country populations and voting demographics I used European Social Survey and the data it collects every two years. After downloading the most recent data sets for Estonia (2016), Lithuania (2016) and Latvia (2008) I selected the same variables for study that could be found in the national statistics offices data. These were: age and gender. As well as these variables, I used data from the politics questions that interviewees were asked in each survey. The questions asked in each country are the same, which makes comparing the answers and data possible. Of these questions, I included data that measured voter turnout (question/ variable: "Voted in Last National Election") and which political party interviewees voted for at the last

election (question/ variable: “Party Voted For in Last National Election”). Data was also collected about citizenship, marital status, and education, but it was not comparable with data from national statistics agencies and so could not be included in my impact analysis or counterfactual. Having created these profiles of emigrants and home country voters, I could then work out the probability of emigrants voting and for which party.

Election and Voting Data

Data regarding how emigrants vote from abroad is not published so I could not use that, if it is even collected, in my calculations. This is why voting data from European Social Survey was used instead when I created my profiles. Turnout data was taken from the election commissions in Estonia, Latvia, and Lithuania and the totals for valid votes - excluding spoiled ballots - was used where possible. For Lithuania, the second round of voting was used.

Probabilities

To calculate the probabilities of emigrants voting and to create my counterfactual I needed five sets of numbers for each country. These were:

1. The total number of emigrants
2. The likelihood of home country voters casting a ballot
3. The likelihood of home country voters voting for a specific party
4. The likelihood of an emigrant voting if they had remained in their home country
5. The likelihood of an emigrant who stayed voting for a specific party

The first number was the most straightforward to find. Using emigration data from national statistics agencies in Estonia, Latvia, and Lithuania, I combined the amount of people that left each year to get a total emigration figure for each country. I used data starting in 2004 for all countries and finished the year before each election I was looking at. As mentioned above, the data was categorised in five-year age groupings

and by male and female. This gave me between 12-14 numbers for each country with age categories of voters (as some countries categorised up to 100 and others only 85+, for example). This was then doubled when gender was introduced as a variable alongside age, giving me the total number of men and women, combined and separately, who had left each country in each category. This gave me a basic profile outline of emigrants. I deleted data about emigrants under 20 to make sure I had a demographic that could vote and take part in national elections. In Estonia, Latvia and Lithuania you cannot vote in national elections if you are under 18, so including this data would make my calculations less accurate. As the data is banded in five-year categories I could only start at 15 or 20, but not 18.

In order to find out the likelihood of home country voters casting a ballot I used data from the European Social Survey (ESS) to create profiles of voters who had remained in their country. I used the same data from the ESS that I had taken from the national statistics agencies to create a profile based on age and gender. It was necessary to use similar data because otherwise emigrant and home country profiles would not have been comparable. However, I also used data about whether these people had voted or not in the last election, which is an answer to a question on the ESS. I created binary variables for 'voted' and 'gender', and a categorical variable for 'age', splitting the data into five-year groups to make it the same as the emigration data. Then using a logistic regression, I calculated the predicted probability that each age group ('age') and age group and gender ('age and gender') voted in the last election. This gave me 16 figures when simply calculating 'age' and 32 when calculating 'age and gender'.

I used the same ESS data when calculating the likelihood of voting for each party. I selected the four parties which received the most votes in each election and used the ESS answer data that came from the question "Who did you vote for in the last election?" This was a standard question in all three countries' surveys so was readily comparable. Again, I used a logistic regression to calculate the probabilities of voters voting for each of the four parties.

Lastly to find out the probability estimate of emigrants voting for each party, I multiplied the likelihood of voting for home country voters with the figures for total migration by 'age' and 'age and gender'. This figure was then multiplied with the likelihood of voting for each specific party. This figure gave me the amount of votes that could have been cast by emigrants. Finally, the amount of fictional votes was added to the real amount of votes cast in each election to see what the impact could have been if emigrants never left and voted. This process is shown below in figures 1 (page 40) and 2 (page 41).

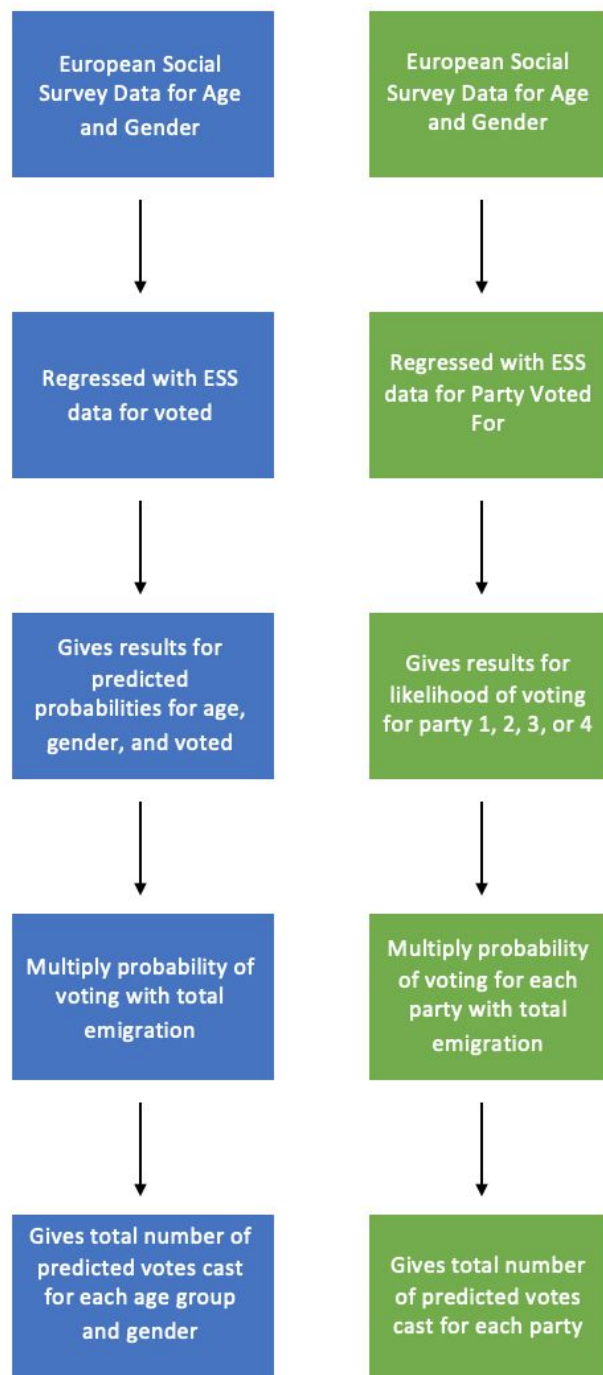


Figure 1: Model 1 (blue) and Model 2 (green)

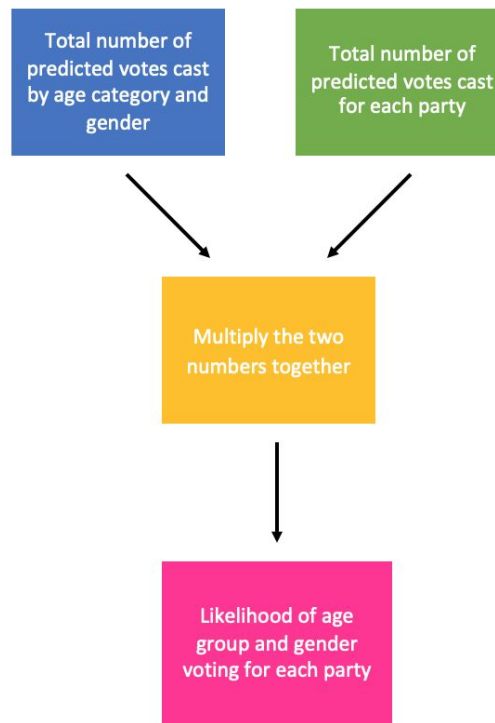


Figure 2: Finding the Probability of an Age and Gender group Voting for a Specific Party

The results of these calculations for the variables age and gender for Estonia, Latvia, and Lithuania are displayed below in table 3 (page 42). The results show that for every age group Estonians are predicted to be more likely to vote than Latvians or Lithuanians. The country where emigrants are least likely to vote is Lithuania, with Lithuanian women voting in the smallest numbers - especially in the 20-24 years category. In contrast, Estonian women are the most likely to vote in all age categories, with the most likely to vote in age category 60-64. Overall, the likelihood of voting increases with age in all countries and for both genders. The results for the likelihood of voting for each party, by each age group and gender, for each country can be found in the appendices (Appendix 1 (Estonia), Appendix 2 (Latvia), Appendix 3 (Lithuania)) starting on page 89. The results of these calculations are discussed in detail in chapter 5.

Table 3: Predicted Estimation of Voting of Age Group and Gender in Each Country

Gender*	Age	Estonia	Latvia	Lithuania
f	20-24	0.6115049	0.491477	0.2854026
m		0.5557395	0.4304557	0.3061961
f	25-29	0.6625318	0.5577596	0.3544554
m		0.6094125	0.4965443	0.3776214
f	30-34	0.7037547	0.6131851	0.4215269
m		0.6537329	0.5535003	0.4460476
f	35-39	0.7360575	0.6574258	0.4828046
m		0.6890803	0.6001155	0.507761
f	40-44	0.7605326	0.6911377	0.5358352
m		0.7162322	0.6363476	0.5605618
f	45-49	0.7782188	0.7153518	0.5794898
m		0.7360547	0.6627612	0.6036111
f	50-54	0.7899661	0.7310731	0.6135995
m		0.7493159	0.6800882	0.6369899
f	55-59	0.7963791	0.7390631	0.6385215
m		0.7565877	0.6889484	0.6612362
f	60-64	0.7977999	0.7397389	0.6547838
m		0.7582019	0.6896995	0.6769935
f	65-69	0.7943053	0.7331368	0.662848
m		0.7542336	0.6823731	0.6847886
f	70-74	0.7857069	0.7189092	0.6629762
m		0.744499	0.6666695	0.6849125
f	75-79	0.7715516	0.6963539	0.6551729
m		0.7285621	0.6420098	0.6773699
f	80-84	0.751128	0.6644993	0.6391836
m		0.7057609	0.6076662	0.6618787
f	85-89	0.7234964	0.6222952	0.6145516
m		0.6752699	0.5630143	0.6379183

Source: author's own data

**F stands for female, M stands for male*

Model Fit

In tables 3 and 4 below, the Pseudo R², also known as a goodness-of-fit measure, results for how well the model fits my calculations are shown. The results are on a scale between 0 and 1, and the closer to 1 the better the result is at explaining the relationship between my variables. Number of observations means the number of people surveyed in the ESS data.

Table 4: Fit of Model for 'Age and Gender'

Country	Estonia	Latvia	Lithuania
Number of Observations	1,706	1,929	1,730
LR chi2	31.74	97.21	51.98
Prob > chi2	0.0000	0.0000	0.0000
Fit of Model (Pseudo R2)	0.0159	0.0370	0.0233

Source: author's own data

Table 5: Fit of Model for Likelihood of Voting for Each Party

Country	Estonia	Latvia	Lithuania
Number of Observations	962	558	632
LR chi2	51.90	37.97	29.63
Prob > chi2	0.0000	0.0000	0.0005
Fit of Model (Pseudo R2)	0.0204	0.0261	0.0184

Source: author's own data

CHAPTER FIVE

RESULTS

The results of this thesis will be laid out in this section. First, I compare the total votes predicted to be cast when age and gender are used as variables for all three countries, then how these votes contrast with each country's migration rate, and the voter turnout for the chosen elections. Finally, the impact of these predicted votes on individual parties will be shown and discussed.

5.1 Effect of Age and Gender on Predicted Turnout

Number of Votes Predicted by Age and Gender

Table 6: Total Votes Predicted by Age and Gender Variables

Country	Total	Women	Men
Estonia	26,774	15,194	11,579
Latvia	130,361	67,210	63,151
Lithuania	196,484	94,914	101,570

Source: author's own data

The results for the total number of votes predicted to be cast by my calculations are shown above in Table 6. Lithuania, receives the most votes at almost 200,000 followed by Latvia and then Estonia. This is not very surprising as Lithuania has seen by far the highest amount of emigration from the country, so it follows that it should also receive the largest amount of predicted votes.

The above table also shows the amount of predicted votes broken down by gender. In two countries - Estonia and Latvia - women are predicted to cast more votes than men, but in Lithuania men are predicted to be more likely to vote than women. For

Estonia, this is unsurprising as many more women than men have emigrated. However, in Latvia and Lithuania the emigration rate of men and women have been almost equal, so it is interesting to see that the votes are not equally shared between the genders.

