Master Thesis M2 (PhD Track) in Economics:

*Fear and Loathing on the Campaign Trail?**

Immigration, Local Public Spending and Voting:

Evidence from a Natural Experiment

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Abstract

In this Master thesis I estimate the causal effect of Migration on Voting outcomes and the repartition of Public Spending using an instrumental variables approach similar as in Card (2001) using evidence from English local elections and Public spending. I find a negative impact of immigration on Voting outcomes for Left wing parties and an overall decrease in votes for established parties in 2004 as well as a decrease for Right wing parties in 2006. Those variations can be explained through displacement in 2004 and associated immigration in 2006. I also find a positive causal impact of migration on spending devoted to Culture. The explanation for this is most likely the voting channel.

*This title is inspired by Hunter S. Thompson's novel "Fear and Loathing on the Campaign Trail 72"

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1 Introduction

1.1 Motivation

The main aim of this Master thesis is to examine the fundamental question of whether immigration can have any impact on the native population's political preferences and on the distribution of public spending at the local level.

Those are two extremely pertinent and interesting questions to consider, given the recent increase in immigration in the European Union and the associated ramifications at the Political level i.e. the rise of extreme right wing parties in Europe. Prominent examples include the Front National in France, The Northern League in Italy and the United Kingdom Independence Party (UKIP) in Great Britain.

I will use the natural experiment of EU-enlargement in 2004 together with an instrumental variables (IV) analysis to estimate the causal impact of immigration on those variables. More specifically I will estimate the casual impact of Polish migration on Voting outcomes and Public spending in British Local Authorities (LAs).

This thesis will offer firstly a literature review (Section 2). Then the institutional and historical background of the country in question (Section 3). After that the data description and summary statistics will follow (Section 4). In section 5 I will present the main specification. Section 6 will show the main empirical results and Section 7 will discuss the mechanisms associated to my findings. Section 8 will contrast my findings with the ones of Barone et al. (2016) and Section 9 will conclude. I will use the term "migrant" and "immigrant" interchangeably and this will refer to additional migrants of the

year in question (unless specified) [1].

1.2 Main Results and Contribution of Thesis

The main results of my thesis are that increased migration of Polish people in the year 2004 has causally lead to a decrease in Left wing party shares of 0.35 percentage points, a decrease in Green party shares of 0.21 percentage points and also a decrease in combined party shares of Conservatives and Labour of 0.24 percentage points compared to the year before.

In the year 2006 new migrants have caused a decrease in Right wing party shares of 0.42 percentage points. Those results can be explained by associated displacement of population in 2004 and additional in-migration of Polish people in 2006 respectively. It is therefore not possible to exclude that additional polish migration lead to no change in political preferences.

Immigration in the year 2006 has significantly caused an increase of spending devoted to Culture of about 1.08 percentage points. This increase is probably due to the changes in voting outcomes for the years before.

My thesis thus contributes in two pertinent ways to the existing literature. First of all, it is the first attempt at empirically examining the impact of of immigration on the distribution of Public spending. Additionally I offer a convincing mechanism that could explain my results of the impact of immigration on voting and public spending. I will show that for every Polish person that migrates to a certain area this leads to a displacement of on average 3.3 people. Those magnitudes could explain our shifts in voting outcomes. We can thus not exclude that migration did not lead to any change in Political preferences.

In order to explain the changes in public spending devoted to culture, we

[1] So Immigrants and Migrants do not mean current stock of people born abroad or in Poland for example.

will see that shares of Left wing parties are significantly negatively correlated with shares devoted to cultural spending. Therefore the preceding change in share of left wing parties (caused by immigration) could explain this shift in public spending devoted to Culture.

2 State of the Art in the Literature

2.1 The Effect of Migration on the Labor Market

Most of the research has concentrated on the effect of immigration on labour market outcomes. Most literature finds the effect to be relatively small (Grossmann 1982, Card 1990, Pischke and Velling 1997). There are indications that those immigrants adapt well and quickly (Chiswick 1978, 1980, LaLonde et al.1991). On the other hand, some authors claim that immigration has had a negative impact on wages in the US (Borjas 1985, 1999, 2003, 2015 amongst others).

Additionally, some authors have looked at the effects of migration on internal migration in the country of destination (Boustan 2010, Card 2001), finding evidence of displacement.

One of the key identification issues of the impact of migration is concerned with the exogeneity of the shock. Two sources of potential bias must be taken into account. The first one concerns the composition of the migrating population. In this case we refer to the fact that there could be a self-selection of migrants who emigrate (such as for example politically prosecuted, high-skilled or low-skilled workers). Another potential source of bias occurs when migrants choose a certain spatial allocation. If the dependent variable of interest is correlated with the spatial preference of migrants, a bias could evolve. In my analysis only this potential bias will be taken into account,

given that the subject of this thesis is to measure the impact of additional immigration. In the future more advanced studies taking into account different characteristics of immigrants could be carried out. For example whether skilled or unskilled migrants could have different effects on voting and public spending and through which causal channels this would occur.

I will briefly outline a few ways those issues are dealt with in specific cases in the literature. Hunt (1992), for example, measures the effects of French repatriates on the labour market. Since all repatriates come back to France we can assume that there is no significant self-selection of repatriates who decide to leave Algeria [2]. Additionally, repatriates choose certain regions because of similarities with Algeria (their previous country of residence) which makes those exogenous to labour market developments (dependent variable measured). In this case the immigrants (repatriates) have chosen certain French cities independently of labour market variables and so we can assume exogeneity.

When we cannot assume that new migrants allocate to certain areas for reasons that are independent of the outcome variable we would want to measure, Card (2001) proposes the following instrumental variable approach:

There is evidence that new migrants often-times allocate where former migrant networks were already established. As a result this new migration is highly correlated with past allocations of migrants. If one can then show that the initial allocation of migrants can be seen as exogenous to our outcome variables, those stocks of migrants can be used to instrument for the new migration. I will use a similar approach in my thesis and the details will be explained in Section 5.

[2] Although repatriates might have different characteristics than the average frenchwoman or frenchman.

2.2 The Fiscal and Societal Impact of Migration

Another segment of the literature has been concerned with the reaction of society to increased migration. It is evident from the literature that additional migration creates a sensation of social fright and urge of retaliation towards migrants (as seen in Hatton (forthcoming), Hainmueller and Hopkins (2014) or Werts et al. (2014), amongst others).

In the review by Hainmueller and Hopkins (2014), the authors state that the attitude of people in society towards migration does not depend on personal income, but rather on national level impacts of migration. Those impacts can be of both societal and economic nature.

DeVreese and Boomgaarden (2005) argue that the main fear of people of further European integration comes from the fear of additional migration and not being able to control it. This channel of fear and loathing towards migrants will be the main hypothesis tested in this thesis when considering the impact of immigration on voting outcomes. Those elements, together with a biased media coverage, have *arguably* lead to the rise of right wing and populist parties in Europe. Some examples here are the United Kingdom's Independence Party in Great Britain, the National Front in France as well as the Northern League in Italy.

Other parts of literature have tried to answer questions regarding the fiscal impact of migration. Recently, the OECD (2015) estimates that the cost of the current refugee crisis will amount to about 0.1-0.2 percent of European Gross Domestic Product (GDP).

Other studies carried out have shown that the overall fiscal impact of migration in the United Kingdom (UK) can be estimated at +/- 1 percentage points of GDP. Those models heavily depend on whether one considers the long-term impact of migration or only the short term strain on public re-

sources (Vargas-Silva (2015)). A study by Gott and Johnston (2002) shows that migrants in the UK between 1999-2000 had a positive net impact on the economy of about 2.5 Billion pounds.

