# Brexit – Theory and Empirics

Till Nikolka* and Panu Poutvaara**

## Introduction

Article 50 of the Treaty on European Union states that: "any Member State may withdraw from the European Union in accordance with its own constitutional requirements". On the 23rd of June the British government held a referendum on whether Britain should exit the European Union and 52 percent of the electorate voted in favour of the so-called Brexit. There was substantial difference in vote shares for 'leave' between different regions of the country. While in London and in Scotland, for example, there was a large majority in favour of 'remain', other regions voted more clearly for 'leave' than the average referendum results suggest. Polls conducted shortly before the election had still predicted a majority of votes for 'remain'.[1] The unexpected results were followed by a 3-percent drop in the FTSE 100 index, the British Pound lost 9 percent of its value against the US dollar and 7 percent against the euro on June 24th.[2] The IMF (2016) and the OECD (2016) project that, in the long run, secession from the EU is likely to weaken economic growth in Britain substantially due to factors like trade barriers with EU countries, for example. So far, however, it is not clear what Brexit actually means and which conditions will apply to future relations to EU countries. To date, the British government has not even made a formal request for Britain to exit the EU.[3] The expectation of Brexit and uncertainty about future economic and political development have nevertheless already led to a decrease or a postponement of private investments in Britain worth 65.5 billion pounds, according to a survey among 1,015 companies conducted in October.[4]

This article begins by presenting the theoretical arguments related to how a referendum on whether or not to leave the European Union should have taken place, and goes on to provide an empirical analysis of the actual Brexit vote and a summary of the swiftly growing body of literature on this topic.

## Theory on why citizens should vote on secession

### *Stubborn politicians and strategic delegation*

What is currently known as Article 50 of the Lisbon Treaty initially appeared as Article 59 in the draft Treaty establishing a Constitution for Europe, on which the member states agreed in June 2004. The Lisbon Treaty replaced the Constitutional Treaty, which was rejected in referenda in 2005 by French and Dutch voters.

Introducing the possibility of leaving the European Union changes the threat points in intergovernmental bargaining. Eerola, Määttänen and Poutvaara raised the concern back in 2004 that letting governments decide on withdrawal, even without popular consent, could lead into an increased use of the threat of withdrawal to extract concessions in intergovernmental negotiations. In their model on inter-governmental bargaining, there is uncertainty over which member state gets an opportunity to make an ultimatum to demand concessions from other member states. An ultimatum is modelled as a required concession and a threat to withdraw from the European Union if the other member states do not accept it. If other member states do not accept the demanded concession, the politician who has made the ultimatum has to decide whether to pursue withdrawal or move on. Politicians differ in their abilities to manage public resources, and in the psychological cost they would suffer if they were first to make an ultimatum, and then not to carry it out. Only leaders who have the credibility that they will

* Ifo Institute.
** Ifo Institute and Ludwig-Maximilians-University Munich.

[1] See, for example, *The Financial Times,* "EU referendum poll of polls", https://ig.ft.com/sites/brexit-polling/.

[2] https://www.theguardian.com/business/2016/jun/23/british-pound-given-boost-by-projected-remain-win-in-eu-referendum.

[3] On November 3rd the High Court ruled that the parliament has to approve government negotiations for exiting the EU; the majority of MPs oppose the referendum decision.

[4] https://www.welt.de/newsticker/bloomberg/article159477481/Brexit-kostet-Grossbritannien-76-Mrd-an-Investitionen-Studie.html.

carry out a threat find it optimal to make threats. If a politician who is not credible were to threaten withdrawal, other leaders would simply call his/her bluff. Those politicians for whom the psychological costs of losing face by not carrying out the threat they made would be so severe that they would be willing to leave the European Union if they were not to obtain the transfers they require are called stubborn. In each period, that can be interpreted to be sufficiently long so that each leader plays the game only once, one of the leaders is randomly selected to be in a position of making an ultimatum to others.