Predicted Votes for Each Country Compared with Total Migration

Table 7: Predicted Votes for Each Country Compared with Total Migration

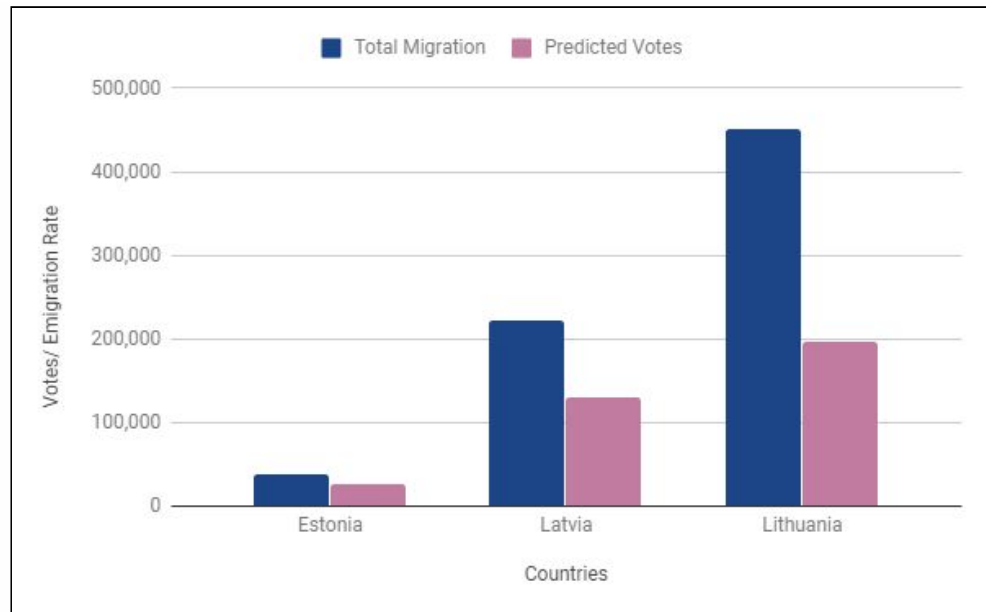
Country	Predicted Votes*	Total Migration**	% of Migration
Estonia	26,774	38,952	68.74
Latvia	130,361	222,031	59.25
Lithuania	196,484	451,813	43.49

** Source: author's own data,*

***Source: Statistics Estonia, Statistics Lithuania, Central Statistical Bureau of Latvia*

Table 7, above, and graph 2, below, show the number of people predicted to cast a vote compared to the total emigration rate of people over 20 years of age. Estonia has by far the highest predicted turnout at 68.74% or almost 27,000 votes of a potential 39,000. Latvia has the second highest emigrant turnout rate with more than 59% predicted to turnout. Lithuania has the lowest predicted turnout rate at 43.49%. As mentioned above, Lithuania also has the highest emigration rate so, this is a particularly low rate of turnout.

Below the results for total votes and total emigration have been compared on a single graph. It emphasises how high the likelihood of voting is by Estonian emigrants compared to Latvia and Lithuania.



Source: author's own data / Statistics Estonia, Statistics Lithuania, Central Statistical Bureau of Latvia

Graph 2: Predicted Votes compared with Total Migration for Estonia, Latvia and Lithuania

Emigrant Turnout for Each Country Compared with Election Turnout

Table 8, below, shows the likelihood of emigrant turnout to the actual election turnout. We can see that emigrants, if they had remained, are predicted to vote at a higher rate than people who stayed behind in Estonia and Lithuania. Lithuania and Estonia are significantly higher with turnout increases for the emigrant population of 4.54% and 5.50%, but Latvian emigrants are only 0.36% more likely to vote when compared to the election turnout.

Table 8: Emigrant Turnout Compared with Home Country Population Election Turnout

Country	Emigrant Turnout (%)*	Election Turnout (%)**	Difference
Estonia	68.74	64.20	+4.54
Latvia	59.21	58.85	+0.36
Lithuania	43.49	37.99	+5.50

*Source: Author's own data

** Source: Estonian National Electoral Committee, Central Election Committee of Latvia, Central Electoral Commission of the Republic of Lithuania

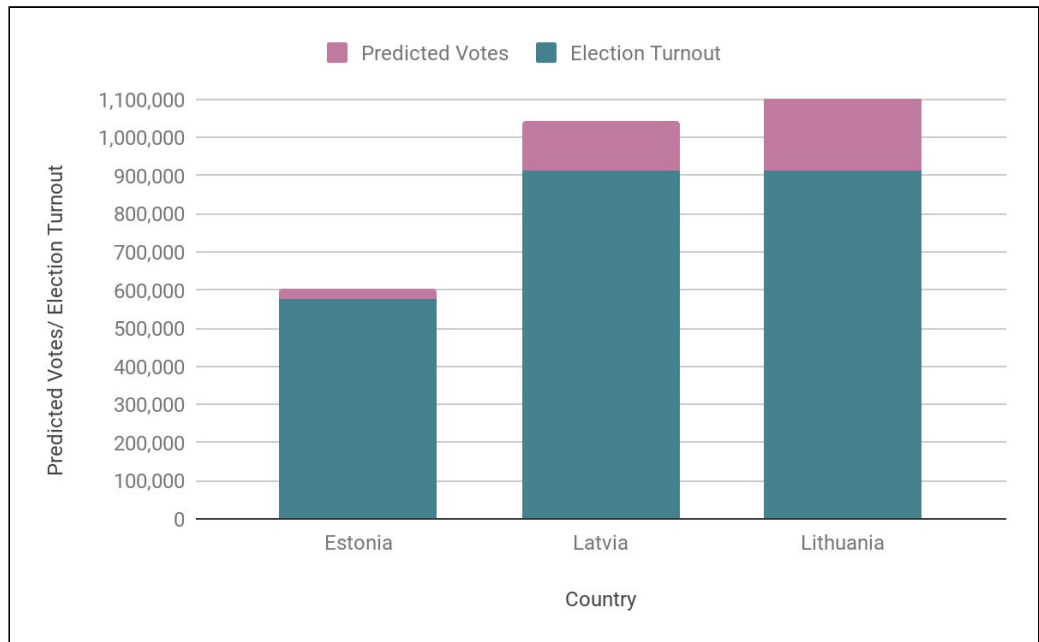
Table 9, below, shows the predicted votes as a percentage of the total votes cast in each election. Estonia's votes equate to 4.63% of the total turnout, but votes for the Latvian and Lithuanian elections are much higher, at almost 15% and 21.50% respectively. Graph 3, next page, shows the predicted votes in relation to the election turnout totals in each country's election, although it should be kept in mind that this is the result for Lithuania's second round of voting.

Table 9: The Increase in Turnout for Each Countries' Election if Emigrants had Not Left and Continued to Voted

Country	Predicted Votes*	Election Turnout**	% of Turnout
Estonia	26,774	577,910	4.63
Latvia	130,361	913,491	14.29
Lithuania	196,484	913,752	21.50

**Source: Author's own data*

*** Source: Estonian National Electoral Committee, Central Election Committee of Latvia, Central Electoral Commission of the Republic of Lithuania*



Source: Author's own data / Estonian National Electoral Committee, Central Election Committee of Latvia, Central Electoral Commission of the Republic of Lithuania

Graph 3: Total Turnout When Predicted Votes are Added to Election Turnout

Estonia

Table 10: Predicted Votes for Estonian Emigrants by Age and Gender

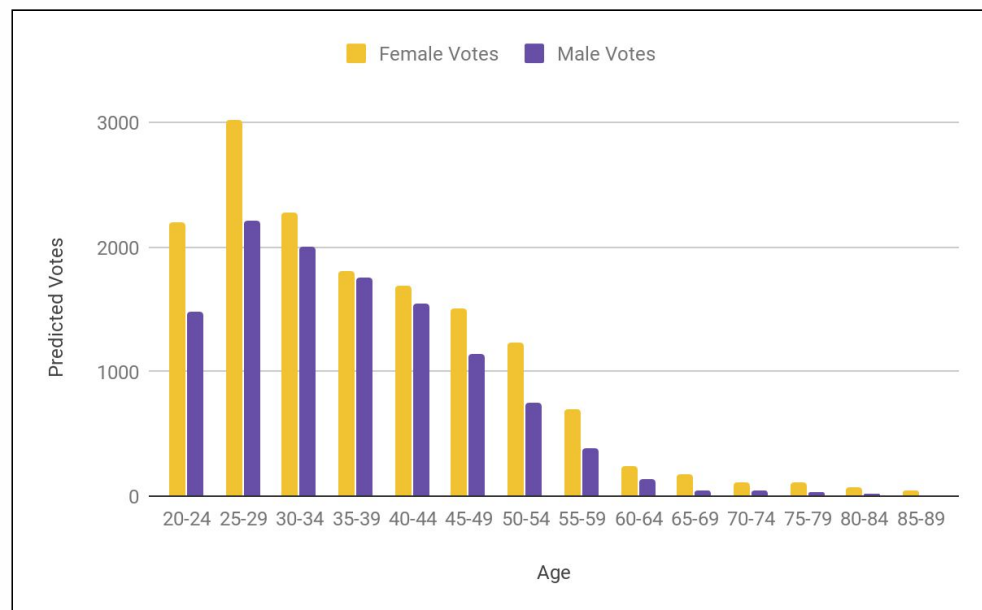
Age	Female Emigration**	Votes*	Men Emigration**	Votes*
20-24	3,593	2,197	2,663	1,480
25-29	4,568	3,026	3,636	2,216
30-34	3,231	2,274	3,063	2,002
35-39	2,451	1,804	2,553	1,759
40-44	2,216	1,685	2,162	1,548
45-49	1,939	1,509	1,557	1,146
50-54	1,557	1,230	1,003	752
55-59	881	702	501	379
60-64	308	246	185	140
65-69	228	181	67	51
70-74	148	116	61	45
75-79	149	115	46	34
80-84	92	69	24	17
85-89	55	40	15	10
Total	21,416	15,194	17,536	11,579

**Source: Author's own data*

*** Source: Statistics Estonia*

As mentioned above, Estonian women are predicted to cast more votes than men, with 15,194 female emigrants predicted to vote compared to 11,579 men. This is 56.74%, the highest female vote of all three counties. When the results of my calculations are broken down further into gender and age categories they show that women are more likely to vote than men at every stage of their lives. The biggest gaps between men and women casting votes are in 20-24 and 25-29 age categories, which can be seen below in graph 4, next page, which compares predicted votes to emigration rate. Between the ages of 35 and 44, the voting rate gap narrows considerably, but then widens as women are far more likely to vote than men when they are over 50, and in

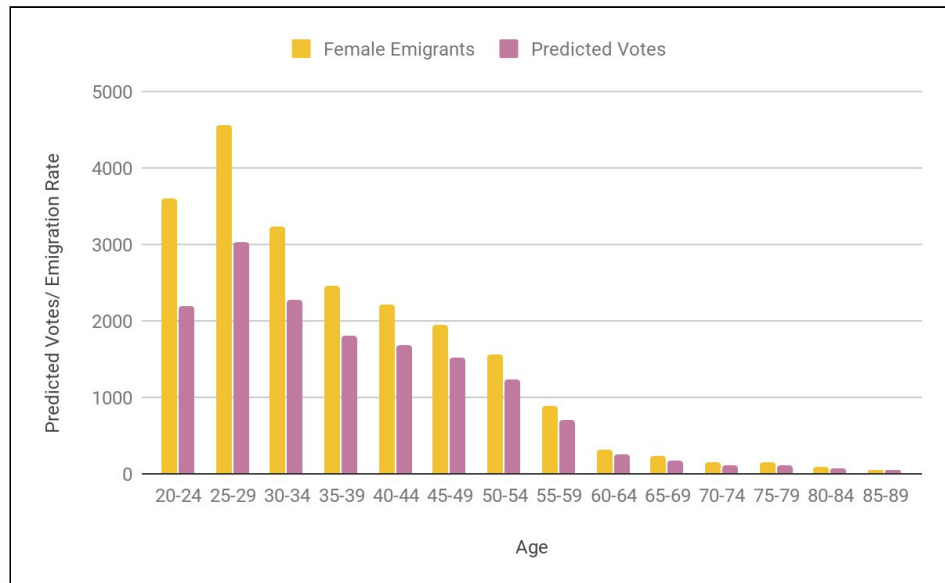
some categories by as much as four times that of the male voting rate. The data for migration rate and votes cast can be seen side-by-side in table 10, above.



