

## **Did EU regional spending affect the Brexit referendum?**

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## **Did EU regional spending affect the Brexit referendum?**

This article explores whether European Union regional spending influenced how local areas voted in the United Kingdom's 2016 EU referendum. While much focus has been on identity and demographic factors in explaining the referendum result, little attention has been paid to the role of EU interventions in the UK's regions. This article provides an initial exploration into this by assessing the role of EU regional spending. It finds the level of EU spending in local areas had little impact on how those areas voted in the referendum, raising questions about the communication and awareness of EU regional spending.

Keywords: Brexit; EU referendum; cohesion policy; communication; awareness

### **Introduction**

This article contributes to the debate on whether European Union (EU) regional spending affects support for European integration. The United Kingdom's (UK) vote to leave the EU in June 2016 puts this question into sharp focus. Shortly after the referendum, European Commissioner for Regional Policy Corina Crețu expressed regret that areas supported by EU regional spending had nevertheless voted to leave:

The European Union stood by Wales when Wales decided to close down the mines. It was only thanks to European funds that ... we were able to build new jobs, new economic activities. And of course it's disappointing to see [the referendum result]. Of course we respect the British vote, but it was a big mistake for our part, our failure to explain that this region developed also due to European funds.[1]

The Commissioner's remarks draw attention to a wider puzzle in the EU referendum result. While the overall amount has reduced in recent years, EU spending in UK regions remains significant with over €5.8 billion allocated during the 2014–2020 programming period. Indeed, during the last programming period (2007–2013), every local area in the UK received EU regional spending to some extent (see Figure 1).

Nevertheless, it appeared areas which had received substantial EU regional spending, such as Cornwall, the South Wales Valleys and North East England, had voted to leave.

**[FIGURE 1 HERE]**

Existing analyses on the referendum result have focused on the role of public opinion, social attitudes and values and demographic factors (Clarke, Goodwin & Whiteley, 2017; Curtice, 2017; Goodwin & Heath, 2016; Hobolt, 2016), as well as drawing on long-standing debates surrounding Britain's relationship with the EU (Evans and Menon, 2017). Place-based analyses have also tried to unpick the geography of the vote, for example focusing on the local economic impact of Brexit (Dhingra, Machin & Overman, 2017).

There has already been some discussion on post-Brexit cohesion policy and regional funding (for example Bachtler & Begg, 2017; Bell, 2017; Di Cataldo, 2017; REMOVED FOR PEER REVIEW; Sykes & Bäing, 2017). However, analysis into the role of EU regional spending in influencing the referendum outcome is lacking. Exploring this is important for three reasons. Firstly, it addresses a gap in current understanding of the referendum outcome. While much focus has been on individual socio-demographic factors and the nature of the debate UK-wide, little attention has been paid to the role of EU regional spending. Secondly, it complements ongoing debates about the role of EU regional spending to foster support for European integration (for example Chalmers & Dellmuth, 2015; Dellmuth & Chalmers, 2018; Mendez & Bachtler, 2016), and even a sense of European identity (Capello, 2017; Capello & Perucca, 2018). This is especially relevant given one of the stated aims of EU regional policy is to develop social cohesion. It is claimed this fosters a sense of solidarity among EU citizens and, by extension, EU support and a sense of European identity (Bachtler, Mendez & Wislade, 2013, p. 12; Capello & Perucca, 2018, p.

1452). Thirdly, it has policy relevance. Cohesion policy accounts for a third of the EU's budget but, in light of post-2020 proposals, is coming under increased scrutiny from scholars and policy-makers about its effectiveness (for example Fraseti & Wishlade, 2017).

This article therefore opens this field of enquiry by presenting an initial exploration into the following research question: what impact, if any, did the level of EU regional spending have on how local areas voted in the EU referendum? This is achieved through an aggregate-level analysis of EU regional spending and the referendum outcome at the NUTS3 level. Overall, the article finds that the level of EU spending in local areas had little impact on how those areas voted in the referendum. These results pose significant questions for how EU regional spending is communicated to and received by citizens.

### **EU regional spending, EU support and Brexit**

Existing literature on support for the EU debates whether that support is driven by economic or identity factors (for example Hooghe & Marks, 2005). This essentially comes down to whether EU support is rationally driven, for example through cost–benefit analyses, or driven by social identity.