On the other hand only one paper (Mayr (2013)) has tried to model the impact of immigration on the government's decision on public spending. She also partially addresses the issue of repartition of public spending. In her setting government spending can be decomposed into spending on public and private goods. She shows that additional migration can increase the size of public spending if natives have a preference for public goods over private goods.

Here Mayr (2013) does not *directly* address the impact of immigration on the repartition of public spending, which I will test empirically in this thesis. This seems to be a pertinent topic, as certain politicians might respond differently to certain electoral incentives. For example for seeking to compensate certain parts of the electorate. One could think in this case that Politicians might reward certain parts of the electorate if they are hit by certain shocks, such as for example immigration.

Concurrently immigration might lead to a certain pressure or increased demand for certain public services, which could have overall ramifications on Public spending and thus impact its repartition. For example if Migrants exerted increased pressure on social services spending, this could imply a decrease in other types of expenditures (e.g. Transport, Culture, Education).

2.3 The Effect of Migration on Voting

Another, relatively scant strand of the literature has been devoted to measuring the causal effect of immigration on voting outcomes. Most of these papers are unpublished, but for the recent contribution of Barone et al. (2016).

Halla et al. (2013) show that increased migration in Austria has causally led to an increase in votes for the far right populist party FPO (Freedom Party of Austria). They also find that immigrants create pressure on local amenities, but they do not find any evidence of displacement due to immigration.

Brunner et al. (2014) study the case of Swiss referenda outcomes and find that especially migrants of different cultural identity than Swiss natives increased the faction of right wing votes. Here they use as an outcome variable the shares devoted to right wing positions in one-dimensional immigration policy issues.Their approach to instrument for the share of migrants is to take local labor market conditions as an instrumental variable, which can be seen as exogenous to the political outcomes they are measuring. Their study thus measures the effect of cultural distance between migrants and natives and the corresponding effect on voting outcomes.

Harmon (2012) finds a positive effect of migration on right wing party outcomes in danish municipalities (1981-2001). As an instrument he uses the past share of rental housing, as new migrants are not allowed to acquire property if they are not of Danish nationality.

Gerdes and Wadensjo (2008) analyse multi-ethnicity in Danish municipalities and election outcomes for over 10 years and find that anti-immigration parties gain, but also left wing socialist parties. In their analysis they instrument share of non-natives with initial shares of refugees. It is unclear whether the initial allocation of refugees can be seen as exogenous to Politi-

cal outcomes. Therefore the exclusion restriction is most likely not validated in their setting.

The most complete and recent work is by Barone et al. (2016), where the authors look at the effect of migration on national elections in Italy using a similar IV strategy as in this thesis by relying on past shares of migrants. They find a significant positive effect of migration on the centre-right coalition and an associated decrease in centre and centre-left parties. Their analysis uses far-spaced national elections (2001, 2006 and 2008). Their additional findings are that the effects of migration are stronger in medium sized municipalities and that there is a negative effect on voter turnout. They find no evidence of displacement due to migration. The authors also cite cultural diversity, competition in the labor market and for public services and political competition as the most relevant mechanisms. I will later contrast those findings in detail with the results of my thesis.

3 Institutional and Historical Background

3.1 Polish Migration in the United Kingdom

Although there is evidence that some polish people arrived in the United Kingdom in the 19th century after the November uprising against Russia in 1831, the main influx of polish people occurs after WW2. In the 1951 Census of the UK, some 162,339 UK residents had Poland listed as their place of birth, up from 44,642 in 1931 (Burrell (2002) and Holmes (1988)).

Most polish people came to the UK, because The Soviet Union and Germany occupied Poland. They also fought with the allied forces later, so where welcome to come to the UK by the British government. In 1940, after France fell, the polish government, prime minister and president were transferred to

London. The exile government had thus determined London as its capital. During the battle of Britain the second biggest non-british personnel in the Royal Air Force (RAF) were Polish people.

The recognition of the role played by Polish troops in WW2 was as big, as for Churchill to utter: "His Majesty's Government will never forget the debt we owe to the polish troops. I earnestly hope it will be possible for them to have citizenship and freedom of the British Empire, if they so desire." (Pittsburgh Post-Gazette 1945).

This then lead to the creation of the Polish resettlement Corps (1946-49). In this case the British crown instituted an army of Polish people to facilitate their integration into the UK for those that wanted to stay. This led to the first mass migration law in the UK, the "Polish resettlement act" (1947).

The next big wave of documented migration then started after the accession of Poland to the European Union on the 1st May 2004. On the 1st of May also other seven countries from Central Europe joined the EU [3] . Those countries, together with Poland, are usually referred to as "Accession 8" (A8) countries. A7 in this thesis refers to non-Polish A8 countries.

In Fig. A we can clearly see that Polish migration is higher than the one of all other A7 countries added together in 2014, although their levels were similar in 2000. We can also see that although the level of Indian born residents was much higher than the one of Polish born residents in the year 2000, the latter have now caught up.

[3]The Czech Republic, Hungary, Estonia, Latvia, Lithuania, Slovakia and Slovenia

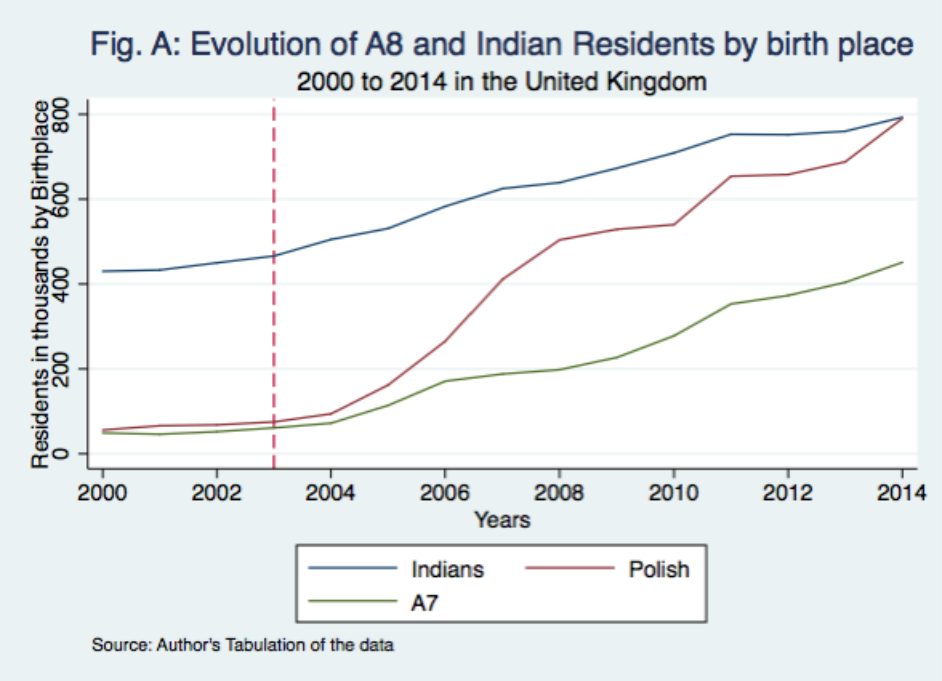
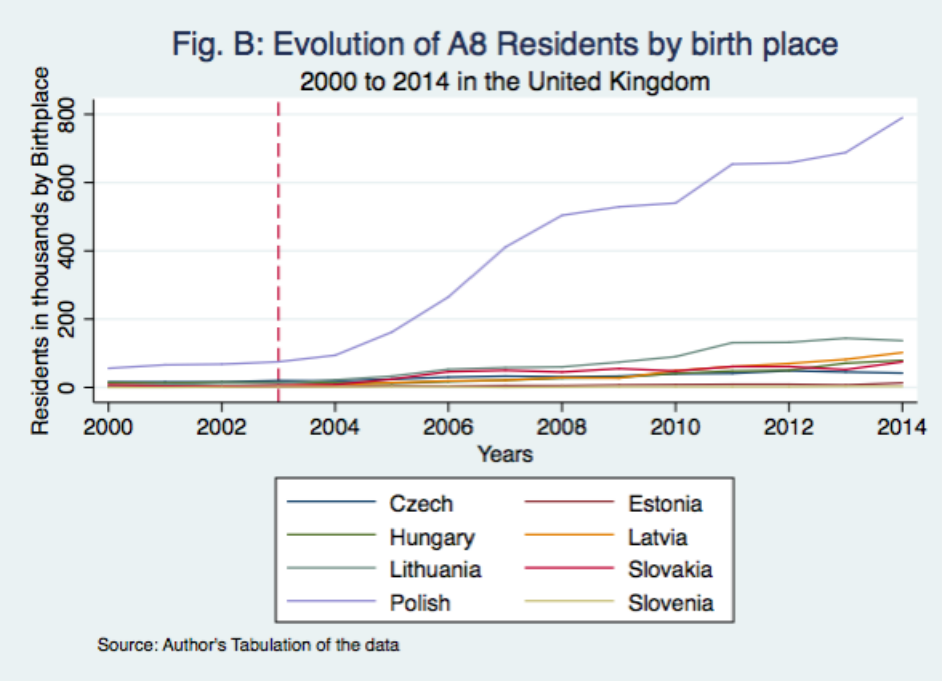