Eerola *et al.* (2004) suggested that the possibility of stubborn politicians blackmailing concessions by threatening withdrawal would give national electorates an incentive to elect more stubborn politicians. This would increase the amount of confrontations and also reduce the average ability of elected politicians, if electorates proved willing to elect less competent, but more stubborn politicians whom they expect to be able to extract more concessions from other member states.

*Referendum as a safeguard*

Eerola *et al.* (2004) also suggested a remedy to avoid strategic delegation to stubborn politicians: EU constitution should require that withdrawal from EU membership must be approved by the voters of the withdrawing member state in a binding referendum. If a national electorate was bound to approve withdrawal in a referendum, this would mean that even stubborn politicians should have no incentive to make an ultimatum, if they expect their voters to prefer membership. Crucially, the referendum should be binding and take place to ratify or reject the political decision to withdraw from the EU membership. If voters accept withdrawal after the elected politicians have decided that they would like to withdraw, the government should no longer have a possibility to reverse withdrawal. This requirement of not being able to turn back is needed to avoid a situation in which voters tactically approve withdrawal, to improve their government's bargaining position and expect that withdrawal will finally not be implemented when other member states offer additional concessions.

Is the concept of stubborn politicians empirically relevant? There are several historical examples of a stubborn politician blocking decision-making in the European Union to get his or her way. In 1965, President de Gaulle was of the view that the European Commission had exceeded its powers. France refused to participate in the European Community institutions for six months, pursuing a so-called empty chair policy. In the end, other member states gave in and agreed to give member states a veto power when they believe that their fundamental interests were under threat. In 1984, Prime Minister Margaret Thatcher demanded a considerable rebate on UK membership fees. She threatened to veto any further expansion of spending, unless the other countries accepted her demand. In the end, she secured massive cost savings to Britain. As a third example, in 2003 Italy's then-Prime Minister Silvio Berlusconi linked fines to Italian farmers for exceeding Common Agriculture Policy milk production quotas and a tax package on a cross-border savings levy and a code of conduct for corporate taxation. When the other member states refused Berlusconi's demands, Italy vetoed the proposed package.

*What went wrong in the Brexit referendum?*

To link the theoretical results by Eerola *et al.* (2004) to the Brexit debate, the mistake in Britain was that the referendum took place without there being a parliamentary majority for leaving the EU. There should only have been a referendum once a parliamentary majority had already voted in favour of leaving. The government should also have specified what type of withdrawal it wanted. Current debate over what type of mandate the British government has to withdraw, and whether Britain should stay in the common market or not, testifies that the policy choice put to voters was unclear. Strikingly, the British government has even questioned whether parliament has to approve the momentous decision of invoking Article 50, with several ministers arguing that the government should be able to do so without a parliamentary vote or mandate on what type of withdrawal to pursue.

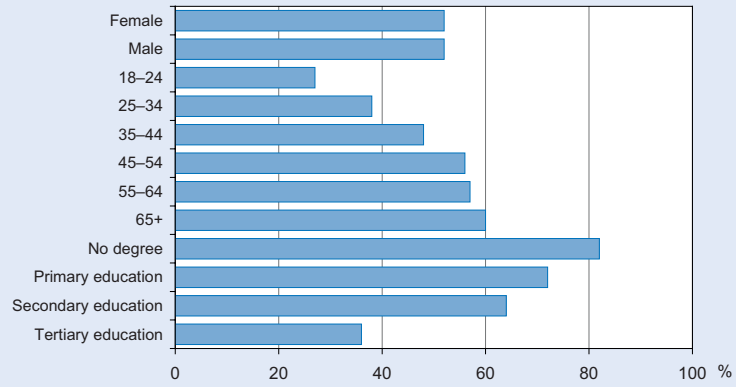
**Empirical analysis of the referendum results**

Without having defined the conditions of a potential Brexit, the British government held a referendum on whether or not Britain should exit the EU. The political debate ahead of the elections mainly focused on two issues: firstly, Britain's costs and benefits from EU membership with respect to public finances and, secondly, free labour mobility within the EU. Supporters of the 'leave' campaign argued that the British taxpay-

er would lose by transferring fiscal funds to the EU instead of spending them domestically. Furthermore, unrestricted immigration of EU citizens would increase competition and unemployment in the labour market and impose an additional fiscal burden.[5] Thus, 'leave' supporters proclaimed that Britain would be better off exiting the EU, spending the government budget domestically and restricting access for EU citizens to its national labour market. Given that the aggregate economic effects of Brexit are perceived as being negative, it remains unclear at first sight why these arguments apparently convinced a majority to vote for 'leave'.