The relationship between EU regional spending and EU support is central to this debate. EU regional spending and its role in encouraging social cohesion is believed to foster solidarity among EU citizens and, in turn, increase support for European integration (Bachtler, Mendez & Wishlade, 2013, p. 12; Capello & Perucca, 2018, p. 1452). Following the rationalist approach, then, it is posited that greater spending in regions by the EU will make those living in those regions more supportive of the EU. Early research has indeed found a positive relationship between the level of regional

spending and the support for the EU, but that support was conditional upon awareness of EU regional funds being spent in the first place (Osterloh, 2008).

Indeed, recent research highlights a more complicated picture, finding that the role of regional spending in fostering EU support is often mediated by social identity and socio-demographic factors, such as education. For example, Chalmers and Dellmuth (2015) find that the role of EU regional spending to foster EU support is stronger among those holding a European communal identity and those who are more politically aware. The perceived fit of EU regional spending to local economic need is also shown to be important; EU regional spending is more positively received in areas where it addresses local economic need (Dellmuth & Chalmers, 2018). In this way, support for the EU is not simply down to receiving higher levels of investment and may often depend on factors which are outside the EU's control.

Existing analysis of the EU referendum result has so far found social identity and demographic factors played a crucial role. In particular, areas with higher percentages of younger people and university graduates were more likely to vote 'remain' (Goodwin & Heath, 2016). This is confirmed in individual-level analyses (Curtice, 2017). In broader context, it has been argued that the leave vote was strongest in areas that have been socially and economically 'left behind' (for example Rodríguez-Pose, 2018). Nevertheless, the impact of direct EU interventions, such as EU regional spending, is relatively unexplored.

### **Research design and data**

A dataset was compiled using EU referendum results at the local authority level, provided by the Electoral Commission, and 2007–2013 EU regional spending as at 2014, provided by the European Commission. Expenditures, rather than allocations, were used on the presumption that citizens would only be aware of EU regional

spending that is actually spent. EU regional spending was operationalised into a per capita variable using 2014 population estimates from the Office of National Statistics. The addition of demographic data from the 2011 census, also from the Office of National Statistics, allows for control variables to be included later on in the analysis. Specifically: percentage of population under 45, percentage of population with undergraduate degrees and above and a dummy variable for regions in Scotland and Northern Ireland. A full list of variables used in this analysis is provided in the online appendix.

All data were aggregated at NUTS2 and NUTS3 levels. This was done using 2006 boundaries as this was the basis for the EU regional expenditures data. This analysis focuses primarily on the NUTS3 level (see Figure 1). While NUTS1 and NUTS2 boundaries represented the functional geography of EU regional policy during 2007–2013, these regions are also spatially large, meaning citizens based in one part of a region may not be readily exposed to EU regional spending in another part. Furthermore, the level of EU regional spending can vary substantially within NUTS2 regions.[2] Focusing on the more granular NUTS3 regions mitigates this, as it provides a lower level of analysis where EU spending in local areas is more likely to be recognised by citizens living in those areas.

The dataset covers all of the UK. However, due to some local authority boundaries in Scotland not conforming to NUTS boundaries, some regions here have been merged.[3] Furthermore, Northern Ireland reported the referendum result as a single entity and so data here is only available at NUTS2 level.[4] Gibraltar was excluded from the analysis as there is no readily available data on EU regional spending in this region.

## Results

Figure 2 and Figure 3 display the relationship between per capita EU regional spending and support for 'remain' at the NUTS2 and NUTS3 levels respectively. Both of these do not obviously support the presence of a relationship between the two variables. This is confirmed with Spearman correlations, showing insignificant and weak associations between EU regional spending and support for remain at the both the NUTS2 ( $r_s = -0.051$ ,  $p = 0.77$ ) and NUTS3 ( $r_s = 0.043$ ,  $p = 0.63$ ) levels.[5]

### [FIGURE 2 AND FIGURE 3 HERE]

As noted, existing research on the referendum outcome shows support for remain was greater in areas with higher proportions of younger voters and with higher proportions of those educated to degree level and above (for example Goodwin & Heath, 2016). There was also an inherent territorial dimension to the referendum result, with Scotland and Northern Ireland in particular leaning for remain. This serves as the basis of a two-step hierarchical regression, using percentage aged under 45, percentage of university graduates and a Scotland/Northern Ireland dummy variable as control variables (Table 1). Step one models the effect of the control variables alone. In line with existing research on the referendum, this accounts for a substantial amount of the variation in the level of the remain vote ( $R^2 = 0.808$ ). Step two introduces EU regional spending. This variable has an extremely small, but nevertheless significant, effect on the level of support for remain. While this does account for more variance ( $R^2 = 0.835$ ), its overall impact is minimal.[6]