Fig. B clearly shows how the evolution of Polish residents has been much higher than the one of the A7 countries individually. This is one of the reasons it has been chosen as the migration to be studied in this thesis. Another reason why Poland has been chosen is that it is the only migration stream with a back-dating migration to the UK, which will allow us to instrument current Polish migration with past stocks in order to avoid the potential endogeneity usually associated with measuring the impact of migration on voting or public spending outcomes.



3.2 The structure of English Local Government, English Politics and the timing of Local Elections

England's local government structure has 32 London Boroughs, 55 Unitary Authorities, 36 metropolitan districts and 201 non-metropolitan districts (I refer to them as Local Authorities (LAs)) [4]. The groupings do not imply any difference on size, for example South Tyneside with about 155 000 inhabitants is a metropolitan district as well as Leeds with about 765 000 inhabitants (Figures for 2014). [5]. Differences are mainly associated with faculties over local spending. Unitary authorities, London Boroughs and Metropolitan districts have faculties over educational spending. Those three authorities

[4]For a concise description of Local government in England see https://www.gov.uk/.

[5]Similar discrepancies apply to the other classifications:The county of Durham has 902 500 inhabitants and Bracknell Forest has 118 025 and they are both unitary authorities. West Somerset has 34 322 inhabitants and Northampton has 219 495 inhabitants and they are both non-metropolitan districts (Figures for 2004). Only London Borroughs are reasonably similar in size, but they are excluded from our analysis as they elect all councillors every four years.

also have faculties over social spending, but some non-metropolitan districts also do.

Those LAs also directly coincide with the voting circumscriptions at the local/council level. On the other hand parliamentary constituencies might be placed in a way to overlap more than one local council. Each voting circumscription is the divided into electoral wards, where one, two or three councillors are elected using a first past-the-post-Voting system. [6]

There are three different possibilities considering the timing of elections. Some LAs elect one third of their councillors every year and skip the fourth year, some LAs elect half of their councils every two years and some others elect all councillors every four years. London boroughs elect all councillors every four years. Metropolitan district councils elect a third for three years in a row, skipping one year. Other districts and unitary authorities can choose. For all councils changes are allowed (Besley and Preston 2007).

The political parties that stand for elections are briefly described below:

The Conservatives (or Tories) have a rather negative position on migration and are only in favour of additional immigration if the immigrants are relatively wealthy or highly skilled. [7] Allocated at the centre-right on the Political spectrum it is a party that espouses liberal market reforms with a fiscally conservative stance.

The Labour Party is the traditional centre-left party in the UK. It has a history of deficit spending, but especially since Tony Blair has been rebranded as a centrist party of the "Third Way". In this instances espousing liberal market reforms, but actively sustaining redistribution. Its position regarding immigration is positive and the position is mainly derived from human

[6] I.e. the top ranked candidate(s) in terms of votes get elected to represent the ward

[7] At the moment there is a bill in discussion in the Houses of Parliament, which seeks to establish a minimum earning that a migrant needs to achieve in the UK in order to renew his residency permit. They want to implement this law also for Europeans.

compassion towards migrants.

The Green party is a left wing ecologist party originally known as "People". It is a party that started with a strong pro-environment stance, but has in recent years taken over a broader leftwing stance in politics. Some even refer to it as a "watermelon" (Carter (2008)). This metaphor suggests that they brand themselves as an ecologist party, whereas at their core lie deeply socialist fundamentals (The red core of the otherwise green watermelon). Its position on immigration is highly favourable and its economic position has strong redistribution and green/public investment at its fundament.

The United Kingdom Independence Party (UKIP). Is a British supremacist party placed at the right wing spectrum in British politics. It espouses right wing libertarian values on the economy i.e. the total absence of the state in regulating the economy. It is fiercely anti-immigration.

The anticipated migration of Polish people in 2004 has been greatly treated in anticipatory manner by the british media and has been prominently featured in Political party's manifestos and campaign posters. Figure 1 shows a UKIP campaign poster:

Figure 1: Source: blog.unitee.eu

The media has also payed its role in demonising immigration especially from Central Europe and Poland. A often cited cliche was the one of the "Polish Plumber" and "Polish nurse", given that those were stereotypically the new main occupation that polish migrants would take over (D'Amato (2008)). There are other numerous instances, where editorials, opinions and articles, especially in right wing news papers such as the Daily Mail or The Sun recount of a growing fear and resentment of migrants before the EU accession of Poland in May 2004. [8]

The local elections in 2004 take place in June. EU-accession of Poland takes place as on the first of May of the same year. Given the aforementioned media build-up I will take the effect in 2004 as the effect of short-term migration on voting outcomes. What I mean in this case is that changes in voting outcomes in that year are only partially due to migration, but mostly due to the interaction of the media with the first experiences of migrants. On the other hand the effect of migration on voting outcomes in 2006 will reflect the impact on voter's preferences after feeling the complete impact of migration. In my analysis one will thus be able to see the effect of "short-term" migration on voting in 2004 and "prolonged" migration on voting in 2006. In order to consistently test this hypothesis I only take LAs that have elections both in 2004 and 2006 [9].

[8] See for instance here The Sun and The Guardian (2005 and 2008), Daily Mail (2009) and the Mirror (2006) amongst others

[9] Only 3 elections take place in 2005 and no later data is available. This leaves me with elections in 12 Unitary Authorities, all Metropolitan districts and 72 non-metropolitan districts.

4 Data and Summary Statistics

In my analysis I use data on residents in LAs by country of birth and nationality, Gross Value Added at the NUTS3 level and Unemployment. The furthest back this data exists is the Year 2000 [10]. Gross value added is an indicator of local economic development of the NUTS3 region in question. For the voting data I use shares of parties per ward aggregated at the LA level, covering all the elections in 2002, 2003, 2004 and 2006 [11]. "Left" are aggregated shares of the Green and Labour Party, "Right" are aggregated shares of UKIP and Conservatives and "LabCon" are aggregated shares of Labour and Conservatives. "Turnout" is the percentage of people, who turn up to vote. "Other" is the aggregated party share of all other parties present in the elections [12]. "British" and "Indians" refer to people in born in Britain and India respectively. $\Delta Polish$ refers to the difference between 2004 and 2003 and 2006 and 2004 of Polish born people respectively. "Polnat2000" refers to the level of Polish people by nationality in the year 2000.