Source: author's own data

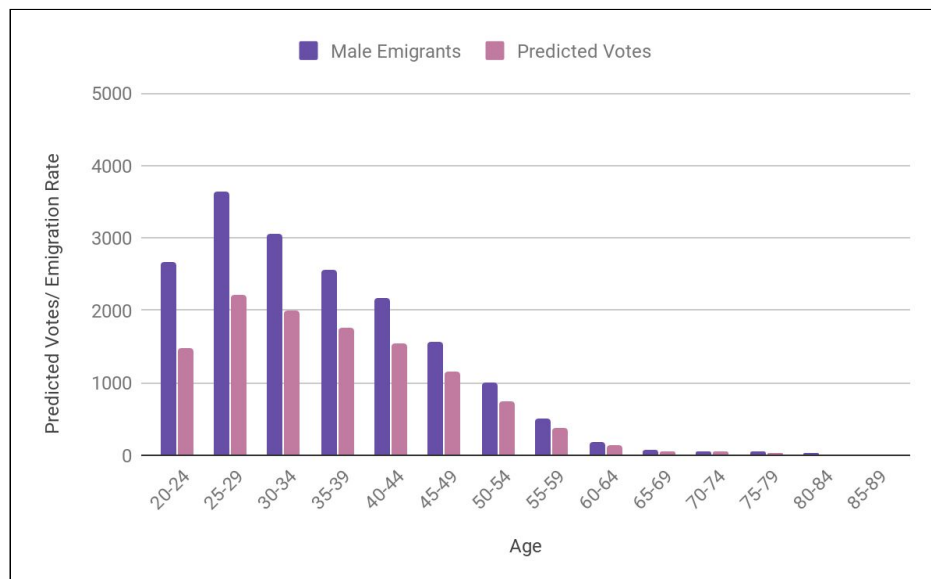
Graph 4: Predicted Votes for Estonian Emigrants by Age and Gender

Graphs 5 and 6, below and on the next page, show the migration rate and predicted votes of each gender. As mentioned previously in this thesis Estonians have the highest predicted rate of voting when compared to Latvia and Lithuania. This is reflected in the charts below as you can see that at every age group the majority are likely to vote, even in the youngest age group categories. Again, the highest numbers of votes are likely to be cast by the 20 to 34 years old age groups, but this is because these groups also have the highest emigration rate.



Source: Author's own data / Statistics Estonia

Graph 5: Predicted Vote Share Compared with Estonian Female Emigration

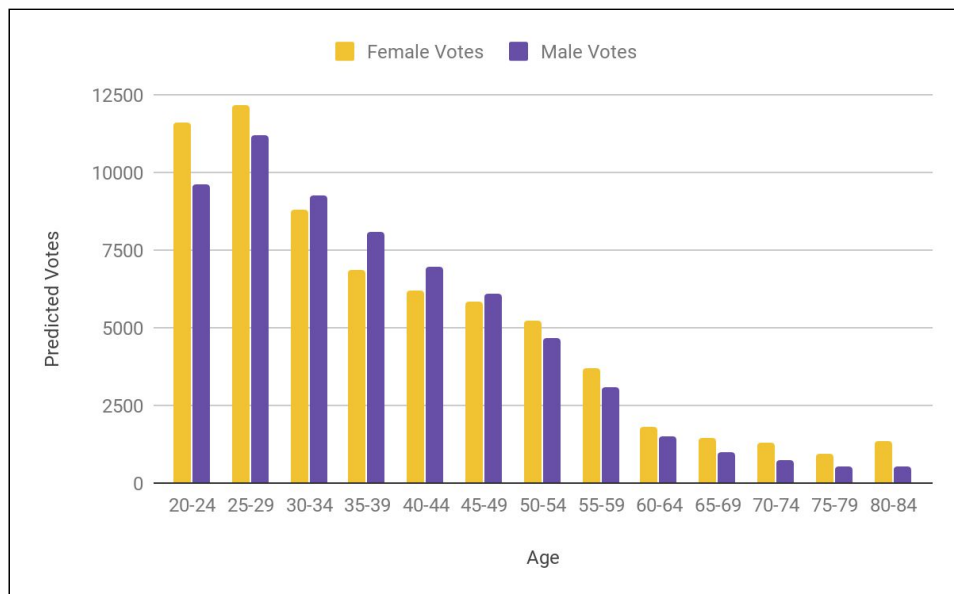


Source: Author's own data / Statistics Estonia

Graph 6: Predicted Vote Share of Estonian Male Emigration

Latvia

The results for Latvia show that, when age and gender are used as variables, 67,210 women are predicted to cast votes and 63,151 men. This means 51.56% of the predicted votes are cast by women. Compared with the Estonian votes this is much smaller turnout gap between men and women. Graph 7, below, shows these results. In total women cast around 4,000 more votes than men. These results are shown in full and by age category in table 11, next page, and graph 7.



Source: author's own data

Graph 7: Predicted Votes for Latvian Emigrants by Age Group and Gender

By looking at the results in this format we can see that women cast more votes in their 20s, and are then outvoted by men until they reach their early 50s. Women then cast more votes until the end of their lives. This is probably because women migrate in higher numbers than men after the age of 50 and probably because women also have a higher life expectancy than men do. In total, this means women are predicted to cast the most votes, in comparison to the Estonian predicted votes, the gap between the genders is the same with about 1,000 more female voters than men until the age of 30.

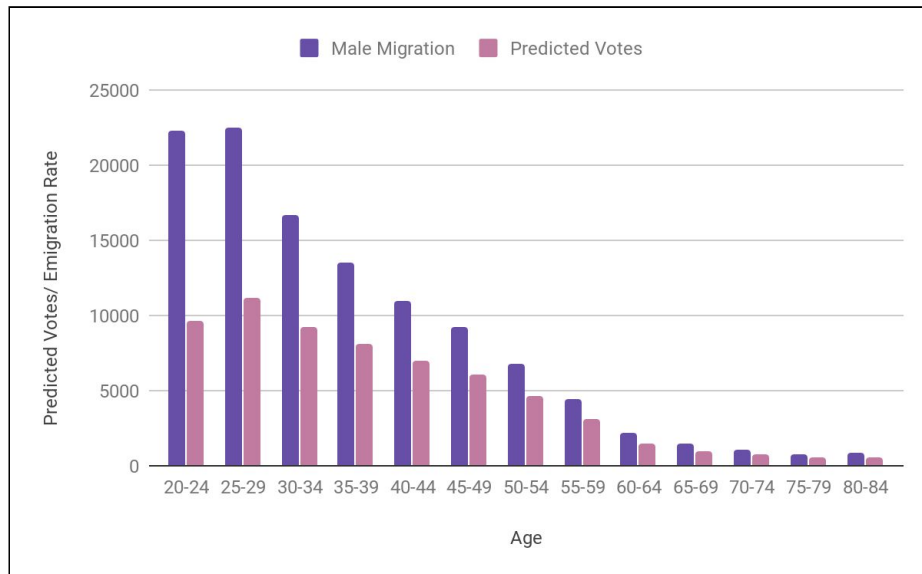
Table 11: Predicted Votes for Latvian Emigrants by Age Group and Gender Compared with Migration Rate

Age	Female Emigration**	Votes*	Men Emigration**	Votes*
20-24	23,631	11,603	22,306	9,592
25-29	21,837	12,163	22,523	11,171
30-34	14,312	8,773	16,721	9,247
35-39	10,421	6,847	13,497	8,098
40-44	8,991	6,213	10,958	6,969
45-49	8,186	5,853	9,195	6,087
50-54	7,121	5,205	6,824	4,640
55-59	5,009	3,702	4,465	3,072
60-64	2,472	1,829	2,193	1,511
65-69	1,958	1,435	1,477	1,007
70-74	1,775	1,274	1,087	724
75-79	1,370	954	794	510
80-84	2,046	1,359	862	523
Total	109,219	67,210	112,902	63,151

**Source: Author's own data*

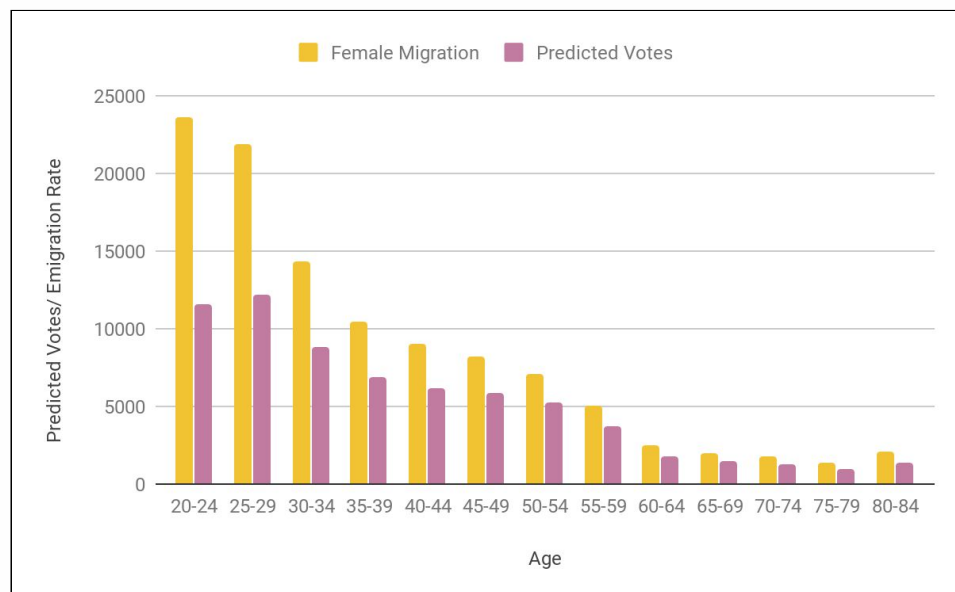
*** Source: Central Election Committee of Latvia*

Graphs 8 and 9, both on the next page, show Latvian total emigration by gender and age and the votes my calculations predict will be cast. For both men and women the likelihood of voting increases with age, which is when the migration rate steadily declines. For both genders the 20-24 and 25-29 categories have the lowest likelihood of voting and are quite considerable when contrasted with the emigration rate, both categories having a turnout of less than 50% of the migration rate.



Source: Author's own data/ Central Election Committee of Latvia

Graph 8: Predicted Votes for Latvian Male Emigrants Compared to Migration Rate

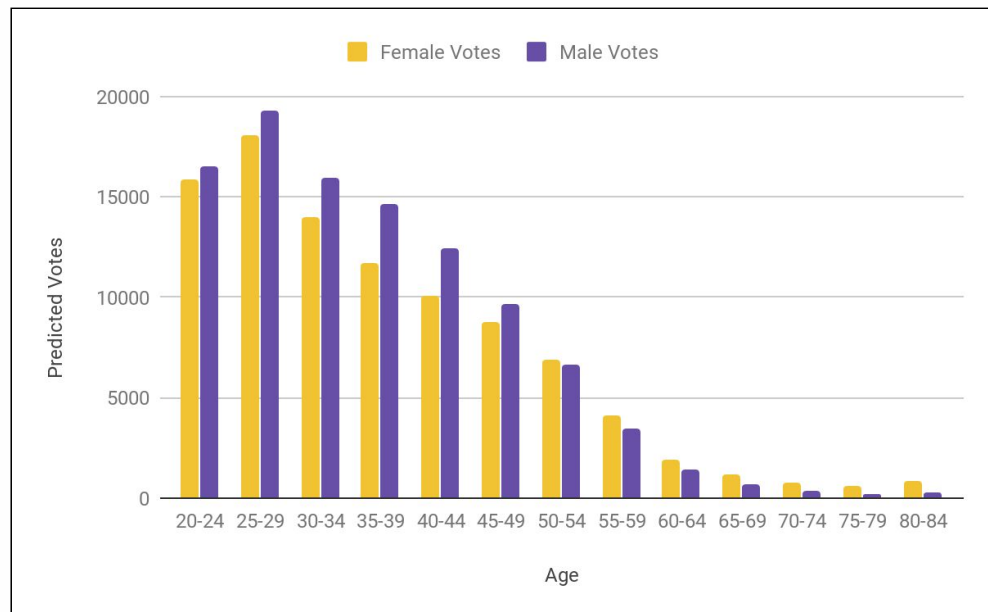


Source: Author's own data/ Central Election Committee of Latvia

Graph 9: Predicted Votes for Latvian Female Emigrants Compared to Migration Rate

Lithuania

The results for Lithuania show that men are predicted to cast 101,570 votes and women are predicted to cast 94,914 votes. This shows that, unlike in Estonia and Latvia, men are more likely to vote than women are. This is shown in graph 10, and table 12, which are both below. There are approximately 6,000 more male voters despite the emigration rate being almost 50% men and 50% women.