### [TABLE 1 HERE]

## Discussion

Overall, this analysis finds little evidence of a strong relationship between the level of

per capita EU regional spending and the percentage voting ‘remain’ at the NUTS3 level. This indicates that, at best, the role of EU regional spending in the outcome of the UK’s 2016 EU referendum was minimal. This finding raises questions for future analysis, both on the impact of EU regional spending in the context of the Brexit vote and for the wider role of EU regional spending to foster EU support.

The first of these questions centres on communication and awareness. As noted, existing research highlights that the ability of EU spending to affect EU support is often conditional upon citizens being aware of the spending in the first place (Osterloh, 2008). Awareness of EU regional spending (as measured in the Flash Eurobarometer surveys on EU regional policy) has been consistently low in the UK (below 15% before the referendum). While awareness saw a sharp increase after the EU referendum, it nevertheless remains the case that only a minority (below 20%) are aware of EU regional spending in their local areas (see Figure 4).

**[FIGURE 4 HERE]**

This question of communication has become increasingly important. This is partly a response to Brexit, but also reflects the context of the post-2020 EU budget, where the effectiveness cohesion policy is increasingly scrutinized by scholars and policy-makers (for example Fraseti & Wishlade, 2017). However the issue of communication goes beyond raising awareness of EU regional spending among citizens. Focus group research of Welsh ‘leave’ voters, for example, shows that despite being aware of EU funded projects in their local area, many regarded them as ‘vanity projects’ with little worthwhile impact on the local community (Awan-Scully, 2017). Similar attitudes were identified in northeast England and recent research has highlighted how citizens across the EU want more input into how EU funds are spent (Pegan, Mendez & Triga, 2018).

A second question, related to communication and awareness, centres on how well ‘embedded’ EU regional spending has been in the UK. This is especially the case in England, where, following the abolition of Regional Development Agencies in 2010, the subnational institutional landscape has been in a state of flux, preventing a long-term and coherent approach to EU regional policy being developed (Bachtler & Begg, 2017). The management of EU regional spending has also become centralised. Although responsibility for setting local priorities for the 2014–2020 programme was devolved to Local Enterprise Partnerships (LEPs), a lack of capacity and limited room for manoeuvre effectively limited LEPs’ ability to shape EU regional spending strategies to suit their areas (REMOVED FOR PEER REVIEW). Given existing research showing the fit between EU regional spending and local economic need is important (Dellmuth & Chalmers, 2018), local input and control is crucial and increasingly demanded by citizens (Pegan, Mendez & Triga, 2018).

Overall, then, while this analysis finds the raw level of EU regional spending played a very limited role in influencing the referendum result, it opens up further questions and highlights the need to engage in further research on its role in fostering EU support, both in the context of Brexit and beyond.

## **Conclusions**

This article sought to provide an initial exploration into the impact of EU regional spending on influencing the UK’s referendum. Overall, the analysis found the level of EU regional spending in local areas had little impact on how those areas voted in the referendum.

There are, of course, caveats to this analysis. It has only analysed aggregate level data, and NUTS3 regions are still relatively large. As such, future research should focus on individual level analysis. Furthermore, referendums only offer sporadic tests of

public opinion which are often dominated by domestic political issues (Osterloh, 2008). This was arguably the case with the UK's EU referendum. The UK's position as a net contributor to the EU did feature in the campaign, but this was in the context of how payments currently made to the EU could be spent on national priorities, such as the National Health Service. Overall, however, the campaign was dominated by discourse on the impact of the EU on the UK's economy for the remain side, and on immigration and sovereignty for the leave side (Clarke, Goodwin & Whiteley, 2017; Evans & Menon, 2017); the role of EU regional spending barely featured. These limitations aside, however, as an initial exploration into the role of EU regional spending in the referendum outcome this article makes two contributions which guides further research and highlights the importance of these results beyond the UK's context.