For the Public Spending data I use total expenditure per LA for social, transport, education and cultural spending in 2007, no data prior to that date is available.

In Tables 1 and 2 we can see the summary statistics for the Year 2004 and 2006 respectively. Table 3 summarises my Public Spending data for the Year 2007.

[10] The data used is all micro data available through the Office of National Statistics (ONS) www.ons.uk.

[11] This data is taken from the UK data service (https://www.ukdataservice.ac.uk/) and the post-2003 data is a courtesy from Professor Gavazza.

[12] We do not include them in this analysis as we find no significant nor interesting effect on their shares.

Table 1:

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Population	120	169.46	129.99	54	992
$\Delta Polish$	120	0.12	0.35	0	2
Indians	120	1.5	2.83	0	21
British	120	157.13	114.98	42	833
Polnat2000	119	0.08	0.09	0	1
GVA	120	17562.7	4196.27	11279	30622
Unemployment	120	4.35	1.46	2.1	8.7
Turnout	120	40.71	5.47	27.3	55.18
Left	120	28.37	12.41	0	58.53
Greens	120	2.47	3.77	0	17.38
Right	120	40.55	12.52	4.58	66.48
UKIP	120	4.01	5.43	0	29.7
LabCon	120	62.44	11.95	36.6	91.68
Other	120	31.08	11.46	1.74	57.96
Votes	120	49748.92	43006.85	12052	298904

Note: Author's tabulation of data

The observed Unit is the LA. Population, $\Delta Polish$, Indians, British, Polnat2000 are in thousands. GVA measured in £ per person. Unemployment, Turnout, Left, Greens, Right, UKIP and Other in percentage.

Table 2:

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Population	120	171.79	132.22	44	1011
$\Delta Polish$	119	0.8	1.24	0	9
Indians	120	1.89	3.35	0	26
British	120	156.57	113.37	44	812
Polnat2000	119	0.08	0.09	0	1
GVA	120	19203.63	4549.83	12230	33658
Unemployment	120	5.05	1.53	2.4	10.2
Turnout	120	36.51	4.72	24.08	50.11
Left	120	28.09	13.63	0	56.66
Greens	120	2.73	3.84	0	24.53
Right	120	41.48	13.96	5.34	72.34
UKIP	120	3.04	4.89	0	26.98
LabCon	120	63.8	12.97	29.02	95.12
Other	120	30.43	12.41	0.07	68.98
Votes	120	41480.4	34021.44	8015	260937

Note: Authors tabulation of data for the Year 2006

The observed Unit is the LA. Population, $\Delta Polish$, Indians, Polnat2000, British are in thousands, GVA in £ per person. Unemployment, Turnout, Left, Greens, Right, UKIP and Other in percentage.

Table 3:

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Education	120	105663.4	166878.4	0	1127302
Social	120	56808.36	88662.59	0	548477
Culture	120	14606.17	17171.82	341	97922
Transport	120	10115.26	11945.03	584	84904
Total	120	213605.7	310751.6	5253	2059423
$\frac{Education}{Total}$	120	21.06	26.05	0	60.5645
$\frac{Social}{Total}$	120	12.18	13.43	0	34.69
$\frac{Culture}{Total}$	120	19.03	13.45	0.08	52.12
$\frac{Transport}{Total}$	120	10.72	6.91	2.14	32.71

Note: Authors tabulation of data

The observed Unit is the LA. Education, Social, Culture, Transport and Total are Absolute spending in thousands of £ for the Year 2007. Shares of Spending over Total are given in percentage.

In Table 1 and Table 2 we can see that the new amount of Migrants has increased from 120 on average to 800 on average between 2004 and 2006. The initial amount of polish nationals is of 80 people on average in the Year 2000. The amount of Indian born residents has increased from 1500 to 1890. On the other hand the amount of british people has on average decreased in the LAs we consider (from 157130 to 156570). We can see that the average shares in percentage points for Political parties do not differ greatly between 2004 and 2006. In Table 3 we can see that not all LAs have faculty over social or educational spending. Education and Culture on average have the highest share of spending devoted to them.

5 Main Specification and Instrumental Variables Approach

In terms of voting outcomes we are interested in measuring the causal effect of additional migrants on the change in party shares for Political parties from the year before. The relevance of doing this is to measure how much new migrants for a certain year have had a causal impact on election outcomes relative to the year before, conditional on controls. So we estimate the following model here:

$$\Delta ShareofParty_{it} = \beta_0 + \beta_1 \Delta Polish_{it} + \beta_k controls_{it} + \epsilon_{it} \qquad (1)$$

Where:

$\Delta ShareofParty_{it}$: Difference between the share of a party in year t and the share of party in year $t-1$ in percentage points in the LA i, where t are election years.

$\Delta Polish_{it}$: Difference between Polish born residents in year t and in year $t-1$ in the LA i, where t are election years.

We are also interested in Looking at the effect on the repartition of Public spending at the LA level. In this case we estimate:

$$\frac{Spending_{2007i}}{Total_{2007i}} = \theta_0 + \theta_1 \Delta Polish_{2006i} + \theta_k controls_{2006i} + \varepsilon_i \qquad (2)$$

Where:

$\frac{Spending_{2007i}}{Total_{2007i}}$: The share of expenditure devotes to a certain Spending (Education, Social, Culture or Transport) over Total Expenditure for the LA i in the year 2007.

$\Delta Polish_{2006i}$ Is the difference between Polish Born residents in 2006 and 2004 per LA i.

As controls we include the logarithm of GVA and Unemployment as a measure of local Economic development. The logarithm of Population to control for heterogeneity in size of LA. Indian born residents give us a proxy of other migrants groups[13] , but which are distinct from the A8 migration that we are interested in. We control for the amount of British people, as inversely certain Political outcomes might depend on how many British people live in that LA.

This model per se, does not allow us to determine the causal effect of immigration on voting nor on public spending, as new migrants might potentially sort towards certain LAs based on certain characteristics that could be correlated with both Political or Budgetary outcomes. In order determine the causal impact of immigration on Voting and Public spending we make use of an instrumental variables approach pioneered by Card (1991).

As I have first explained there is a long lasting history of migration of Polish people to the United Kingdom. We have also seen before that Immigration levels of Polish people are rather low and accelerate quickly after EU-accession of Poland in 2004. Given that Polish migrants prior to 2004 had a difficult way to reach England and work there and so to establish themselves there permanently, the EU enlargement acts a natural experiment, which greatly accelerates Polish migration to England. As a result the stock of Polish people in the year 2000 in each LA (which is the latest data available) is a good proxy for historical Polish migration to England. Given that those polish migrants established themselves a long time ago (in the beginning of the 1950s), their initial allocation is exogenous to Political and Budgetary

[13]Indian Migration is the most important migrant group presence in England in 2014 according to the ONS.

outcomes in the year 2004 to 2007. Therefore our exclusion restriction for our instrumental variable analysis is justified. With this exclusion restriction validated, the stock of Polish people in 2000 now can be used as an instrument if it is highly correlated with the stock of new migrants in the year 2004 and 2006 respectively. Therefore our First stage is the following:

$$\Delta Polish_{it} = \mu_0 + \mu_1 Polnat2000_i + \mu_k controls_{it} + \xi_{it} \tag{3}$$

Where:

$\Delta Polish_{it}$: Is the the difference between Polish born people from year t to $t-1$, where t are election years.