Source: author's own data

Graph 10: Predicted Votes for Lithuanian Emigrants by Gender and Age Group

The results show that several thousand more men are likely to vote in each age group until the age of 50, when suddenly the roles are reversed. One clear example is the age group 80-84 years old, where 808 women are likely to vote and just 228 men. This is similar to the emigration patterns of women, who tend to migrate in larger numbers than men after the age of 50, as mentioned above in the Latvian results section. This trend can also be seen in graph 10. Something that becomes very evident in graphs 11 and 12, on page 57, is just how few young Lithuanians are predicted to vote compared with the very high emigration rate. This is particularly noticeable in every age

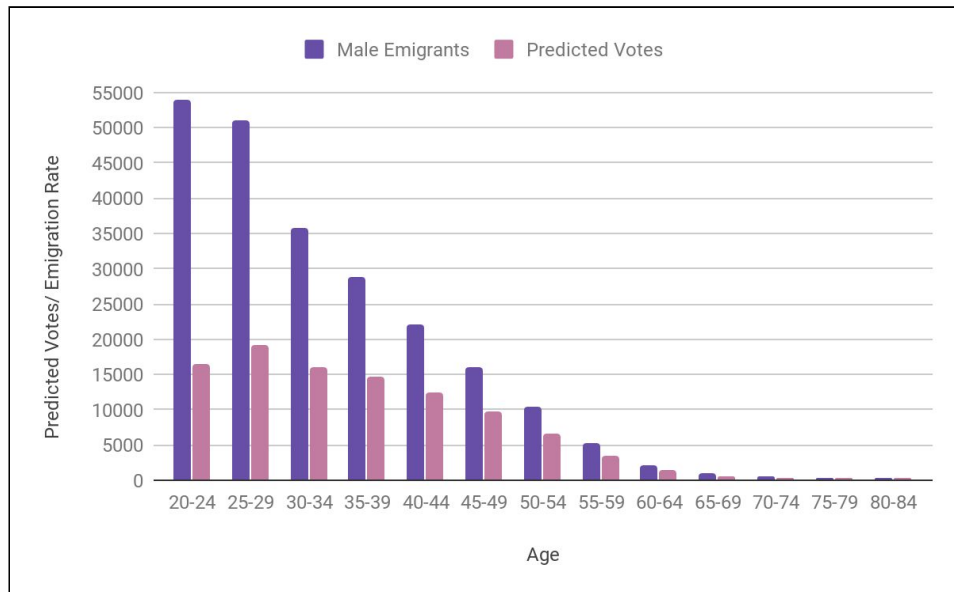
category below 45-49. The final results show that less than 50% of both genders are predicted to cast votes. The full results of predicted votes compared with emigration rate can be seen below in table 12.

Table 12: Predicted Votes for Lithuanian Emigrants by Gender and Age Group Compared with Emigration Rate

Age	Female Emigration**	Votes*	Men Emigration**	Votes*
20-24	55500	15,840	53964	16,524
25-29	51076	18,104	51062	19,282
30-34	33295	14,035	35814	15,975
35-39	24225	11,696	28901	14,675
40-44	18820	10,084	22133	12,407
45-49	15083	8,740	16036	9,680
50-54	11185	6,863	10478	6,674
55-59	6496	4,148	5182	3,427
60-64	2936	1,922	2141	1,449
65-69	1825	1,210	954	653
70-74	1153	764	509	349
75-79	969	635	340	230
80-84	1365	872	371	246
Total	223,928	94,914	227,885	101,570

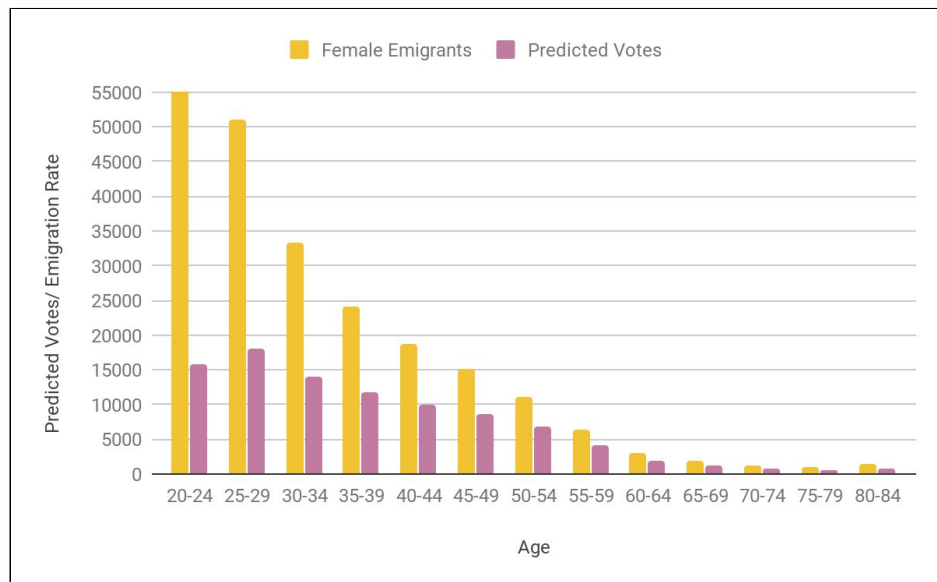
**Source: Author's own data*

*** Source: Central Electoral Commission of the Republic of Lithuania*



Source: Author's own data / Central Electoral Commission of the Republic of Lithuania

Graph 11: Predicted Votes of Lithuanian Male Emigrants Compared with Emigration Rate



Source: Author's own data / Central Electoral Commission of the Republic of Lithuania

Graph 12: Predicted Votes of Lithuanian Female Emigrants Compared with Emigration Rate

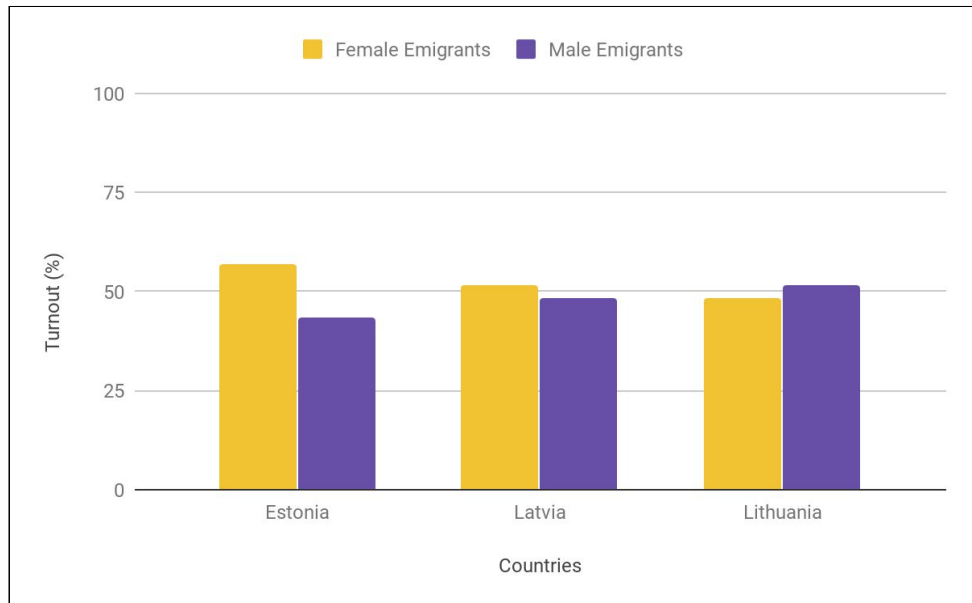
Predicted Votes for Each Country by Gender Calculated as Percentages

Below the results for likelihood of voting by gender and age category are laid out as percentages. Calculating the age categories of men and women as percentages allows me to compare the three countries more easily and on one chart. The results are presented in table 13 and on graph 13. Estonia clearly stands out as having a bigger gap between male and female voters than the other two countries. Both Estonia and Latvia have more female voters than male. Lithuania has the highest number of male voters.

Table 13: Predicted Votes Calculated as Percentage of total Emigration Rate in Estonia, Latvia and Lithuania by Gender

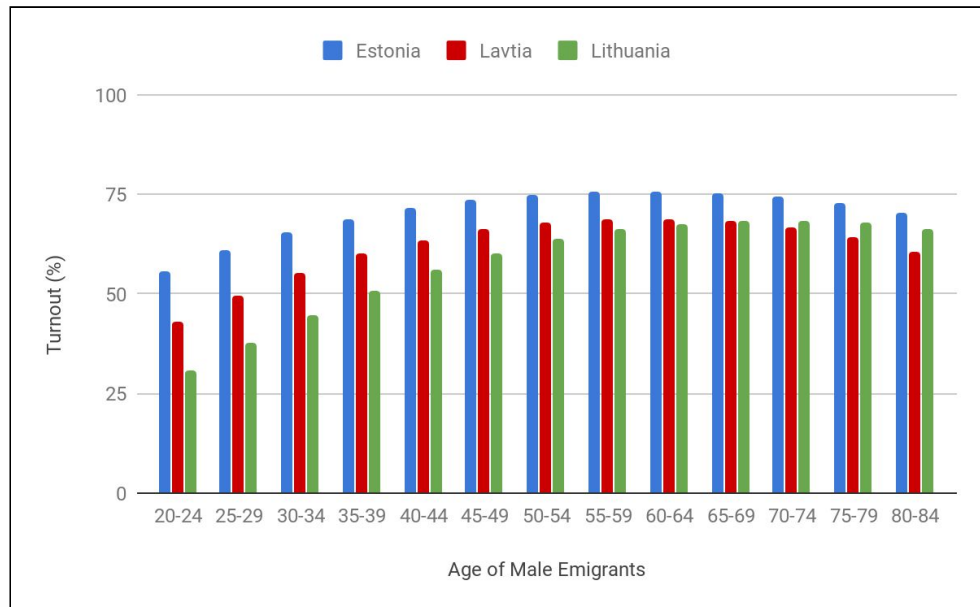
Country	Women	Men
Estonia	56.75	43.25
Latvia	51.66	48.44
Lithuania	48.30	51.69

Source: author's own data



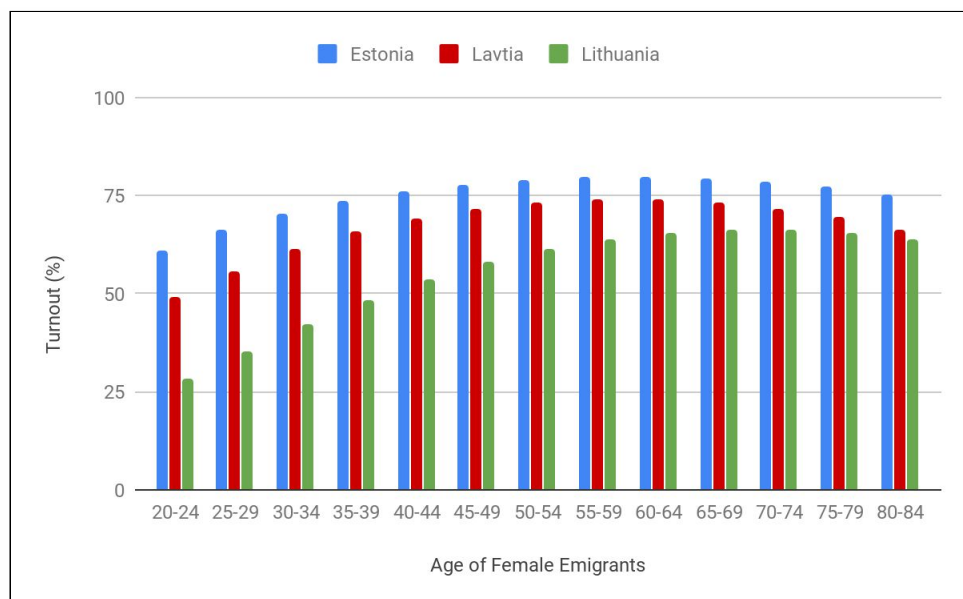
Source: author's own data

Graph 13: Predicted Votes Calculated as Percentage of Emigration Rate in Estonia, Latvia and Lithuania by Gender



Source: author's own data

Graph 14: Predicted Votes Calculated as a Percentage of Male Emigration in Estonia, Latvia and Lithuania



Source: author's own data

Graph 15: Predicted Votes Calculated as a Percentage of Female Emigration in Estonia, Latvia and Lithuania

My results presented in graphs 14 and 15, above on page 58, show that Estonians are predicted to have the highest turnout rate in all age categories and that women (graph 15) have a higher turnout rate than men in all categories. Estonian women vote in the highest numbers and Lithuania women the lowest. They also show how low Lithuanian participation rates are compared to the other countries until the mid 30s.

Conclusion

Before moving on to discussing the effects predicted votes have on parties, I will summarise the results so far. My results show that emigrants are predicted to vote in slightly higher numbers than people who have not migrated in Estonia and Lithuania, and that turnout would be increased if they had stayed in their home countries and not migrated. Estonians emigrants are predicted to cast the most votes compared to the emigration rate, and Lithuanians the least. My results show that older people are more likely to vote in higher numbers than young people in all countries, but that older people are less likely to migrate. This reflects research on age and voting that already exists, as well as knowledge about migration cycles. My results also show that women are more likely to vote than men in Estonia and Latvia, but men are more likely to vote than women in Lithuania. In Estonia this reflects the migration trend of more women moving abroad than men. But in Latvia and Lithuania, men and women have migrated in equal numbers.

(5.2) Which Parties are Strengthened or Weakened?

This section will outline the results relating to specific parties and how they would have gained or lost votes in each election. I will discuss each country separately starting with Estonia, then Latvia, and finally Lithuania, before concluding this results section.