Firstly, the finding that EU regional spending had little impact on the referendum result speaks to wider research on the role of EU regional spending to foster EU support and identity (for example Capello and Perucca, 2018; Chalmers & Dellmuth, 2015; Dellmuth & Chalmers, 2018), which shows a range of other factors play a mediating role. A lack of awareness of EU regional spending is one potential explanation, but this nevertheless highlights the need for future research to look beyond the mere level of spending.

Secondly, in a context where EU cohesion policy is coming under increased scrutiny for its effectiveness and communication, the findings also have policy implications. The EU has spent significant sums in UK regions, but this did not directly translate into EU support. This raises significant questions about the efficacy of EU regional spending to foster EU support, and how EU regional policy is perceived, particularly during high-profile debates on EU membership. Indeed, much analysis since the referendum outcome has focused on how areas voting to leave have been

economically and socially 'left behind' (for example Rodríguez-Pose, 2018). Cohesion policy is supposed to address these imbalances, but in the case of the UK's Brexit vote, it only had an extremely limited impact on how local areas voted.

## **Acknowledgements**

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## **Endnotes**

1. Remarks delivered during the opening session of the 2016 European Week of Regions and Cities, <http://cor.europa.eu/Pages/EWRC-2016-webstreaming.html>.
2. This variation in EU spending is indicated in the online appendix and accounts for differences in the mean, maximum and minimum values observed between the NUTS2 and NUTS3 data.
3. At the NUTS2 level UKM3 and UKM6 were merged. At the NUTS3 level UKM31, UKM33, UKM61, UKM62 and UKM63 were merged.
4. Northern Ireland data does exist at the parliamentary constituency level, but these do not conform to the NUTS3 boundaries.
5. Spearman correlations were used as the EU regional spending data is highly positively skewed. While the coefficients are small, they do indicate a difference in directionality with the NUTS2 correlation being negative and NUTS3 correlation being positive. However, applying 95% confidence intervals shows both coefficients cross zero (NUTS2 [-0.373, 0.282]; NUTS3 [-0.133, 0.217]).
6. Given its high positive skew. these models were also run with a log of the EU regional spending per capita variable. The results of this can be found in the online appendix, but it confirms the results presented in Table 1, where the effect of EU regional spending is extremely small.

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Table 1. Two-step hierarchical regression for variables predicting remain vote at the NUTS3 level.

	<b>Step one</b>	<b>Step two</b>
Constant	0.010 (0.040)	-0.040 (0.039)
% under aged 45	0.317*** (0.070)	0.375*** (0.067)
% degree qualifications or above	1.031*** (0.068)	1.058*** (0.064)
Scotland / Northern Ireland dummy variable	0.160*** (0.010)	0.155*** (0.010)
Per capita EU regional spending		<0.001*** (<0.001)
Multiple R <sup>2</sup>	0.808	0.835
Difference in R <sup>2</sup>		0.027
F for difference in R <sup>2</sup>		19.585***
*** p < 0.001, ** p < 0.01 , * p < 0.05		

Figure 1. Level of EU regional spending in UK regions 2007–2013.