**Figure 1**

**Percent 'leave' votes among voters in selected groups**




Source: lordashcroftpolls.com.

*Analysis of individual voter preferences*

Pollsters analysed the results in the aftermath of the referendum in search of possible explanations for voting behaviour. Relating the voting decision to demographic characteristics, exit polls like Ashcroft (2016) revealed big divisions in society, as illustrated in Figure 1.[6] Young voters were mostly against Britain leaving the EU, while older generations voted for 'leave'. Among the 18 to 24 year olds, for example, only around 27 percent voted for leave, while among those aged 65 and above, the corresponding share was over 60 percent. Moreover, those with higher levels of education voted against leaving, while those with lower levels of education in favour of 'leave'. While 72 percent of voters with only primary education and 64 percent of those with only secondary education voted for Brexit, the corresponding vote share was 36 percent among university graduates. Surveys also revealed major regional differences in voting behaviour: the probability of voting for Brexit, as well as voter turnout, was higher in rural areas compared to large metropolitan areas.[7] Apparently, the perceived distribution of gains from an EU membership was very differently within Britain. The estimated average costs and benefits at the aggregate level alone do not enable us to understand voting behaviour. Instead, one must take into account the heterogeneity of (perceived) gains and losses within the society.

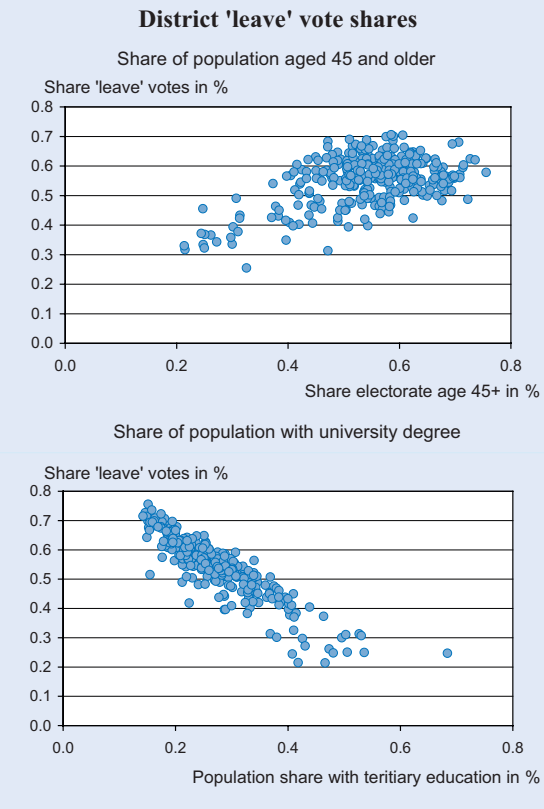
*Vote shares and socio-demographic characteristics on the district level*

Understanding how the heterogeneity in voting behaviour is related to the economic platforms announced by the 'leave' and the 'remain' campaigns is crucial to identifying explanatory factors of voters' preferences. For the following analysis we are going to use data on the level of local authority districts. We correlate the referendum 'leave' vote shares published by the Electoral Commission with socio-economic and demographic variables from the Office for National Statistics (ONS). The ONS provides data from the 2011 Census, as well as from the 2014 UK business register and employment survey. We only compare voting behaviour between districts within England, as some of the census data that we use is not available for Scotland on a district level. This restriction biases our sample towards districts with a higher share of 'leave' votes. In Scotland, over 60 percent voted for remain (Ashcroft 2016).