$Polnat2000_i$: The stock of Polish nationals in the year 2000.

$controls_{it}$: Controls in this case are the amount of Indian born residents, the amount of British born residents, the logarithm of GVA and Population as well as the Unemployment rate.

Here we produce the first stage:

Table 4

	(1)	(2)
	ΔPolish	ΔPolish
Polnat2000	1.92***	6.80***
	(0.26)	(0.49)
Observations	119	119
Adjusted R^2	0.295	0.481

Columns (1) and (2) show OLS regressions for the year 2004 and 2006 respectively. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

In Table 4 we can see that the amount of Polish nationals in the year 2000 is a good predictor of Migrants in both 2004 and 2006. I use the stock of Polish nationals in the year 2000, given that in the year 2000, the amount of Polish nationals is lower than the amount of Polish born, which implies that some Polish people have been naturalised. Taking the amount of Polish born residents in the year 2000 results in a less strong predictor. I interpret this finding with the fact that naturalised Polish born citizens have probably left the initial network of polish people and potentially relocated. The core network established at the beginning of the 1950s is thus best captured by the stock of Polish nationals.

In the literature the usual test for the strength of the instrument is determined by running an F-Test of additional explanatory power by excluding the instrument. Usually the convention is that the F-Statistic should be $\approx$ 10 in order for the variable to be a good instrument. For the additional explanatory power of the excluded Instrument in the year 2004 we have an F-Statistic of 31.35 and of 41.39 for the year 2006.

This test statistic coincides with the Cragg-Donald (1993) Wald F-Test-statistic. Stock and Yogo (2005) propose another test on weak instruments, which relies on the Cragg-Donald Test-Statistic if we have one instrument (as in our case), but the associated critical values are different. In the original critical values of the Cragg-Donald (1993) Test statistic (where the rule of thumb of $\approx$ 10 comes from) the null hypothesis is the one of under-identification. In the Stock and Yogo (2005) case the null hypothesis is that the instruments are weak, even though identified. [14] Therefore their Test-statistic to reject this null hypothesis at the 5 percent level is of 16.38 for a maximal bias in size of 10 percent of the IV estimate. We can clearly

[14] For a full discussion see Stock and Yogo 2005

see thus that our F-Test-Statistics (31.35 and 41.39) are higher and thus we reject this null hypothesis.

Thus we can see that we have a strong instrument, which we can use to make causal inference in our estimation.

6 Main Empirical results

6.1 Voting

6.1.1 Results for 2004

Table 5

	(1)	(2)	(3)	(4)	(5)
	ΔLeft	ΔGreens	ΔRight	ΔUKIP	ΔLabCon
ΔPolish	-0.31	-0.23	-1.39	-1.36	-0.11
	(1.05)	(0.51)	(1.17)	(1.03)	(1.23)
Observations	120	120	120	120	120
Adjusted R^2	0.068	0.088	0.002	0.042	0.133

Columns (1) to (5) show OLS regressions for the year 2004. Dependent variables are the differences in shares from t to $t-1$ for each party. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

Table 6

	(1) ΔLeft	(2) ΔGreens	(3) ΔRight1	(4) ΔUKIP	(5) ΔLabCon
ΔPolish	-2.93**	-1.73**	-0.53	0.27	-2.00**
	(1.15)	(0.74)	(1.11)	(1.09)	(0.94)
Observations	119	119	119	119	119
Adjusted R^2	0.040	0.020	-0.000	0.030	0.134

Columns (1) to (5) show IV regressions for the year 2004. Dependent variables are the differences in shares from t to $t-1$ for each party. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

6.1.2 Results for 2006

Table 7

	(1) ΔLeft	(2) ΔGreens	(3) ΔRight	(4) ΔUKIP	(5) ΔLabCon
ΔPolish	0.68**	0.35	-0.45	-0.24	0.12
	(0.32)	(0.26)	(0.38)	(0.24)	(0.38)
Observations	119	119	119	119	119
Adjusted R^2	0.058	0.056	0.019	0.001	-0.027

Columns (1) to (5) show OLS regressions for the year 2006. Dependent variables are the differences in shares from t to $t-1$ for each party. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

Table 8					
	(1)	(2)	(3)	(4)	(5)
	ΔLeft	ΔGreens	ΔRight	ΔUKIP	ΔLabCon
ΔPolish	0.20	0.05	-0.53**	-0.04	-0.32
	(0.26)	(0.16)	(0.22)	(0.15)	(0.33)
Observations	119	119	119	119	119
Adjusted R^2	0.041	0.038	0.019	-0.002	-0.034

Columns (1) to (5) show IV regressions for the year 2006. Dependent variables are the differences in shares from t to $t-1$ for each party. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

6.1.3 Discussion

Table 5 shows the results of our Ordinary Least Squares (OLS) regression for the year 2004. Here we can see that new Polish migrants sort away from LAs that have experienced a loss in Right wing and UKIP votes, but not significantly.

Table 6 shows us the results for our Instrumental Variables analysis for the year 2004. Here we can see that additional polish migration has lead to an increase in votes for UKIP, though not significantly. For every thousand Polish migrants we can see that there is a causal negative effect on Left wing votes of about 2.93 percentage points, a negative effect of 1.73 percentage points on Green votes and a negative effect of two percentage points on joint shares of Labour and Conservatives.

Table 7 shows us the OLS results for the year 2006. Here we can see that

new Polish migrants have sorted towards LAs that experienced a significant increase in Left wing parties of 0.68 percentage points. They also sort away from LAs, where Right wing parties and UKIP are decreasing, though not significantly.

Table 8 shows the IV estimates for the year 2006. Here we can see that increased Polish migration has causally lead to a decrease in Right wing parties of 0.53 percentage points. We can also see that additional migration caused a slight increase for Left wing and Green parties, but not significantly. It is important to mention that the change in shares of Left wing and Right wing parties from the year before do not add up to 0, given that we have excluded "Other" parties in this analysis.

So all in all we can see that short term Migration has decreased the share of Left wing votes and of the joint shares of Labour and Conservatives. Long-term migration on the other hand, has significantly decreased the share of Right wing parties. Whether those changes in voting outcomes are actually due to changes in political preferences remains to be seen in the discussion of potential mechanisms. If we assume that political preferences change (which is not to be taken for granted as we will see later) a potential explanation could be that the first reaction of natives to migrants is of fear and loathing and as a result, this leads to a decrease in more immigrants friendly parties. In the long-term those communities might adapt to the migrants and either decrease their resentment or embrace migration and therefore this could imply a decrease in the right wing vote. Another interesting finding here is that initially also established parties incur a significant loss. The latter could be due to the fact that the fear of Migration leads to a distrust of people towards parties ruling in the Status quo. Those hypotheses will be discussed later in Section 7.1.