Estonia

Table 14: Emigrant Votes Determined by Age and Gender for Estonian National Election 2015

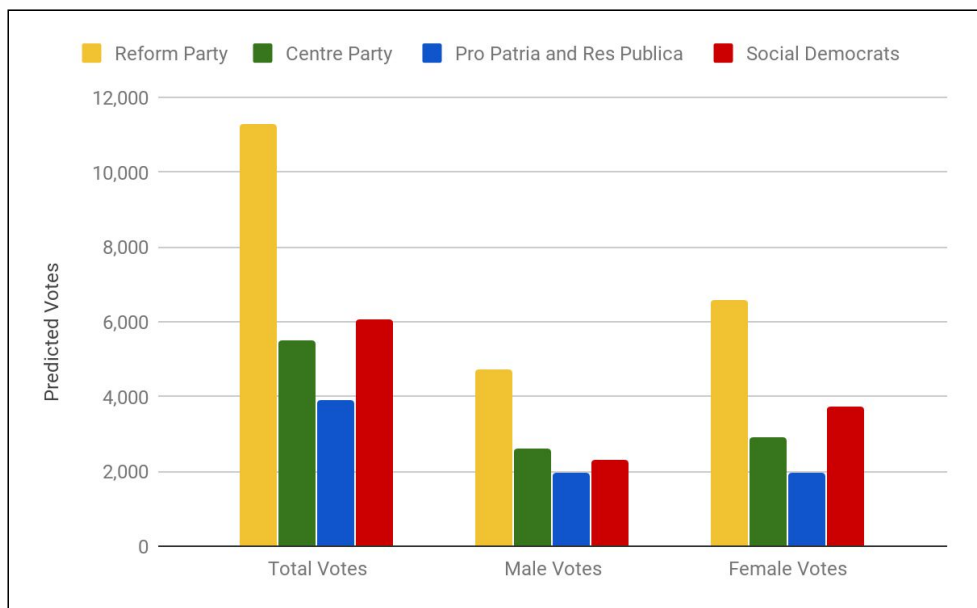
Results: Estonia	Reform Party	Centre Party	Social Democrats	Pro Patria and Res Publica	Total votes
Predicted votes	11,304 (42.22%)	5,493 (20.51%)	6,054 (22.61%)	3,923 (14.65%)	26,774 (+4.63%)
Male	4,718	2,602	2,315	1,942	11,579
Female	6,584	2,890	3,738	1,981	15,194

**Source: Author's own data*

Table 14 shows the predicted votes for each Estonian party. In total when age and gender are used as variables 26,774 votes would have been cast for the four parties that my research focuses on. This is 4.63% of the 2015 election turnout. The majority of these votes - 11,304 - would have been cast for the Reform Party, which was the party that gained the biggest vote share at the election. The party gained 42.22% of the predicted votes, almost double the amount predicted for any other party. The Social Democrats were predicted to gain 6,054 votes, the second highest amount which is 22.61% of the total predicted ballots. Votes for the Centre Party were slightly below 5,500 and Pro Patria and Res Publica were predicted to receive 3,923.

The results also show that there is a gender gap between women and men. Women are more likely to vote for the Reform Party and the Social Democrats - more than two-thirds of female votes are cast for these two parties. It is these additional votes

which see both parties gain the most votes overall because both men and women are likely to vote for the Centre Party and Pro Patria Res Publica in approximately equal numbers. These results are displayed in graph 16 below, and above in table 14.

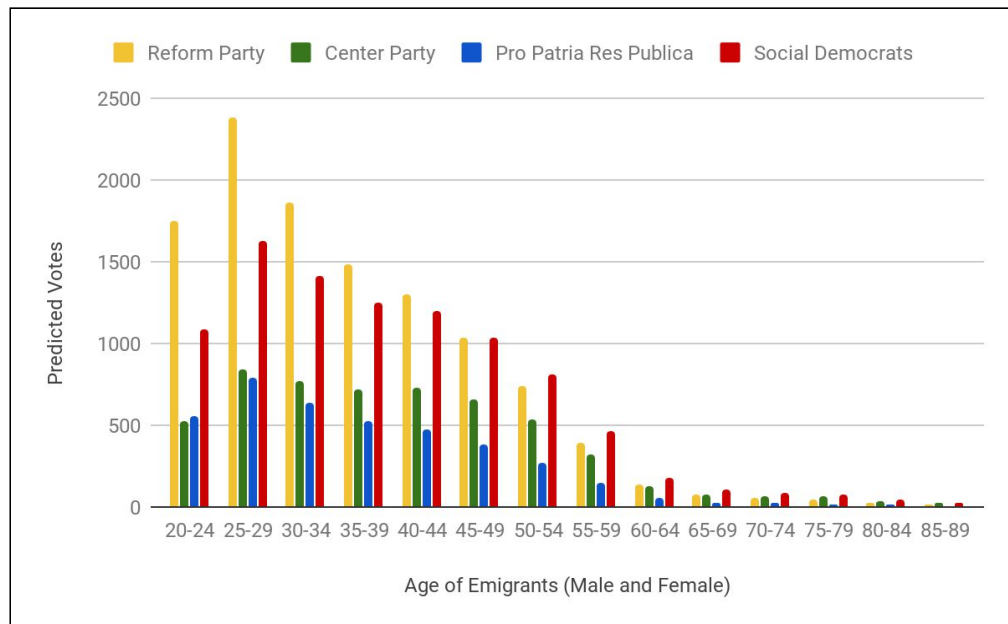


Source: author's own data

Graph 16: Votes Cast for Estonian Parties by Gender

In graph 17, next page, predicted votes by age category are shown. I have combined the male and female results to be able to compare the trends on one graph (but the complete results for votes by age and gender can be found in the appendices starting on page 84). The results for gender described above also list which genders vote for each parties. Looking at the results for age only, they show that until the age of 45, the Reform Party is predicted to receive the most ballots. After this, the most votes for each age group are predicted to be cast for the social democrats. Following migrations trends, people under the age of 35, who emigrate in the highest numbers, are predicted to cast the most ballots. All figures for votes by age group and gender for each party can be found in the appendices, starting on page 91 (appendix 4 (total votes by age and

gender), appendix 5 (age, women, party, voted for), appendix 6 (age, men, and party voted for)).



Source: author's own data

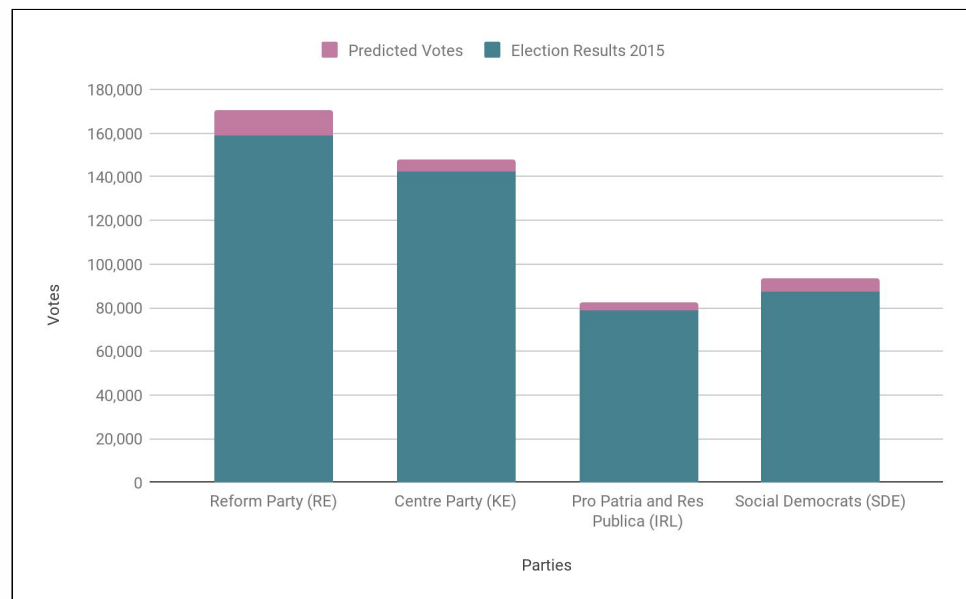
Graph 17: Total Predicted Votes Cast by Each Age Group for Each Party

The results in table 15, on page 64, show the results of the election when predicted votes are added to the 2015 Estonian National Election results. The total turnout has increased to 604,684 when emigrant votes are added. The Reform Party and Social Democrats make the biggest gains, which is expected as they received the most predicted votes. Reform increase their vote share by 0.5%, and increase to 28.2% of the total vote share. The Social Democrats gain 0.2%, rising from 15.2% to 15.4%. Pro Patria and Res Publica gain nothing, sticking with their election turnout of 13.7%. The Centre Party, which gained the second highest vote share in the 2015 election, lose 0.3%. This 0.3% is a small different, but it means the Reform Party increases its lead over the Centre Party by 0.8% in total, and strengthening its position overall. These results are shown on graph 18, next page.

Table 15: Results of all parties in 2015 Estonian National elections with additional votes and turnout

Results: Estonia	Reform Party	Centre Party	Social Democrats	Pro Patria and Res Publica	Total votes (all parties)
Votes*	11,304	5,493	6,054 (22.6%)	3,923 (14.7%)	26,774
Votes 2015 election**	158,971 (27.7%)	142,460 (24.8%)	87,190 (15.2%)	78,697 (13.7%)	577,910
New totals*	170,275 (28.2%)	147,951 (24.5%)	93,243 (15.4%)	82,622 (13.7%)	604,684
Difference	+0.5%	-0.3%	+0.2%	0	

**Source: Author's own data / ** Source: Estonian National Electoral Committee*



Source: Author's own data / Estonian National Electoral Committee

Graph 18: Estonian Election Results with Probability Votes Added to Each Party's Vote Share

Latvia

Predicted Votes for Each Party

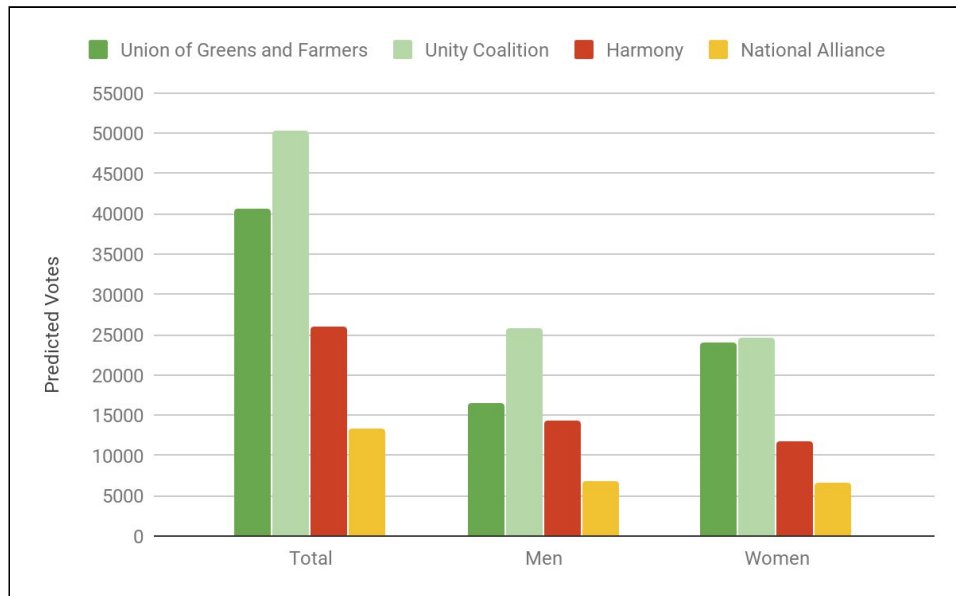
The results for Latvia show that, in total, 136,500 votes are predicted to be cast for the four parties studied. The Unity Coalition, who, in the 2014 election, came away with the second highest vote share, are predicted to gain the most votes, according to my calculations. They would receive 56,005 votes - more than 41% of the total votes. The Union of Greens and Farmers would have received the second highest amount of votes, 40,676, or 29.78%. Following this, Harmony - who received the most votes in the actual 2014 election - are predicted to gain a further 26,087 votes, or around 19% of the total votes. National Alliance would then pick up the rest of the predicted votes. These votes combined total slightly more than 15% of the votes in 2014 national election.

When we look at how each gender is predicted to vote, the results show that women are likely to cast almost 10,000 more votes than men. They cast more votes for all parties except Harmony, and the majority of those votes are cast for the Union of Greens and Farmers and the Unity Coalition. Men and women vote in equal numbers for National Alliance. The difference between men and women voting for Harmony is around 2,500 ballots. These results are shown below in table 16, below, and graph 19, on the next page.