Figure 2 shows that there is substantial heterogeneity in the 'leave' vote shares across districts. Relationships on the aggregate level confirm the heterogeneity described above with respect to individual characteristics: districts with a higher share of the electorate aged 45 or older have a higher 'leave' vote share. Districts with a higher share of the population with some tertiary education, on the other hand, tend to have lower 'leave' vote shares. The relationship between vote shares and population share with tertiary education

[5] See e.g. https://www.theguardian.com/politics/2016/jun/27/eu-referendum-reality-check-leave-campaign-promises.
[6] See e.g. http://lordashcroftpolls.com/2016/06/how-the-united-kingdom-voted-and-why/, and http://blogs.ft.com/ftdata/2016/06/24/brexit-demographic-divide-eu-referendum-results/, for further results of exit poll analysis.
[7] http://cityobservatory.org/cities-and-brexit/.

**Figure 2**




Sources: Office for National Statistics; Electoral Commission.

appears to be very strong. Using similar data, other studies have already documented this (see Becker *et al.* 2016; Darvas 2016; Goodwin and Heath 2016; Langella and Manning 2016): Goodwin and Heath (2016) show that fifteen out of the twenty 'least educated' areas voted to leave the EU, while every single one of the twenty 'most educated' areas voted to remain. Moreover, of the twenty 'youngest' authority areas, sixteen voted to remain. By contrast, the 'leave' vote was much stronger in authorities with a larger number of pensioners. Of the twenty 'oldest' local authorities, nineteen voted to leave. This correlation pattern between election outcomes and the educational distribution of the electorate can still be observed between districts with similar age composition.

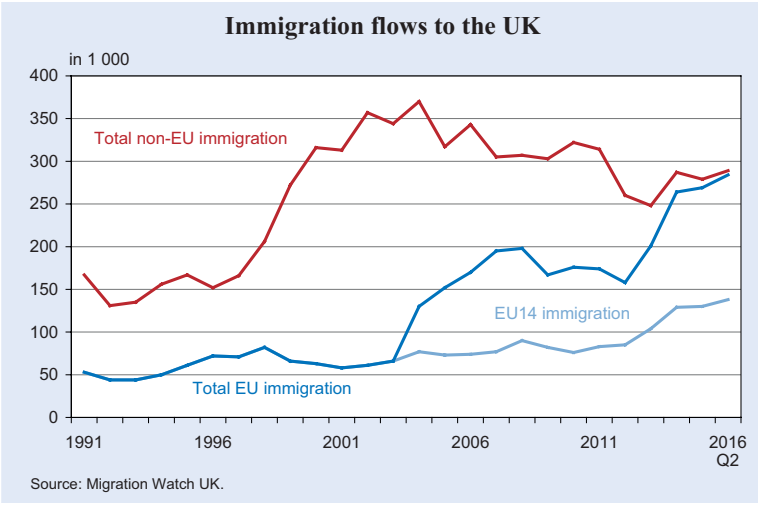
*Immigration and Brexit?*

A central argument made by the 'leave' campaign was that unrestricted immigration from other EU member states to Britain increases wage competition and imposes additional burden to the social security system.[8] Britain was among the first EU15 countries to open its labour market to immigrants from the countries that joined the Union in 2004. Since then, Britain has experienced an increased inflow of labour migrants from Eastern European countries. While immigration from other EU countries to Britain was 15,000 prior to 2003, it increased to 87,000 in 2004 after the EU enlargement (Migration Watch UK 2016). This large increase in immigration flows after the EU enlargement is illustrated in Figure 3. Using data from the UK Household Longitudinal Study, Altorjai (2013) shows that employed immigrants from the new EU member countries hold relatively low levels of formal labour market qualification compared with employed immigrants from the remaining EU countries. Moreover, compared with other EU immigrants, they are more than proportionally formally overqualified, given the skill requirements for their employment in Britain.