6.2 Public Spending

6.2.1 OLS Results

Table 9

	(1)	(2)	(3)	(4)
	$\frac{Social}{Total}$	$\frac{Education}{Total}$	$\frac{Transport}{Total}$	$\frac{Culture}{Total}$
Δ Polish	0.05	-0.21	0.44	1.25
	(0.66)	(0.51)	(0.50)	(0.96)
Observations	78	48	119	119
Adjusted R^2	0.628	0.176	0.326	0.407

Columns (1) to (4) show OLS regressions for the year 2007/2006. Social, Education, Transport, Culture and Total are total expenditures in the year 2007. Δ Polish is the amount of new migrants between 2006 and 2004. Analysis is restricted to LAs that have faculty over the spending share in question. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

6.2.2 IV Results

Table 10

	(1) $\frac{Social}{Total}$	(2) $\frac{Education}{Total}$	(3) $\frac{Transport}{Total}$	(4) $\frac{Culture}{Total}$
Δ Polish	0.36	0.03	0.55	1.35*
	(0.50)	(0.34)	(0.43)	(0.70)
Observations	78	48	119	119
Adjusted R^2	0.627	0.171	0.325	0.407

Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Columns (1) to (4) show IV regressions for the year 2007/2006. Social, Education, Transport, Culture and Total are total expenditures in the year 2007. Δpolish is the amount of new migrants between 2006 and 2004. Analysis is restricted to LAs that have faculty over that spending. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

6.2.3 Discussion

In Table 9 we estimate the OLS regression for the year 2006/2007. We can see that new Polish migrants sort towards LAs that have slightly increases spending devoted to Social, Transport and Culture, but away from LAs with higher spending devoted to education.

In Table 10 we estimate the IV regression for the year 2006/2007. Here we can see that Polish migration has caused an increase in Spending devoted to Culture as well as slight increase in spending devoted to Education and Transport, but not significantly. Remarkably the increase in immigration has caused a positive significant effect on spending devoted to Culture. For an increase in Polish migration of thousand, there is an increase in share

devoted to Cultural spending of 1.35 percentage points. One can interpreted this finding with the fact that additional polish migration causes a sense of fear of the loss of identity in the population and as a result politicians might divert funding towards cultural spending in order to reward and preserve the community of natives.
In the rest of the thesis I will carry out robustness checks, further investigate the effect of migration and discuss potential mechanisms associated to our outcomes.

6.3 Robustness Checks and Further Investigation

In the next three sections I perform a Robustness check to make sure that I am not picking up a pre-eminent trend in voting patterns and perform additional IV regression on subsamples of my data.

6.3.1 Robustness check for lagged Voting outcomes

In the following robustness check I determine whether I am not picking up a trend. I estimate the same model of the impact of immigration on voting as before, but here I use the difference in Party shares of the Political parties between 2003 and 2002, i.e. the previous dependent variable lagged by one period. The idea here being that we could be picking up a trend if the LA where already experiencing a decrease in certain party shares for example. Therefore our instrumented migration would coincide with a pre-eminent trend in the LA.

Table 11					
	(1)	(2)	(3)	(4)	(5)
	ΔLeft	ΔGreens	ΔRight	ΔUKIP	ΔLabCon
ΔPolish	-0.31	-0.43	0.42	-0.04	-1.72
	(5.35)	(0.51)	(0.91)	(0.17)	(1.37)
Observations	119	119	119	119	119
Adjusted R^2	0.242	0	-0.041	-0.021	-0.045

Columns (1) to (5) show IV regressions for the year 2003. Δ Polish is the amount of new migrants between 2004 and 2003. All regressions with controls and robust standard errors Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

Table 11 shows the IV regression for lagged shares of voting outcomes. We can clearly see that there is no significant impact of Polish migration on Voting outcomes. Therefore, we can conclude that there was not a pre-eminent trend in the LA that coincided with the impact of migration onvoting outcomes in the subsequent year.

6.3.2 Selected Subsample 1: LAs with educational spending

In this section I analyse, whether the effects of Migration on voting could be stronger if we consider LAs that have different power in terms of spending. As we have seen before, there is some heterogeneity within the respective categories of LAs (i.e. Metropolitan Districts, Non-metropolitan Districts and Unitary Authorities) and therefore testing in terms of those categories might not be very meaningful. So here we test whether the effect on voting outcomes is stronger if the LA has faculty over educational spending .[15]

[15]Similar, but lower in magnitude, results are found when we consider LAs that have faculty over Social spending.

Table 12

	(1) ΔLeft	(2) ΔGreens	(3) ΔRight	(4) ΔUKIP	(5) ΔLabCon
ΔPolish	-3.45**	-2.30**	0.69	0.74	-1.20
	(1.49)	(0.87)	(1.17)	(1.08)	(0.97)
Observations	48	48	48	48	48
Adjusted R^2	-0.030	-0.025	-0.015	-0.010	-0.023

Columns (1) to (5) show IV regressions for the year 2004 for all LAs with positive educational spending. Δ Polish is the amount of new migrants between 2004 and 2003. All regressions with controls and robust standard errors Standard errors in parentheses.
* p<0.1, ** p<0.05, *** p<0.01

Table 13

	(1) ΔLeft	(2) ΔGreens	(3) ΔRight	(4) ΔUKIP	(5) ΔLabCon
ΔPolish	0.20	-0.00	-0.64**	0.12	-0.55*
	(0.29)	(0.19)	(0.30)	(0.24)	(0.32)
Observations	48	48	48	48	48
Adjusted R^2	-0.051	0.089	-0.042	-0.050	-0.045

Columns (1) to (5) show IV regressions for the year 2006 for all LAs with positive educational spending. Δ polish is the amount of new migrants between 2006 and 2004. All regressions with controls and robust standard errors. Standard errors in parentheses.
* p<0.1, ** p<0.05, *** p<0.01

In Table 12 we estimate the IV regression for the year 2004. Here we can see that an increase in migration has causally lead to a stronger decrease for Green and Left wing parties, but the effect on the combined share of Labour and Conservatives is not significant and less pronounced.

In Table 13 we run the IV regression for the year 2006 and we can see that there is a stronger effect on the decline of Right wing parties.

An intuition behind this finding could be that voter's political preferences experience a higher shift in LAs that have faculty over educational spending, as voters know that their vote will count more. This could either be, because the effects on those LAs are to some extent felt more or the Electorate is more aware of the impact their votes will have and so their political preferences in terms of voting behaviour will shift more.

Considering the weaker loss of Established parties (Labour and Conservatives), this could be direct consequence of Left wing parties loosing more and Right wing parties gaining more. As we can see here the effects on both UKIP and Conservatives are positive (though not significant).

6.3.3 Selected Subsample 2: More populous LAs

Here we estimate the impact on voting outcomes with the upper 50 per cent of most populous LAs in 2003.

Table 14

	(1)	(2)	(3)	(4)	(5)
	ΔLeft	ΔGreens	ΔRight	ΔUKIP	ΔLabCon
ΔPolish	-3.99***	-2.25***	-0.42	0.50	-2.67**
	(1.35)	(0.69)	(1.33)	(1.24)	(1.17)
Observations	60	60	60	60	60
Adjusted R^2	0.021	0.176	0.024	0.016	0.090

Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Columns (1) to (5) show IV regressions for the year 2004 for all LAs in the top 50th percentile of the Population in 2003. Δ Polish is the amount of new migrants between 2004 and 2003. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

Table 15					
	(1)	(2)	(3)	(4)	(5)
	ΔLeft	ΔGreens	ΔRight	ΔUKIP	ΔLabCon
ΔPolish	0.32	0.08	-0.60**	0.09	-0.45
	(0.28)	(0.15)	(0.29)	(0.24)	(0.35)
Observations	60	60	60	60	60
Adjusted R^2	0.001	0.168	0.008	-0.057	-0.032

Columns (1) to (5) show IV regressions for the year 2006 for all LAs in the top 50th percentile of the Population in 2003. Δ Polish is the amount of new migrants between 2004 and 2003. All regressions with controls and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

Table 14 shows the IV regression for the year 2004. Here we can see that there is a more pronounced loss of Left wing, Green party and joint share of Labour and Conservatives compared to our baseline case.