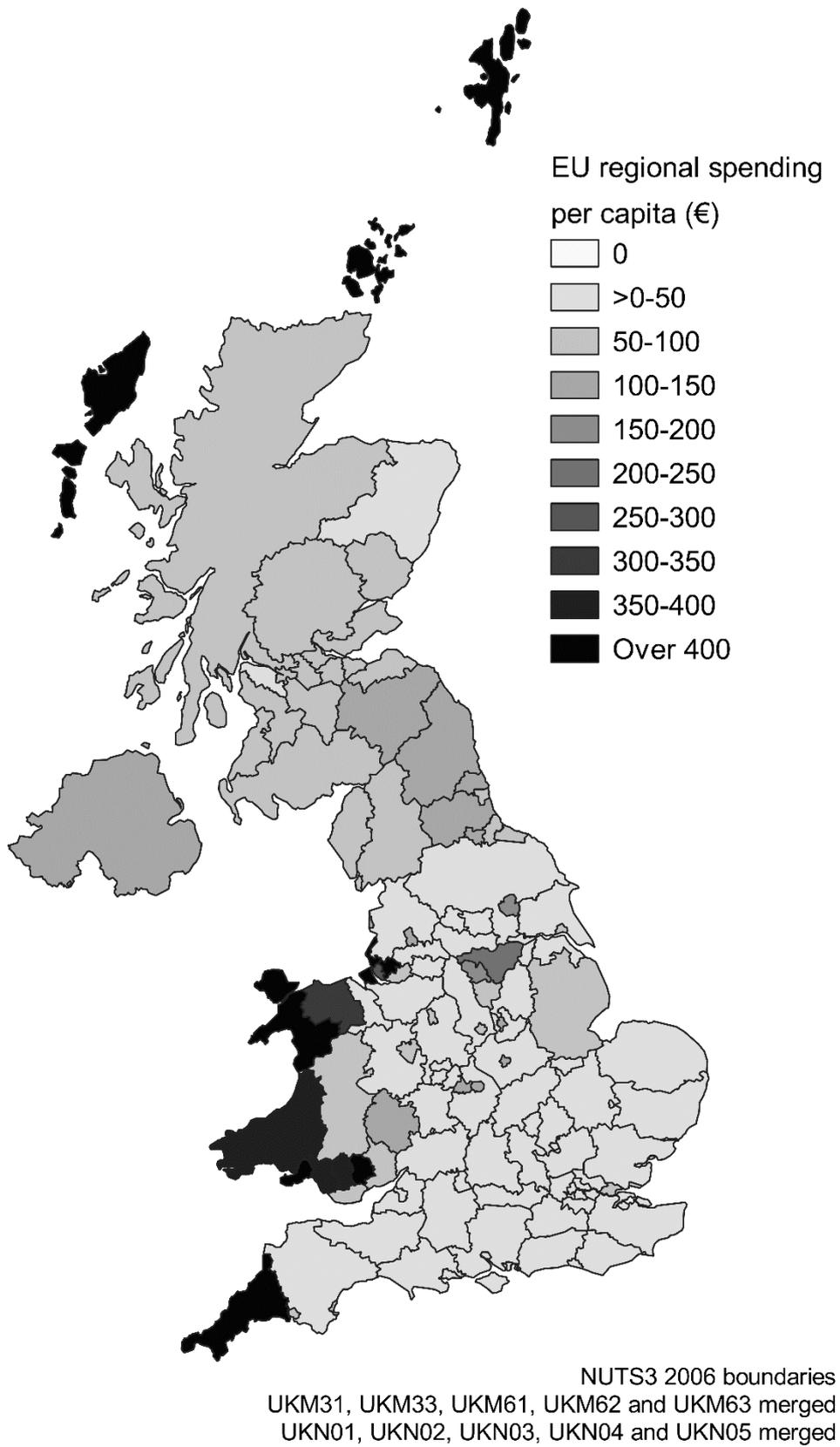


Figure 2. EU regional spending (2007–2013) and remain vote in NUTS2 regions (2006 boundaries).