Economic theory suggests that migration is efficient if it is based on productivity differences, and not on differences in taxes and transfers. However, migration can have large distributional effects for the native population. Figure 4a) illustrates the potential economic effects of immigration on natives in a simple model of the labour market. The figure illustrates a labour market experiencing an inflow of foreign workers, which leads to a decrease in wages among natives who compete with immigrants for similar jobs. Here, L denotes the pre-migration stock of workers and L' the after-migration stock of workers, with L'-L corresponding to net immigration. The gross income of the owners of the fixed factor of production, including workers

[8] https://www.theguardian.com/politics/2016/jun/27/eu-referendum-reality-check-leave-campaign-promises.

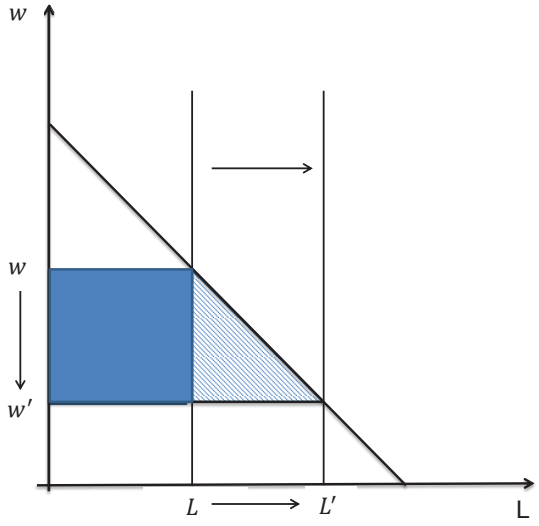
**Figure 3**



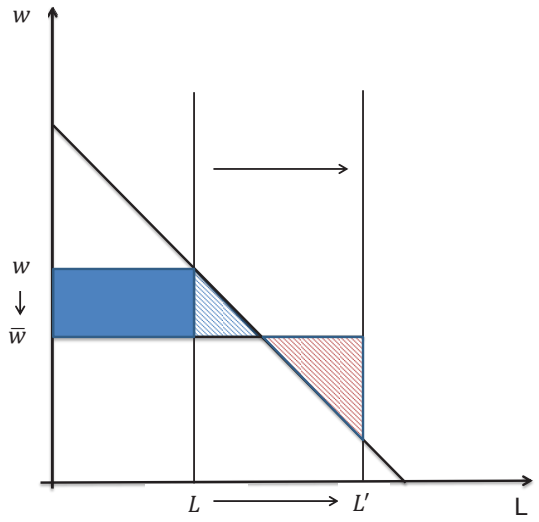

Source: Migration Watch UK.

**Figure 4**
**Wage effects of immigration on labour market**

**a) without minimum wage**




**b) with minimum wage**




Source: Authors' conception.

with different skills than immigrants, is captured by the triangle above the wage line. Overall migration is welfare improving, but the group of natives with the same skills in the host country loses and would oppose free mobility. On the other hand, migrants as well as natives with complementary skills and owners of other production factors will gain.

Figure 4b) illustrates a case in which natives might lose out due to immigration, even if they are complements to immigrant labour. These groups might lose out due to immigration if there is a minimum wage and a welfare state that pays unemployment benefits. In this case, wages might not be able to adjust in response to immigration. Compared to Figure 4a) wage loss is smaller for those who compete with immigrants on the labour market. However, unemployment goes up, and the burden on a redistributive welfare system also increases. If social security contributions are taken from the incomes of the working population, there might be net losses from immigration, even among groups gaining from immigration in terms of gross income.

Can opposition to immigration related to these channels provide an explanation for the Brexit referendum results? Regarding the fiscal contribution of immigrants in Britain, Dustmann and Frattini (2014) argue that immigrants make a positive net contribution to public finances, with above average contributions by those coming from the new EU member countries after 2004. Alfano *et al.* (2016) do not find evidence for increased unemployment rates due to recent immigration in Britain. Battisti *et al.* (2015), on the other hand, calculate the welfare effects from immigration using a labour market model with unemployment and a welfare state that redistributes income through unemployment benefits. In their numerical simulations they compute the welfare effects from different immigration scenarios on low and high skilled natives in 20 OECD countries. Comparing the *status quo* in 2011 with the autarky situation, they find that net welfare in Britain increased due to immigration by 0.35 percent. However, low skilled individuals lost, on average, 0.22 percent of income, while high skilled individuals gained 1.10 percent. In a further numerical exercise they calculate the welfare effects of an inflow of low skilled immigrants increasing the migrant stock by 6 percent. Results for Britain yield an overall net welfare loss of 0.02 percent compared with the status quo. As previously, the net effect on the highly-skilled native population is positive (0.2 percent), while it is negative for the low-skilled native population (– 0.19 percent).