Table 15 shows the IV regression for the year 2006. Also here we can see that the point estimate on Right wing parties decreases and thus the effects are more pronounced also in this year.

A potential reason to explain our findings here could be that in more popolous LAs experience a greater formation of segregated societies ("Ghettos") and that migrants thus are better integrated into smaller communities in a faster fashion. But, in larger LAs, the gains of Multicultaralism might be felt strongly in the long-run and therefore decreases of the Right wing party are more pronounced in the year 2006. As also in section 6.3.2., we will see in the next section that those explanations could not necessarily hold.

7 Mechanism

In this section we will determine two potential mechanisms with which we can explain both our effects of Migration on Voting outcomes and Public Spending. The conclusion from this discussion will shed light on the fact of whether immigration has shaped individuals preferences.

7.1 Outmigration

One important question when we consider the effect of immigration on Voting outcomes is whether additional Polish migration might have lead to a displacement of Population in the LA. As a proxy for potential caused outmigration we take the difference in stocks of Population between t and $t-1$ in different years. Here we thus estimate:

$$\Delta Population_{it} = \sigma_0 + \sigma_1 \Delta Polish_{it} + \sigma_k controls_{it-1} + \zeta_{it} \tag{4}$$

Where:

$\Delta Population_{it}$: is the difference in stocks of Population between t and $t-1$ for each LA, where t are elections years.

$\Delta Polish_{it}$: Measures the differences in stock of Polish born people between t and $t-1$, where t are election years.

$controls_{it-1}$: Controls in this case are the amount of Indian born residents, the amount of British born residents, the logarithm of GVA and Population as well as the Unemployment rate. The logic of using the controls for the year before here is that indicators of the previous year should better predict population movements [16].

[16]The same analysis carried out with controls in time t gives very similar results

Table 16				
	(1)	(2)	(3)	(4)
	ΔPopulation	ΔPopulation	ΔPopulation	ΔPopulation
ΔPolish	-2.56*	-3.33**	0.23	0.60**
	(1.49)	(1.45)	(0.21)	(0.26)
Observations	120	119	119	119
Adjusted R^2	0.391	0.389	0.503	0.487

Columns (1) and (3) show OLS results for the year 2004 and 2006 respectively. Columns (2) and (4) show IV results for the year 2004 and 2006 respectively. Δ Polish is the amount of new migrants and Δ Population is the net migration. All regressions with controls for year before and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

In Table 16 we can see both regressions for the year 2004 (Column(1) OLS and Column(2) IV) and 2006 (Column(3) OLS and Column(4) IV).
We can see that Polish migration has had an effect on displacement of Population in the LAs in 2004. For each thousand new polish migrants in the year 2004, about 3.33 thousand people moved away. This is a plausible magnitude, which matches Boustan's (2010) estimate.[17]
On the other hand we find some evidence that polish migration has actually lead to to an increase in population in the LA for the year 2006. Here there are two issues to keep in mind. The first one is that, given we measure the impact of change in stock of Polish born on the change in stock of Population, without any displacement we would already find a positive association. This means that our estimate for 2004 (Column(2)) *underestimates* the effect of displacement, whereas our estimate for the year 2006 *overestimates*

[17]Boustan (2010) estimates the displacement of white people by black people to be around 2.7 percentage points per percentage point increase

in-migration (Column(4)). Given that the levels of New Polish migrants are low in 2004 (120 people on average), this bias should not be as strong. On the other hand new migrants in 2006 where many more (800 people on average) and as a result this might greatly overestimate the coefficient of in-migration in the year 2006 (especially as the point estimate is 0.6).

This gives us a potential channel to explain our voting results. We can see that in 2004, with on average 120 polish migrants, this will have lead to a decrease in percentage shares of Left wing parties of about 0.35 per cent [18]. Also on average for 120 Polish migrants arriving 396 people move away [19] . Given that the average size of the electorate is 49748 ballots, assuming that the People that moved away were adults of voting age and were as likely to vote as anyone else, this could explain the following change (assuming that all the initial voters voted for left wing parties and considering average turnout of 40.7 percent):

$$\frac{0.407 * 396}{49748} \approx 0.32\, percentage\, points \tag{5}$$

We can see that this could explain all our variation of votes away from Left wing parties. It is important to mention that this is to some extent our lowest bound. If people that were displaced are more likely to vote, this could easily be seen as a reason for our variation in votes.

On the other hand for the year 2006 it is also plausible that new Polish migrants voted in local elections and if they preferred to vote against right wing parties, which is plausible given the aforementioned campaign against their immigration, this could explain the variation.

For the year 2006 we experience a decrease in right wing votes of 0.42 per-

[18] 0.12*2,93

[19] 0.12*3.3

centage points [20]. The average polish migrants are 800 and the electorate for the year 2006 is on average 41480 and the average Turnout is 37 per cent, additional polish migration could cause the following variation in votes:

$$\frac{0.37 * 800}{41480} \approx 0.7\, percentage\, points \tag{6}$$

So we can see that additional polish migrants could have caused the variation in votes away from right wing parties in the year 2006 without necessarily having an impact on the political preferences of the population in question.

The interesting finding here is that although there was a big media build up an active campaigning against EU enlargement and the new immigration of Polish people, we cannot exclude that our election outcomes might have varied solely due to displacement of population in 2004 and additional migration of Polish people in 2006. So we cannot conclude that immigration has necessarily had an impact on the native population's preferences.

Therefore we cannot answer the question of "Fear and Loathing on the Campaign trail?" with a definite "Yes".

7.2 Did Spending devoted to Culture go through Voting?

It is now the turn to determine whether the shift in share of Spending devoted to Cultural activities can be explained through the Political mechanism. The aim is to see here, whether the shift in votes that Polish migration has caused, might have lead to a shift in Local spending towards Culture. Since we have seen before that the increase in Polish migration has lead to a decline in Left wing parties, joined share of Conservatives and Labour in 2004 and a decline in right wing votes in 2006, we would want to test whether the

[20] 0.8*0.53

share of those parties in 2006 are a good predictor for share of spending devoted to Culture in the year 2007. [21] This is a far from perfect measure to determine a causal link, but we can see whether the change in spending is due to any party in particular or whether Polish migration could have lead to an increase in spending devoted to culture without there being any change in shares of parties. This is to say that if we were to find no association between the above-mentioned parties with Cultural spending then this could imply that Spending devoted to Culture increased regardless of change in Party shares. Therefore increase migration could have changed the government's preferences in terms of public spending.

[21] To determine this precisely, we would need to again use the change in spending from the Year 2006 to 2007, but we do not have any public spending data prior to 2007

Table 17

	(1)	(2)	(3)	(4)
	$\frac{Culture}{Total}$	$\frac{Culture}{Total}$	$\frac{Culture}{Total}$	$\frac{Culture}{Total}$
Left	-0.17*			
	(0.09)			
Greens		0.49*		
		(0.26)		
Right			0.03	
			(0.08)	
LabCon				-0.11
				(0.08)
Observations	119	119	119	119
Adjusted R^2	0.430	0.425	0.408	0.418

Columns (1) and (2) show OLS with all independent variables for the year 2006 and outcome variables for Spending (Culture and Total) for the year 2007. Controls include amount of British and Indian born residents, new polish migrants and the Logarithm of GVA and Population and Unemployment. Left, Green, Right, LabCon in percentage shares. All regressions with controls for year before and robust standard errors. Standard errors in parentheses.

* p<0.1, ** p<0.05, *** p<0.01

In Table 17 we see the OLS regression for Spending shares for the year 2007 and Voting shares and controls for the year 2006.