Table 16: Emigrant Votes Determined by Age and Gender for Latvian National Election 2014

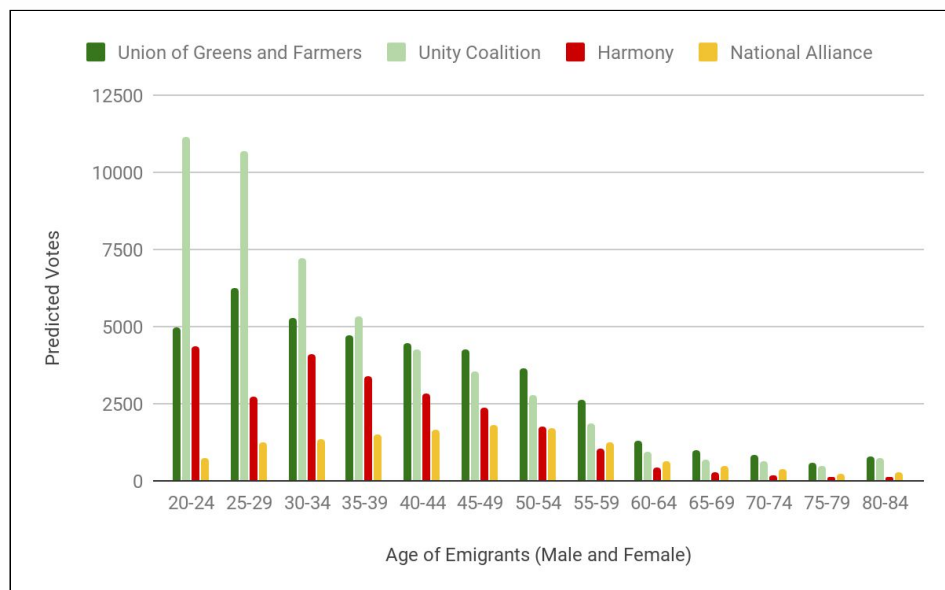
Results: Latvia	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance	Total
Probability Votes	40,676 (29.78%)	56,005 (41.01%)	26,087 (19.10%)	13,333 (9.76%)	136,550 (+15.06%)
Male	16,559	25,728	14,321	6,544	63,152
Female	24,117	30,277	11,767	6,789	72,950

Source: author's own data



Source: author's own data

Graph 19: Votes Cast for Latvian Parties by Gender



Source: author's own data

Graph 20: Total Predicted Votes Cast by Each Age Group for Each Latvian Party

In the above graph (20), predicted votes for each party have been broken down into each age category. The results show that emigrants under 40 are most likely to cast a vote for the Unity Coalition and that people over 45 will vote for the Union of Greens and

Farmers. As with Estonia, people under the age of 35 are predicted to cast the most votes, although as stated in the last section, the same age group are also the least likely to vote in general. All figures for votes by age group and gender for each party can be found in the appendices, starting on page 91 (appendix 7 (total votes by age and gender), appendix 8 (age, women, party, voted for), appendix 9 (age, men, and party voted for)).

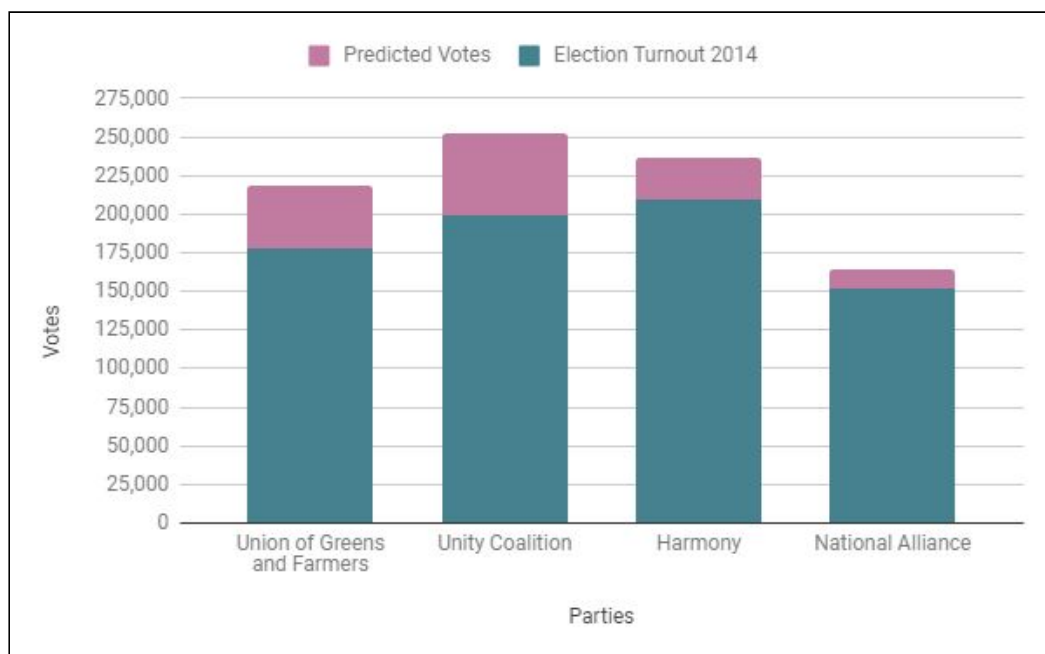
Table 17, below, and graph 21, on page 68, shows the results of adding the predicted votes to the 2014 election results. The new total voting turnout increases from 906,538 to 1,038,088. When the total number of predicted votes by age and gender are added to the total number of votes cast in the 2014 election the Unity Coalition become the party with the largest vote share. It gains 2.77% extra turn out, which puts the party's total vote share at 24.62% instead of 21.84%. This sees the party overtake Harmony, which is left on 22.73% after losing 0.24% of the vote share. Unity also increases its lead over the Union of Greens and Farmers who gain an additional 1.58% vote share, from 19.51% to 21.08%. National Alliance lose 0.70% of their vote share.

Table 17: Results of All Parties in 2014 Latvian National Election with Additional Votes and Turnout

Results: Latvia	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance	Total
Predicted Votes*	40,676	56,005	26,087	13,333	136,550
Votes 2014 election**	178,210 (19.51%)	199,535 (21.84%)	209,887 (22.97%)	151,567 (16.59%)	906,538
New Total Votes*	218,886 (21.08%)	255,540 (24.62%)	235,974 (22.73%)	164,900 (15.88%)	1,038,088
Difference %	+1.58%	+2.77%	-0.24%	-0.70%	

**Source: Author's own data*

*** Source: Central Election Committee of Latvia*



Source: Author's own data / Central Election Committee of Latvia

Graph 21: Latvian Election Results with Probability Votes added to Each Party's Vote Share

Lithuania

Predicted Votes for Each Party

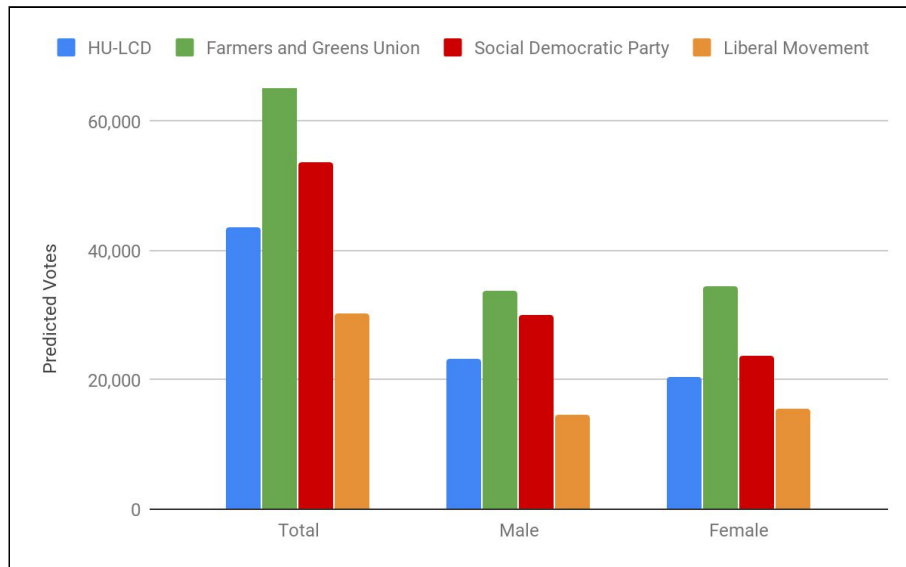
The predicted votes distribution for Lithuanian parties are shown in table 18. In total 196,044 ballots would have been cast for the four parties, in the second round of voting for the 2016 national election. The Farmers and Greens Union have been predicted to receive the highest vote share of the predicted votes at 34.92% or 68,466 votes. The Social Democratic Party would have received the second highest vote share with 27.36% , followed by Homeland Union and then the Liberal Movement. The total number of votes is equal to 22.25% of the total turnout for the second round of voting in the 2016 national election.

Table 18: Predicted Gender and Age Emigrant Votes for the Lithuanian National Election 2016

Results: Lithuania	Homeland Union (HU-LCD)	Farmers and Greens Union	Social Democratic Party	Liberal Movement	Total
Probability Votes	43,693 (22.29%)	68,466 (34.92%)	53,638 (27.36%)	30,247 (15.43%)	196,044 (22.25%)
Male	23,140	33,885	29,917	14,627	101,569
Female	20,553	34,581	23,721	15,620	94,475

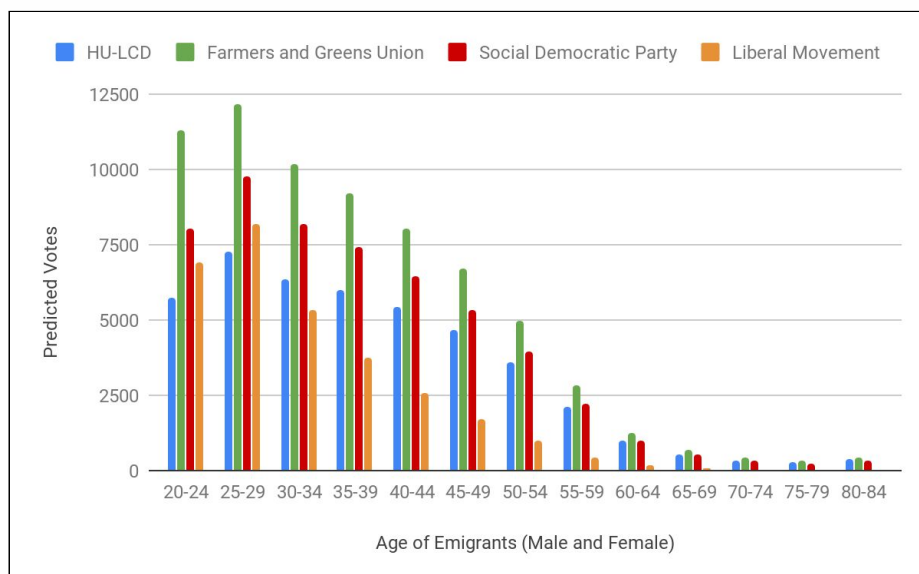
Source: author's own data

Regarding gender, men cast more votes than women, with a gap of around 6,000 ballots between the two. Men voted in higher numbers for Homeland Union and the Social Democratic Party. Combined, for these two parties, men cast around 9,000 more votes than women did. In contrast, women were predicted to vote in higher numbers for the Farmers and Greens Union and Liberal Movement, but by no more than a 1,000 for each party. These results are also shown below in graph 22, on the next page. This shows there is a gender gap in how men and women vote in Lithuania.



Source: author's own data

Graph 22: Votes Cast for All Lithuanian Parties by Gender



Source: author's own data

Graph 23: Total Predicted Votes Cast by Each Age Group for Each Party

When these results are broken down into age categories (graph 23), they show that every age group casts the most votes for the Farmers and Greens Union, and then for every age group over 25, the Social Democratic Movement gains the second highest vote share of predicted votes. The Liberal Movement is the third most popular party for

the under 30s, but then declines rapidly there after. The most votes cast by the under 35s, just like in Latvia and Estonia, even though these groups have the lowest turnout. All figures for votes by age group and gender for each party can be found in the appendices, starting on page 91 (appendix 10 (total votes by age and gender), appendix 11 (age, women, party, voted for), appendix 12 (age, men, and party voted for)).

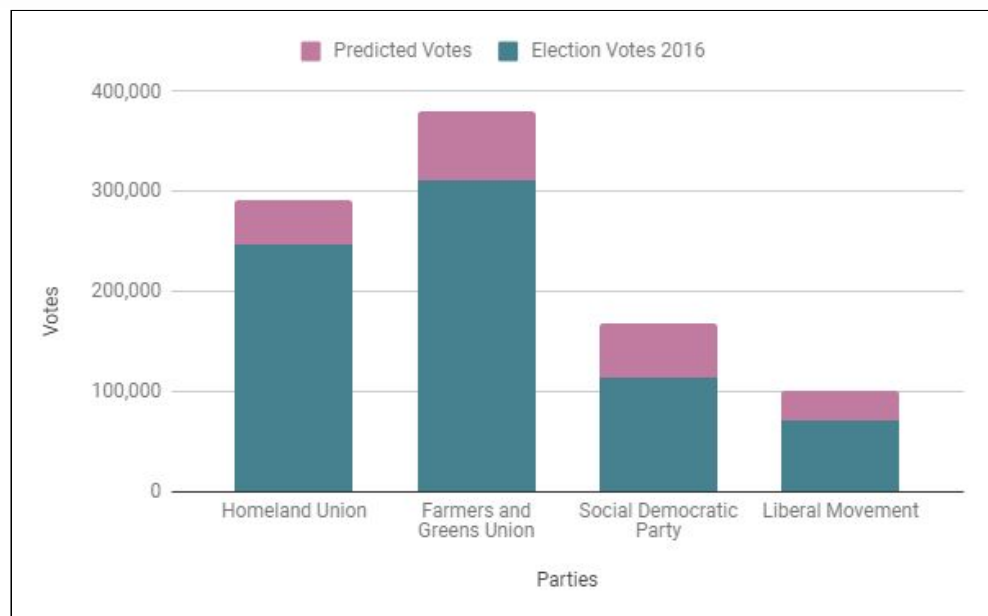
Below in table 18, the predicted votes have been added to the 2016 election ballots, giving as new total turnout of 1,076,901. While, overall, the new results give the same outcome as the actual election, with the Greens and Farmers winning by far the most votes and the Liberal Movement gaining the least, they also show that two parties make huge gains. The Social Democratic Party would have increased their vote share by 44.98%, jumping from 115,599 votes to 169,337. But, the Liberal Movement exceed that, and increase their share by 50.51% - increasing their votes from 30,247 to 70,005. These results are shown on graph 24, on the next page. These two parties would have been strengthened had emigrants not emigrated. As well as this, Homeland Union is the party which loses the highest vote share at 1.03%, despite gaining almost 44,000 predicted votes. The Farmers and Greens Union see a slightly reduced vote share, as they lose 0.009%. In contrast, the Social Democratic Party gain 2.60% of the total vote share and the Liberal Movement 1.36%.