*Regression analysis at a district level*

The following analysis assesses the joint relationships between the referendum vote shares and potential explanatory variables on the level of districts. We address the question whether higher immigrant shares in a district are potentially related to higher 'leave' vote shares when controlling at the same time for the age and education composition in the population. We estimate a simple linear regression model explaining the 'leave' vote share with a district's aggregate characteristics. Results from the estimations of different specifi-

cations of the empirical model are presented in Table 1. First of all, regressions confirm that the composition of the electorate with respect to age and education are important explanatory factors for vote shares on the district level. Column 1 shows that, in districts with a higher share of voters who are 45 years or older, there was higher support for Britain exiting the EU, as seen in Figure 2. We do not analyse the heterogeneity of the results with respect to shares of different age groups in more detail, as multicollinearity between different age shares in a district is a potential concern, as pointed out by Darvas (2016).

Our results reveal that a 10 percentage point increase in the share of those 45 or older increases the 'leave' vote share by around 6 percentage points. Most importantly, column 2 shows that a higher population share with tertiary education in the district is related to a lower 'leave' share, as seen in Figure 2. This estimate indicates that an increase with the population share with tertiary education by 10 percentage points reduces the 'leave' vote share by 11 percentage points. The R-squared measure indicates that this variable can already explain 80 percent of the variation in the vote shares. The results show that insights from the exit poll survey data presented above can also be confirmed at the aggregate level of districts. Column 3 includes both variables jointly into the model. The statistical significance of the results remains robust, but absolute coefficient sizes reduce considerably. This stresses that correlation between explanatory variables can confound inference from univariate analysis, as presented in Figure 2 above.

In order to address the question of whether immigration might be related to the outcome of the referendum, we regress the share of 'leave' votes on the population shares of different immigrant groups in 2011 in the district in column 4. While the population share of EU15 and non-EU immigrants in a district is related to a lower leave vote share, the share of immigrants from the new EU member countries in a district is associated with a higher share of leave votes. However, the R-squared measure reveals that the explained variation in this model is lower compared to the previous specifications. Column 5 includes immigrant shares together with controls for the education and age composition of the population in the regression. Now, the coefficient estimates for the foreigner share from the EU15 countries and for the non-European sending countries are not statistically significant. The estimate for the immigrant share from the EU accession countries, on the other hand, remains statistically significant and positive. According to this specification, an increase in the migrant share from these countries in the district population by 10 percent is associated with a 7 percent increase in the 'leave' vote share. These results indicate that in districts that experienced an increase in immigration from new EU member countries, the number of 'leave' votes was higher. However, comparing the explained variation to the model specifications in column 1 to 3 suggests that individual socio-demographic characteristics seem to explain the largest part of the overall variation in the heterogeneity of vote shares between districts. The empirical results nevertheless indicate that immigration might have played a role for the election outcome. The theoretical considerations above provide an explanatory channel for these considerations.

Other research presents findings that are in line with our results. For analysis in empirically richer

**Table 1**

**Regression analysis for 'leave' vote share in 326 local authority districts in England.**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Electorate share age 45 and over | 0.635*** | | 0.315*** | | 0.353*** |
| | (0.0603) | | (0.0279) | | (0.0457) |
| Some tertiary education | | – 1.129*** | – 1.031*** | | – 1.096*** |
| | | (0.0313) | (0.0279) | | (0.0407) |
| Population share immigrants, EU15 countries | | | | – 0.469*** | – 0.0330 |
| | | | | (0.0866) | (0.0581) |
| Population share immigrants, 2004 EU accession countries | | | | 1.242*** | 0.660*** |
| | | | | (0.320) | (0.250) |
| Population share immigrants, non-EU countries | | | | – 3.377*** | 0.0769 |
| | | | | (0.361) | (0.187) |
| Constant | 0.193*** | 0.853*** | 0.651*** | 0.611*** | 0.639*** |
| | (0.0337) | (0.00889) | (0.0193) | (0.00629) | (0.0282) |
| Observations | 326 | 326 | 326 | 325 | 325 |
| R-squared | 0.255 | 0.800 | 0.857 | 0.539 | 0.860 |