We can see that a one percentage point increase in shares of the Left wing party leads a decrease in shares of Spending devoted to culture of about 0.17 percentage points. On the other hand a percentage point increase in Greens has a significant positive effect of about 0.49 percentage points devoted to

culture. Since the share of Left wing parties in the year 2006 is much higher than the one of the Greens (28.09 percent compared to 2.73 percent) we can see that this channel could potentially explain the increase in spending devoted to Culture. An explanation for this could be that the Left wing parties might devote a higher share to for example social spending. [22]

As a result, this could be the potential channel (i.e. Political outcomes) through which Spending devoted to Culture could have increased. This test helps us thus to exclude the possibility that spending devoted to Culture could have increased, regardless of a change in shares of Parties. Thus we cannot determine whether immigration influenced the party's preferences towards certain types of public spending.

I want to stress that since I do not have any spending variables for the year 2006, this does not suffice in fully justifying the change in Public spending devoted to Culture, but can give us some indication.

8 Comparison and Contrast with the work of Barone et al. (2016)

In this section I discuss the latest publication on the impact of immigration on voting by Barone et al. (2016), which came out just last month (April) in the Journal of Public Economics. I will first outline their results and subsequently discuss them. This is the most recent and advanced work on the impact of immigration on voting.

Here the authors use a panel of three parliamentary election outcomes (2001, 2006 and 2008) in Italy. They measure the impact of $\frac{Immigrants}{Population}$ on Voting outcomes. As instruments they use the shares of Migrants in municipalities

[22] In fact, running the same regression with Share of Social Spending as a dependent variable leads to a significant and positive point estimate for the share of Left wing parties

in the year 1991. They argue that their exclusion restriction is valid for two reasons. Firstly, given that the share of migrants was low in the year 1991 and secondly because in 1992, there was a big shift in Italian Politics, which lead to the dissolution of the two main parties in power (the Christian Democracy and the Socialist party). Those parties also had no particular position on the issue of immigration as the issue was not pertinent at the time. Therefore the authors conclude that any allocation of immigrants in 1991 cannot be a function of strength of a particular party and therefore initial allocation of immigrants are exogenous to Political outcomes they are measuring.

Barone et al. (2016) find a significant positive effect of immigration on the centre-right coalition. Additional findings are that the effects of immigration are stronger in medium sized municipalities, that there is a negative effect on voter turnout and that there is a corresponding loss in voting shares for the left wing and centrist parties. They find no evidence of displacement due to immigration. The authors also cite cultural diversity, competition in the labor market and for public services and political competition as the most relevant mechanisms. This determination of the mechanism relies on a survey taken after the election of 2001, where they perform this additional regression analysis.

We can see that their findings are similar to the ones in this thesis i.e. they see a gain in Right wing votes and a loss in Left wing votes, whereas I see a loss in left wing votes. Effects are stronger in more populous cities in my dataset, whereas in theirs more at the middle municipality size, but that depends on the two countries in question (England and Italy), which greatly differ. Therefore those outcomes are difficult to compare. In my case, there is no significant impact on Turnout (not shown in the Thesis). They do not

carry out an estimation of the effect of immigration on established parties. On the other hand they do not find any evidence of displacement. In order to measure this, they employ a similar estimation method as in this Thesis i.e. they use the change in Population in the locality from the year before as a dependent variables and regress it on the share of immigrants, by instrumenting with past shares.

The problem that they face in this instance, but do not address in the paper, is that their exclusion restriction for the initial allocation of migrants is only valid for political outcomes. They provide no evidence of whether initial migrants could have allocated to certain areas based on factors that could be correlated to increased outmigration or in-migration. Possibly migrants could have allocated to certain areas, because there were many unskilled jobs available, which could be linked to an increasing manufacturing or construction business. As a result they could have allocated in certain areas that are experiencing large and increased inflows, because those manufacturing or construction business are expanding and this could offset the potential outmigration that is caused by increased immigration. Therefore it is not clear in their paper whether there has been an effect on displacement *caused* by migrants.

The second problem with their analysis lies in the construction of their instrument. They use previous shares in the municipality to predict stocks of migrants in the elections years, which they then use as an instrument for stocks in the year of elections. They then measure the impact of this instrumented stock divided by population size of the municipality. There are two potential short comings in proceeding like this.

Firstly since the authors instrument for $\frac{Immigrants}{Population}$ in each year (proxied by foreign born) they are not strictly measuring the impact of immigration on

voting. Here they are estimating the effect of multi-ethnicity on voting outcomes in the municipality in question. This does not directly measure the impact of additional migration on voting, but rather what the differences in voting outcomes are in a more multi-ethnic municipalities.

Secondly since the authors estimate the effect of $\frac{Immigrants}{Population}$ (instrumented) on Voting outcomes, this could potentially lead to spurious correlation without there being any variation in immigrants per se. For example, given that shares of voting depend on the voting population and $\frac{Immigrants}{Population}$ also depend on population, there could be a variation in both the dependent and the independent variable caused by co-movement. In this case the variation in immigration could not play any role of the political outcomes. For example if certain voting outcomes are more extreme for relatively smaller municipalities (because of for example small sample bias) this could imply certain correlations between certain party shares and the share of immigration, which would be relatively higher in those municipalities (given the smaller population). As a result we would see co-movement between $\frac{Immigration}{Population}$ and Voting shares without actually measuring the causal impact of immigration. In my approach I estimate the causal impact of changes in stocks of migrants on changes in voting outcomes and control for Population size. As a result I measure the impact of migration and not of multi-ethnicity and I do not risk a co-movement of $\frac{Immigrants}{Population}$ with voting outcomes, which could be caused solely by a movement in population.

9 Conclusion

We have seen in my thesis that additional Polish immigration has causally lead to a decrease in Left wing and Green party share of votes and combined share of votes of Labour and Tories in 2004 and a decrease in Right wing votes in 2006. Both results can be explained by displacement of Population in 2004 and by additional Polish migration in 2006. Therefore we cannot exclude that polish migration might have had no impact on Political preferences.
Increased migration has also lead to an increase in Spending devoted to culture in 2007, which most likely occurred because of the shift in voting outcomes in the years before.
So the answer to: *"Fear and Loathing on the Campaign Trail?"*: "Maybe."

10 Appendix

10.1 Detailed Public Spending Variables

In all cases I use the figure for total Expenditure.

Social Spending

(1) Social care strategy - children i.e. Children's and families' services - asylum seekers, Children's and families' services - other.

(2) Social care strategy - adults i.e. Older people (aged 65 or over) including older mentally ill, Adults aged under 65 with physical disability or sensory impairment, Adults aged under 65 with learning disabilities, Adults aged under 65 with mental health needs, Other adult Social care - asylum seekers - lone adults, Other adult social care - other , Supported employment

Education

(1) Schools: i.e. Nursery schools, Primary schools, Secondary schools and Special schools

(2) Non-school funding: i.e. Strategic management of non-school services , Pre-school education, Youth education services, Adult and community learning, Student support and Other non-school education funding

Transport

Spending on transport can be decomposed in:

(1) Transport planning, policy and strategy

(2) Highways and roads - maintenance

(3) Traffic management and road safety

(4) Parking services

(5) Public transport

Culture

The Spending on Culture can be roughly divided in:

(1) Culture and heritage: i.e. Archives, Arts development and support , Heritage, Museums and galleries and Theatres and public entertainment

(2) Recreation and sport: i.e. Community centres and public halls, Foreshore, Sports development and community recreation, Sports and recreation facilities, including golf courses, Open spaces, Tourism as well as Library service

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