Table 19: Results of all parties in 2016 Lithuanian Election with Additional Votes and Turnout

Results: Lithuania	Homeland Union (HU-LCD)	Farmers and Greens Union	Social Democratic Party	Liberal Movement	Total
Predicted Votes*	43,693	68,466	53,638	30,247	196,044
Votes 2016 election**	246,108 (27.94%)	311,611 (35.38%)	115,599 (13.12%)	70,055 (7.95%)	880,857
New Total Votes*	289,801 (26.91%)	380,077 (35.29%)	169,337 (15.72%)	100,302 (9.31)	1,076,901
Difference %	-1.03%	-0.09%	+2.60%	+1.36%	

**Source: Author's own data*

*** Source: Central Electoral Commission of the Republic of Lithuania*



Graph 24: Lithuanian Election Results with Probability Votes Added to Each Party's Vote Share

Summary

In summary, my results show that if emigrants had stayed in their home countries and voted, that the most popular party in Latvia would have changed from Harmony to the Unity Coalition, but the allocation of votes would have remained the same in Estonia and Lithuania. In Latvia, the result would ultimately have remained the same too because after the election in 2012 a coalition was formed between parties to keep Harmony Centre out of the government. But because Latvia has a proportional electoral system, they could have won more seats than they did if emigrants had remained in Latvia and voted. My results also show that in Lithuania, the Social Democratic Party and Liberal Movement would have increased their vote share if emigrants had voted, weakening both the Greens and Peasants and Homeland Union. In Estonia, there were no significant changes in the election outcome by adding votes from emigrants to the election outcome of 2015, but the Reform Party would have increased its lead over the Centre Party.

CHAPTER SIX

DISCUSSION

In this section I will discuss my results, answer my two research questions, and layout ideas for further research in this subject area. After that, there will be a conclusion which will be the last chapter of this thesis.

How have voting demographics changed in Estonia, Latvia, and Lithuania since 2004?

From the demographic data collected by national statistics agencies we can see that voting demographics have changed in each country primarily because young people have emigrated in the largest numbers since 2014. This means that there are fewer, by hundreds of thousands, of young people in each country to cast votes in each election as migration is highest among the under 40s.

Regarding gender, in Estonia thousands more women have migrated than men, so there are fewer women than there should be given the demographics. However, the Estonian population as a whole has more women than men, so emigration may have evened out this imbalance. In Latvia and Lithuania, men and women have emigrated in equal numbers. But Latvian women were shown by my results to vote at a higher rate than men.

Another way in which the voting demographic has changed in regards to young people voting, is that in Latvia and Lithuania, young people with higher education have left both countries causing a brain drain. This changes the voting demographics because

there is a strong correlation between higher education and voting. Most of these young migrants are also documented as being single, rather than married.

Emigration may end up being a long term problem when it comes to voting because if a person migrates in their early 20s and stays abroad for several years, or maybe even decades, this may also lead to a decrease in voting even when this generation, or cohort, are older, as they are not in the habit of doing so or are disinterested in the politics of their home country. There is plenty of research to show that voting is based on habit and if a voter starts voting when they are younger, they are more likely to carry on in following elections.

Potentially, this change in demographics is a concern if each country still sees bringing young people from abroad back to their home countries as the solution to population decline, because Estonia, Latvia, and Lithuania all have aging populations which gives older people a greater say at the ballot box because there are more of them. Older people are also much more likely to vote and therefore parties could create policies targeted specifically at older voters and not young people.

What political forces have been strengthened as a result of outward migration?

My results show that parties in Estonia, Latvia, and Lithuania have been strengthened and weakened, but to different levels in each country. The strongest results were found in Latvia, and then Lithuania. A smaller impact was seen in Estonia.

In **Latvia**, my calculations show that a different party would have likely gained the largest vote share had emigrants not left, and stayed at home, and voted. Harmony, which gained the largest amount of ballots in the 2014 election fell to second place after the Unity Coalition (UC) gained more predicted votes. In a proportional system this would have given the Unity Coalition more seats and strengthened them as a party over their rivals. This could have made a difference in the formation of the coalition government as the UC would have had a lot more seats than the Union of Greens and Farmers (UGF), who were their closest rival in 2014. In the actual election UC won 23

seats, UGF 21, and Harmony 31. However, if Unity had been the biggest party they would have gained significantly more seats which would have given them more power in the coalition formation negotiations and when they were in government. With regards to Harmony, during the coalition formation talks which took place after the 2014 election, the parties banded together to keep Harmony out of the government and force them into the role of the opposition. So it's fair to say Harmony's position would still be in opposition, but they would have less seats. This shows Harmony would have been weakened as a party.

For **Lithuania**, although several parties gained more votes and were strengthened by this, the outcome of the 2016 election would have given the same results in regards to which parties gained the most votes. However, the Social Democratic and Liberal Party would have gained a lot more votes than they did in real life, and these would have mostly come from young people. This would have weakened the Greens and Peasants and Homeland Union parties, but the Greens and Peasants would still have collected the most ballots in the election.

Finally, regarding **Estonia**, my calculations show that high migration has less of an effect on the outcome of the 2015 election than it did on the other two countries' elections. The predicted votes were distributed in the same way as they were in the actual election. This is probably because young people are very likely to vote for Reform, who gained the most votes during the election, and young people have left Estonian in the largest numbers. However, while the gains the Reform Party made from the predicted votes proved to be only a small increase in vote share, because the Centre Party lost a small amount of its vote share, this saw the gap between the two parties increase.

Looking at the ideological beliefs behind these parties, in Estonia and Latvia the majority of votes were cast for the centre-right parties Reform and Unity (and Union of Greens and Farmers), so my results show that the centre-right has been strengthened in these countries at the expense of Harmony and Centre, who are more on to the left of

the political spectrum. In Lithuania, the results when discussed on this basis are not so clear. While most votes are cast for the centre-right parties Farmers and Greens Union and Homeland Union-Lithuanian Christian Democrats, their overall vote share decreases and the centre-left Social Democratic party receives more than 50% of the votes than it did in the 2016 election. Which shows that the centre-left political force has been strengthened. However, the Liberal Movement, which also almost doubles its total votes when the predicted votes were added, is perceived to be more to the centre-right. But seeing as the Social Democratic Party increased its total vote share by 2.60%, and the losses of Homeland Union-Lithuanian Christian Democrats (1.03%) and the Union of Greens and Farmers (0.09%) are subtracted from the Liberal Movement's 1.36% vote share increased, that leaves an increase for the centre-right parties of 0.22%. Therefore, in Lithuania, it may well be fair to say the centre-left if the political force which would have been strengthened if emigrants had not emigrated.

It is also important to remember that the emigration data from each country is incomplete, as mentioned in the limitations section. Emigration data totals, especially from sending countries, are regarded to be lower than they actually are, as people are not required to notify the government when they leave. If data had been more accurately gathered, it would have been possible to estimate a more accurate answer. This would also be possible to do if each country was looked at as a single case study, as more data is available and more variables could have been added to the models.

Further Research

If further research was to be carried out on this subject in the Baltic states, now that initial results have been carried out to see if, and which, countries' election outcomes are most affected by high rates of emigration, each country should be studied on it's own. Two of the studies that I read for this thesis focused on Moldova and Italy and broke the country down into regions, where local elections and migration of people, both internal and external, were studied for several election cycles. This is how I would

suggest proceeding with this area of study, and Latvia, particularly, seems to be a good candidate for this type of research. This are for two reasons for this:

1. The results I calculated were strongest in Latvia
2. Voters do not submit ballots to their previous places of residence

If a Latvian votes from abroad, their vote is submitted to the Riga municipality, regardless of whether they have ever lived or worked in the capital city. This, surely, discourages voters who live in other areas from casting their ballots as it breaks connects with an area they know well and may have an interested in, such as a home municipality. However, qualitative interviews should also be carried to understand why Latvians living abroad do not vote to stand alongside the quantitative research. This could also be undertaken for the other two countries, and especially for Estonians who have the simplest and easiest way of voting from another county, but don't. Secondly, it would beneficial to see if research could be carried out which could determine whether or not traditional indicators of voting, such as education level and marital status, do have an effect on emigrants voting in home country elections, or their intentions to do so. Thirdly, research that seeks to understand how emigrants interact with their destination country's political system in contrast with their home country political system when they live abroad would also shine new light on this subject.

It would be interesting to carry out research in European Union countries outside of the Baltic states which have also had high levels of emigration and internal migration, such as Poland and Hungary, which have seen their politics undergo more radical changes. More research should be carried out to see if emigration is a driving force behind votes for parties in these countries, and especially to see if it has affected the composition of voters in urban and rural areas. This is what Anelli and Peri focused on in their research paper about the Five Star Movement in Italy. Hungary also joined the European Union in 2004 and has seen high migration over the past decade,

especially since the financial crisis. As a final recommendation, more research should be carried out into whether freedom of movement has contributed to political stability or instability within the European Union.

CHAPTER SEVEN

CONCLUSION

This thesis sought to understand how, and if, large-scale migration from Estonia, Latvia, and Lithuania after the three countries joined the European Union in 2004 has had an effect on the outcomes of three national elections held in 2014, 2015, and 2016. Since accession in 2004, the lifting of labour market restrictions in 2007, and the fallout of the financial crisis in 2008, hundreds of thousands of mostly young people have moved abroad, either temporarily or permanently, to live and work in other EU member states. This has rapidly decreased the sizes of their home country populations and work forces by up to 15%, leading to a “demographic crisis”, (LTV/LSM, 2017) exacerbating declining birth rates and aging populations. Governments see the best way of fixing these crisis is by encouraging the emigrants to come back home.

While emigrants live abroad they mostly stop voting in elections in their country of origin, which has led to a non-random section of each country’s population withdrawing from making decisions about the future of their country. This leaves the future of the country in the hands of people who have not left, and this could potentially push policy makers into making decisions that may be totally out of step with the people who have emigrated. This could decrease the likelihood of attracting emigrants back home in the future.

With this in mind, I wanted to find out if emigrants not voting in elections had changed their outcomes. While there is plenty of literature written on the subject of how large-scale immigration to a country changes the political atmosphere and how host country voters react to this at the polls, there has been very little research carried out on how emigration affects a sending country’s elections. There has also been little research carried out about the motivations of emigrants to politically engage with their home

countries while they live abroad, which includes deciding whether or not to vote in an election. Researchers are not even sure whether classical indicators associated with a person in their home country voting in local and nation elections apply to emigrants at all. There is some evidence that emigration has influenced elections in Italy, Moldova, and Mexico, and that voting turnout of countries that joined the EU after 2004 has been suppressed by emigration.

In order to carry out my research I created an impact assessment and used a counterfactual model to estimate what the impact could have been on elections had emigrants not left and voted in elections. I used migration data from each country's statistics agencies to gain a total figure of how many men and women had left between 2004 and the year before, or of, the election selected for examination. This data also gave me their ages, but hindered my original plans to use ethnicity, education level, and marital status data as it was not freely accessible in a comparable form across all three countries. To create my counterfactual model, I made profiles of the emigrants based on European Social Survey data collected from people who still live in Estonia, Latvia, and Lithuania and voted in recent elections. I assumed that the emigrants would behave in the same way and vote for the same political parties if they had not migrated, based on these profiles.

My results of my calculations showed that, potentially, turnout would have increased by 4.63% in Estonia, 14.29% in Latvia, and 21.50% in Lithuania. In Latvia, the increase of votes would have meant the Unity Coalition gained the most ballots, pushing Harmony - who actually were awarded the most votes in the 2014 election - into second place. This would have given the Unity Coalition a bigger share of the seats in the subsequent coalition government that was formed, which excluded Harmony. In Estonia, the vote share distribution between the four largest parties would have remained unchanged, with the Reform Party gaining the majority of predicted votes and. The results show that Reform and the Social Democrats would have strengthened their vote share slightly, while the Centre Party's declined slightly. But none of these increases or decreases would have been significant overall or changed the outcome of the election, although it may have given Reform several more seats. Lastly, for

Lithuania the results show the country has the highest rate of predicted ballots cast, but this was still the lowest of all three countries when compared to its emigration rate. Similarly, to Estonia, these votes shows that the outcome of the election would have remained the same but would have strengthened the Social Democratic Party and Liberal Party who would have both gained a lot more votes than they did in real life. It would have led to the strengthening of centre-right parties in Estonia and Latvia, but in Lithuania the centre-right would have weakened, while the centre-left was strengthened.