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' own calculation.

set-ups including more control variables see e.g. Becker *et al.* (2016); Darvas (2016); Clarke and Whittaker (2016); and Langella and Manning (2016). The Economist (2016); Becker *et al.* (2016) as well as Clarke and Whittaker (2016) find that the increase in immigration after EU enlargement is particularly related to higher 'leave' vote shares. Becker and Fetzer (2016) find that immigration has a similar effect on the vote shares for UKIP in the European Parliamentary elections 2004. For Italy, Barone *et al.* (2016) show that a high inflow of immigrants is related to vote gains for centre-right coalitions in elections at a municipal level. McCarty *et al.* (2006) suggest that political polarisation in the United States is also related to immigration.

However, there are more potential explanatory factors that might have played a role in the Brexit referendum. Becker *et al.* (2016) use a comprehensive collection of different data sources to investigate a variety of potential explanatory channels for the referendum outcome. Related to the economic structure of a district, they find that a high employment share in retail, manufacturing, mining and construction in the district is associated with a higher share of 'leave' votes. This is also true of districts with higher unemployment rates. The effects of structural change probably play an important role in this context. Moreover, variations in public policies, like fiscal expenditure, also seem to have a significant explanatory power for the heterogeneity in the voting outcomes. Fiscal cuts in a given district are related to more 'leave' votes. Moreover, high trade dependence of a district is also found to be significant and positively correlated with the share of 'leave' votes in a district (Becker *et al.* 2016; Coyle 2016).[9] According to Bell and Machin (2016) and Darvas (2016), wages and wage inequality matter too. Regions with higher median wages were less likely and regions with higher poverty rate more likely to vote for 'leave'. A higher share of 'leave' votes was also related to higher wage inequality as measured by the Gini coefficient.

Goodwin and Heath (2016) argue that the strong divide in society along the lines of age and education, together with the role of the factors mentioned above, reflect an increased fraction of voters feeling 'left behind' by the economic and social dynamics of the country. In this context, worries about immigration might also be unrelated to economic consideration, even if correlations suggest a direct link. Poutvaara and Steinhardt (2015) show that 'bitterness in life' is associated with major concerns over immigration. This effect cannot merely be explained by concerns that immigrants represent competition in the labour market, as the link between bitterness in life and worries about immigration holds even after controlling for job security, and when analysing different education or skill categories separately. Instead, it appears that people who feel that they have not got what they deserve in life oppose immigration for spiteful reasons. An intriguing topic for future research would be whether a similar relationship prevailed in the Brexit referendum.

[9] For the United States, Autor *et al.* (2016) have shown that increasing trade exposure with China has increased political polarization.

**Conclusion**

On June 23rd a majority of British voters decided that Britain should leave the European Union. The British government held a referendum on British EU membership without specifying the conditions for a Brexit and without a majority in parliament backing the vote to leave the EU. We argued that citizens should, in general, have the possibility to vote on secession in a referendum. However, in our view, the Brexit referendum did not meet the conditions for an informed voter decision on secession. Until today, the implications of the referendum are not clear as the government still has not formally requested to invoke Article 50 starting negotiations for leaving the EU.

We analysed voting behaviour in the referendum empirically to understand potential explanatory factors for the voter decision. Data on vote shares reveal a big divide in society along the lines of education and age, as well as between different regions in the country. The less educated and the old were more likely to vote for 'leave'. On the district level, the socio-demographic characteristics of the population explain a large part of inter-regional heterogeneity in vote shares. In particular, the relationship between education and 'leave' votes appears to be very strong. We analysed how immigration, which was a central argument in the political debate ahead of the elections, is related to 'leave votes'. Districts that experienced a recent influx of immigrants from the 2004 EU accession countries were more likely to exhibit a higher leave vote share, even after controlling for socio-demographic characteristics of the population. Concerns over increased competition in the labour market might be an explanation for this.

On the other hand, the presented literature has shown that other factors related to economic and social dynamics are also linked to the 'leave' vote shares. However, the relationship between low levels of education and Brexit votes provides the most robust result across the lines of other potential explanatory factors. In this context, worries about immigration might also project general discontent without being directly related to considerations over personal income or job security.

## References


Alfano, M., C. Dustmann and T. Frattini (2016), *Immigration and the UK: Reflections after Brexit*, CReAM Discussion Paper 1623.

Altorjai, S. (2013), *Over-Qualification of Immigrants in the UK,* ISER Working Paper 2013–11.

Ashcroft, M. (2016), *How the United Kingdom Voted on Thursday … and Why,* lordashcroft.com.

Autor, D, D. Dorn, G. Hanson and K. Majlesi (2016), *Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure,* NBER Working Paper 22637.

Barone, G., A. D'Ignazio, G. de Blasio and P. Naticchioni (2016), "Mr. Rossi, Mr. Hu and Politics: The Role of Immigration in Shaping Natives' Voting Behavior", *Journal of Public Economics* 136, 1–13.

Battisti, M., G. Felbermayr, G. Peri and P. Poutvaara (2015), *Immigration, Search, and Redistribution: A Quantitative Assessment of Native Welfare,* CESifo Working Paper 5022.

Becker, S.O. and T. Fetzer (2016), *Does Migration Cause Extreme Voting?*, mimeo.

Becker, S.O., T. Fetzer and D. Novy (2016), *Who Voted for Brexit? A Comprehensive District-Level Analysis,* University of Warwick Working Paper 305.

Bell, B. and S. Machin (2016), *Brexit and Wage Inequality,* VoxEU, August.

Clarke, S. and M. Whittaker (2016), *The Importance of Place: Explaining the Characteristics Underpinning the Brexit Vote across Different Parts of the UK*, Resolution Foundation.

Coyle, D. (2016), *Brexit and Globalization*, VoxEU, August.

Darvas, Z. (2016), *Brexit Vote Boosts Case for Inclusive Growth,* Bruegel blog 16.

Dustmann, C and T. Frattini (2014), "The Fiscal Effects of Immigration to the UK", *The Economic Journal* 124, 593–643.

Eerola E., N. Määttänen and P. Poutvaara (2004), "Citizens Should Vote on Secession", *The B.E. Journal of Economic Analysis & Policy* 4(1), 1–22.

Goodwin, M.J. and O. Heath (2016), "The 2016 Referendum, Brexit and the Left Behind: An Aggregate-level Analysis of the Result", *The Political Quarterly* 87, 323–332.

IMF (2016), *World Economic Outlook Update July,* Washington DC.

Langella, M. and A. Manning (2016), *Who Voted Leave: The Characteristics of Individuals Mattered, But So Did Those of Local Areas,* LSE blog, http://blogs.lse.ac.uk/politicsand policy/explaining-the-vote-for-brexit/.

McCarty, N., H. Rosenthal and K.T. Poole (2006), *Polarized America: The Dance of Ideology and Unequal Riches,* Cambridge, MA: MIT Press.

Migration Watch UK (2016), https://www.migrationwatchuk.org/statistics-net-migration-statistics/#create-graph.

OECD (2016), *The Economic Consequences of Brexit: A Taxing Decision,* OECD Economic Policy Paper 16.

Poutvaara, P. and M. Steinhardt (2015), *Bitterness in Life and Attitudes towards Immigration,* SOEPpaper 800.

The Economist (2016), http://www.economist.com/news/britain/21702228-areas-lots-migrants-voted-mainly-remain-or-did-they-explaining-brexit-vote.