This thesis has filled a gap in the literature because it is the first piece of research, as far as I know, that has tried to estimate the impact of high-level emigration on election outcomes in Estonia, Latvia and Lithuania after they joined the European Union. It also contributes to the small amount of literature already written on the subject of the impact of emigration on elections.

In conclusion, high-levels of emigration can have an impact on a country's election outcome, and in the case of the Baltic states Latvia's election result could have been significantly different from the actual result obtained in 2014. However, election results were not found to be different for Estonia and Lithuania.

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APPENDICES

Appendix 1: Probability of Voting for Each Party by Age Group and Gender in Estonia

Gender	Age	Reform	Centre	Pro Patria Res Publica	Social Democrats
f	20-24	0.4850285	0.1303955	0.1354301	0.2491459
m		0.4592619	0.1616756	0.1762478	0.2028146
f	25-29	0.4659314	0.1461787	0.1335682	0.2543217
m		0.4397383	0.180653	0.173257	0.2063517
f	30-34	0.4481441	0.1635367	0.1318363	0.2564829
m		0.421194	0.2012651	0.1703001	0.2072407
f	35-39	0.4316006	0.1825931	0.1302383	0.2555568
m		0.4035868	0.2235775	0.1673821	0.2054536
f	40-44	0.4161884	0.2034538	0.1287624	0.2515954
m		0.3868382	0.2476247	0.1644916	0.2010455
f	45-49	0.4017583	0.2261952	0.1273823	0.2446642
m		0.370843	0.2733992	0.1616031	0.1941547
f	50-54	0.3881353	0.2508495	0.1260596	0.2349556
m		0.3554805	0.3008393	0.1586806	0.1849996
f	55-59	0.3751297	0.2773908	0.1247457	0.2227337
m		0.3406254	0.3298196	0.1556813	0.1738737
f	60-64	0.3625493	0.3057224	0.1233859	0.2083424
m		0.3261585	0.3601452	0.1525607	0.1611357
f	65-69	0.350211	0.3356669	0.1219231	0.192199
m		0.3119761	0.3915514	0.1492769	0.1471956
f	70-74	0.3379534	0.3669637	0.1203022	0.1747807
m		0.2979982	0.4237099	0.145796	0.1324959
f	75-79	0.3256473	0.3992732	0.1184752	0.1566043
m		0.2841741	0.4562428	0.1420953	0.1174878
f	80-84	0.3132039	0.4321907	0.1164056	0.1381998
m		0.2704846	0.4887419	0.138167	0.1026066

Source: Author's own data

Appendix 2: Probability of Voting for Each Party by Age Group and Gender in Latvia

Gender	Age	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance
f	20-24	0.2719624	0.5051133	0.1869452	0.0359791
m		0.1898218	0.5481551	0.2268062	0.0352169
f	25-29	0.3106884	0.4360418	0.1992773	0.0539926
m		0.2202284	0.4805671	0.2455328	0.0536717
f	30-34	0.3433531	0.3784947	0.2025344	0.0756178
m		0.2470285	0.4233927	0.2532842	0.0762946
f	35-39	0.3698379	0.3328424	0.1977389	0.0995808
m		0.2698155	0.3775474	0.2507557	0.1018813
f	40-44	0.3907885	0.2984487	0.1866564	0.1241064
m		0.2887645	0.3428856	0.2397443	0.1286056
f	45-49	0.4072411	0.2743297	0.171266	0.1471632
m		0.3044005	0.3188189	0.2225196	0.1542611
f	50-54	0.4203022	0.2595786	0.1533902	0.1667291
m		0.3173675	0.3047524	0.2013268	0.1765532
f	55-59	0.430886	0.2535994	0.1344969	0.1810177
m		0.3282132	0.3003442	0.1780776	0.1933651
f	60-64	0.4394979	0.2562203	0.1156428	0.188639
m		0.3371867	0.3056361	0.1542182	0.2029591
f	65-69	0.4460501	0.2677344	0.0975114	0.1887041
m		0.3440536	0.3210879	0.1307377	0.2041207
f	70-74	0.4497116	0.2888755	0.0805032	0.1809096
m		0.3479413	0.3475042	0.1082651	0.1962894
f	75-79	0.4488244	0.3207021	0.0648427	0.1656308
m		0.3472686	0.3858053	0.0872074	0.1797187
f	80-84	0.44098	0.3643221	0.0506765	0.1440215
m		0.3398716	0.436575	0.06789	0.1556634

Source: Author's own data

Appendix 3: Probability of Voting for Each Party by Age Group and Gender in Lithuania

Gender	Age	Homeland Union (HU-LCD)	Farmers and Greens Union	Social Democratic Party	Liberal Movement
f	20-24	0.1681319	0.3104706	0.2223979	0.2989995
m		0.1858805	0.3063903	0.2717909	0.2359383
f	25-29	0.186125	0.3301526	0.236097	0.2476254
m		0.2026285	0.3208348	0.2841232	0.1924134
f	30-34	0.2032613	0.3464737	0.2473576	0.2029074
m		0.2183755	0.3322694	0.2937616	0.1555935
f	35-39	0.2194007	0.3595215	0.2562554	0.1648224
m		0.2331009	0.3409584	0.3009533	0.1249874
f	40-44	0.2345026	0.3695483	0.2629823	0.1329667
m		0.2468506	0.3472391	0.3060084	0.0999019
f	45-49	0.2485989	0.3768993	0.2677944	0.1067073
m		0.2597113	0.3514696	0.3092527	0.0795664
f	50-54	0.2617677	0.3819535	0.2709702	0.0853086
m		0.2717885	0.3539943	0.3109975	0.0632197
f	55-59	0.2741109	0.3850832	0.2727811	0.0680248
m		0.2831921	0.3551243	0.3115226	0.050161
f	60-64	0.2857378	0.3866301	0.2734751	0.0541571
m		0.2940266	0.3551284	0.3110693	0.0397757
f	65-69	0.2967547	0.3868931	0.2732685	0.0430838
m		0.3043859	0.3542328	0.3098396	0.0315417
f	70-74	0.3072589	0.3861258	0.2723439	0.0342714
m		0.3143517	0.3526234	0.3079991	0.0250258
f	75-79	0.3173355	0.3845386	0.2708525	0.0272734
m		0.3239926	0.3504509	0.3056819	0.0198747
f	80-84	0.3270572	0.3823027	0.2689171	0.021723
m		0.3333652	0.3478362	0.3029949	0.0158038

Source: Author's own data

Appendix 4: Predicted Votes Cast by Each Age Group by Men and Women for Each Estonian Political Party

Age	Reform Party	Centre Party	Pro Patria Res Publica	Social Democrats
20-24	1746	525	559	1084
25-29	2384	842	788	1630
30-34	1862	774	641	1415
35-39	1489	722	529	1251
40-44	1300	726	472	1198
45-49	1031	654	377	1031
50-54	744	535	274	809
55-59	392	320	147	467
60-64	135	126	51	177
65-69	79	81	30	111
70-74	53	62	21	83
75-79	47	61	19	80
80-84	27	38	10	48
85-89	15	24	6	30

Source: Author's own data

Appendix 5: Predicted Votes Cast by Women for Each Age Group for Each Estonian Political Party

Age	Reform Party	Centre Party	Pro Patria Res Publica	Social Democrats
20-24	1066	286	298	547
25-29	1410	442	404	770
30-34	1019	371	300	583
35-39	779	329	235	461
40-44	701	343	217	424
45-49	606	341	192	369
50-54	477	309	155	290
55-59	263	195	88	156
60-64	89	75	30	51
65-69	63	61	22	35
70-74	39	43	14	20
75-79	37	46	14	18
80-84	22	30	8	10
85-89	12	19	5	5

Source: Author's own data

Appendix 6: Predicted Votes Cast by Men for Each Age Group for Each Estonian Political Party

Age	Reform Party	Centre Party	Pro Patria Res Publica	Social Democrats
20-24	680	239	261	300
25-29	974	400	384	457
30-34	843	403	341	415
35-39	710	393	294	361
40-44	599	383	255	311
45-49	425	313	185	223
50-54	267	226	119	139
55-59	129	125	59	66
60-64	46	51	21	23
65-69	16	20	8	7
70-74	14	19	7	6
75-79	10	15	5	4
80-84	5	8	2	2
85-89	3	5	1	1

Source: Author's own data

Appendix 7: Predicted Votes Cast by Each Age Group by Men and Women for Each Latvian Political Party

Age	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance
20-24	4976	11118	4345	755
25-29	6239	10672	2743	1256
30-34	5297	7236	4119	1369
35-39	4717	5336	3385	1507
40-44	4440	4242	2831	1667
45-49	4236	3546	2357	1800
50-54	3661	2765	1737	1687
55-59	2603	1861	1045	1264
60-64	1312	930	444	651
65-69	987	708	272	476
70-74	825	620	181	372
75-79	605	502	106	250
80-84	777	723	104	277

Source: Author's own data

Appendix 8: Predicted Votes Cast by Women for Each Age Group for Each Latvian Political Party

Age	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance
20-24	3156	5861	2169	417
25-29	3779	5304	2424	657
30-34	3012	3321	1777	663
35-39	2532	2279	1354	682
40-44	2428	1854	1160	771
45-49	2384	1606	1002	861
50-54	2188	1351	798	868
55-59	1595	939	498	670
60-64	803	468	211	345
65-69	640	384	140	271
70-74	573	368	103	231
75-79	428	306	62	158
80-84	599	495	69	196

Source: Author's own data

Appendix 9: Predicted Votes Cast by Men for Each Age Group for Each Latvian Political Party

Age	Union of Greens and Farmers	Unity Coalition	Harmony	National Alliance
20-24	1821	5258	2175	338
25-29	2460	5369	2743	600
30-34	2284	3915	2342	705
35-39	2185	3057	2031	825
40-44	2012	2390	1671	896
45-49	1853	1941	1354	939
50-54	1473	1414	934	819
55-59	1008	923	547	594
60-64	509	462	233	307
65-69	347	323	132	206
70-74	252	252	78	142
75-79	177	197	44	92
80-84	178	228	36	81

Source: Author's own data

Appendix 10: Predicted Votes Cast by Each Age Group by Men and Women for Each Lithuanian Political Party

Age	HU-LCD*	Farmers and Greens Union	Social Democratic Party	Liberal Movement
20-24	5,735	11,275	8,014	6,900
25-29	7,277	12,1638	9,753	8,193
30-34	6,342	10,171	8,164	5,333
35-39	5,987	9,208	7,414	3,762
40-44	5,427	8,035	6,449	2,580
45-49	4,687	6,696	5,334	1,703
50-54	3,611	4,984	3,935	1,007
55-59	2,107	2,814	2,199	454
60-64	975	1,258	977	162
65-69	5583	699	533	73
70-74	344	418	316	35
75-79	276	325	242	221
80-84	367	419	309	23

Source: Author's own data

**Full name: Homeland Union-Lithuania Christian Democrats*

Appendix 11: Predicted Votes for Each Party by Age Group for Lithuanian Women

Age	HU-LCD*	Farmers and Greens Union	Social Democratic Party	Liberal Movement
20-24	2,663	6,213	3,523	3,001
25-29	3,370	5,977	4,274	4,483
30-34	2,853	4,863	3,472	2,848
35-39	2,566	4,205	2,997	1,928
40-44	2,365	3,727	2,652	1,341
45-49	2,173	3,294	2,341	933
50-54	1,797	2,621	1,860	585
55-59	1,137	1,597	1,131	282
60-64	549	743	526	104
65-69	359	468	331	52
70-74	235	295	208	26
75-79	201.	244	172	17
80-84	285	333	235	19
Total	20,553	34,581	23,720	15,619

Source: Author's own data

**Full name: Homeland Union-Lithuania Christian Democrats*

Appendix 12: Predicted Votes for Each Party by Age Group for Lithuanian Men

Age	HU-LCD*	Farmers and Greens Union	Social Democratic Party	Liberal Movement
20-24	3,071	5,063	4,491	3,899
25-29	3,907	6,186	5,478	3,710
30-34	3,488	5,308	4,693	2,486
35-39	3,421	5,003	4,416	1,834
40-44	3,063	4,308	3,797	1,239
45-49	2,514	3,402	2,993	770
50-54	1,814	2,361	2,076	422
55-59	970	1,217	1,067	172
60-64	426	515	451	58
65-69	199	231	202	21
70-74	110	123	107	8.
75-79	75	81	70	5
80-84	82	85	74	4
Total	23,140	33,885	29,917	14,627

Source: Author's own data

**Full name: Homeland Union-Lithuania Christian Democrats*

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