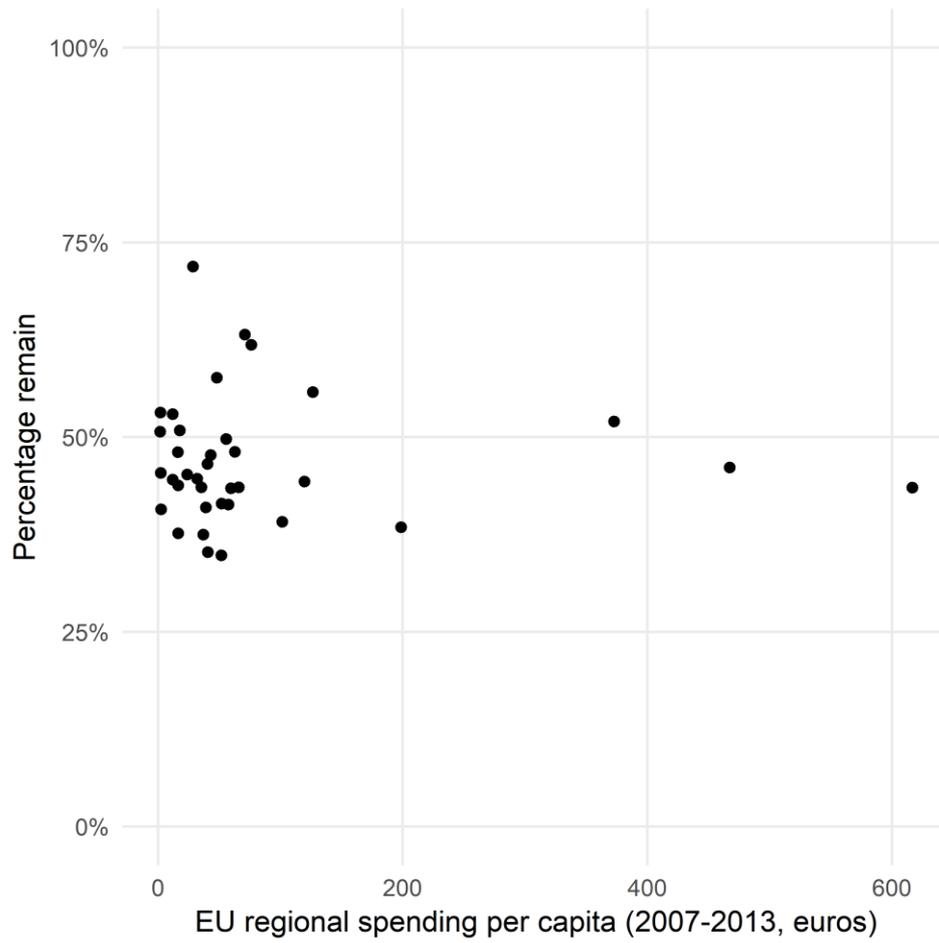


Figure 3. EU regional spending (2007–2013) and remain vote in NUTS3 regions (2006 boundaries).

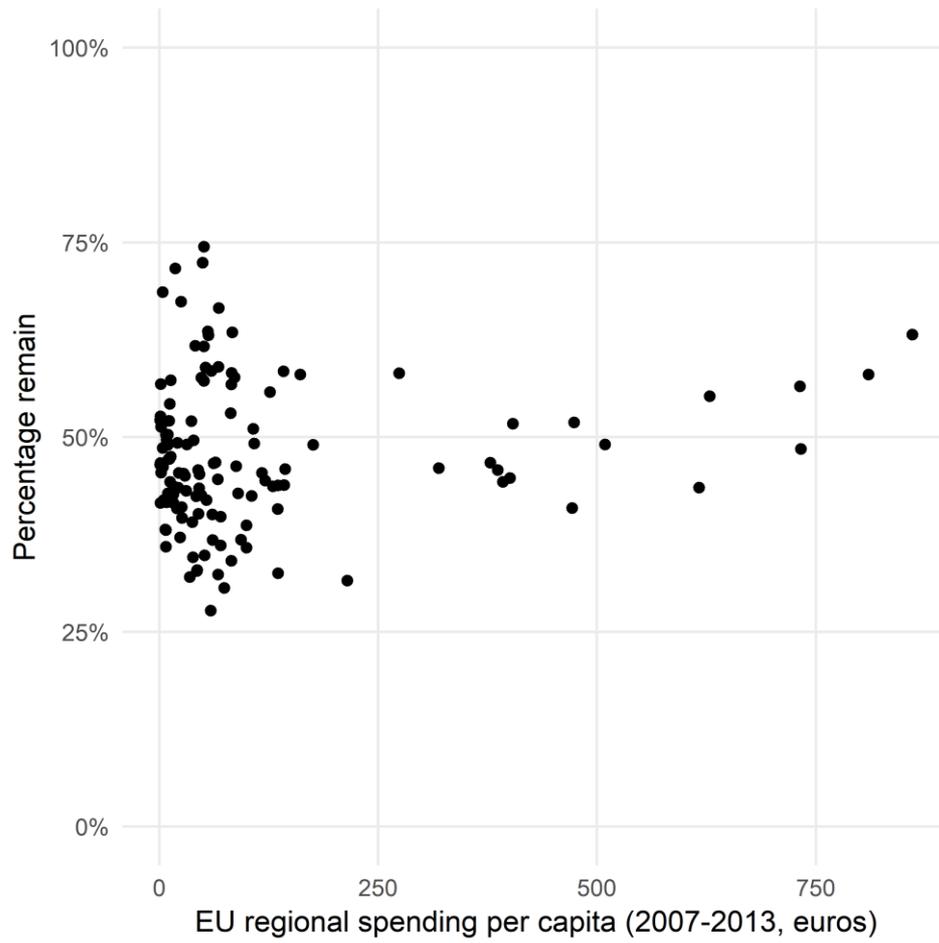
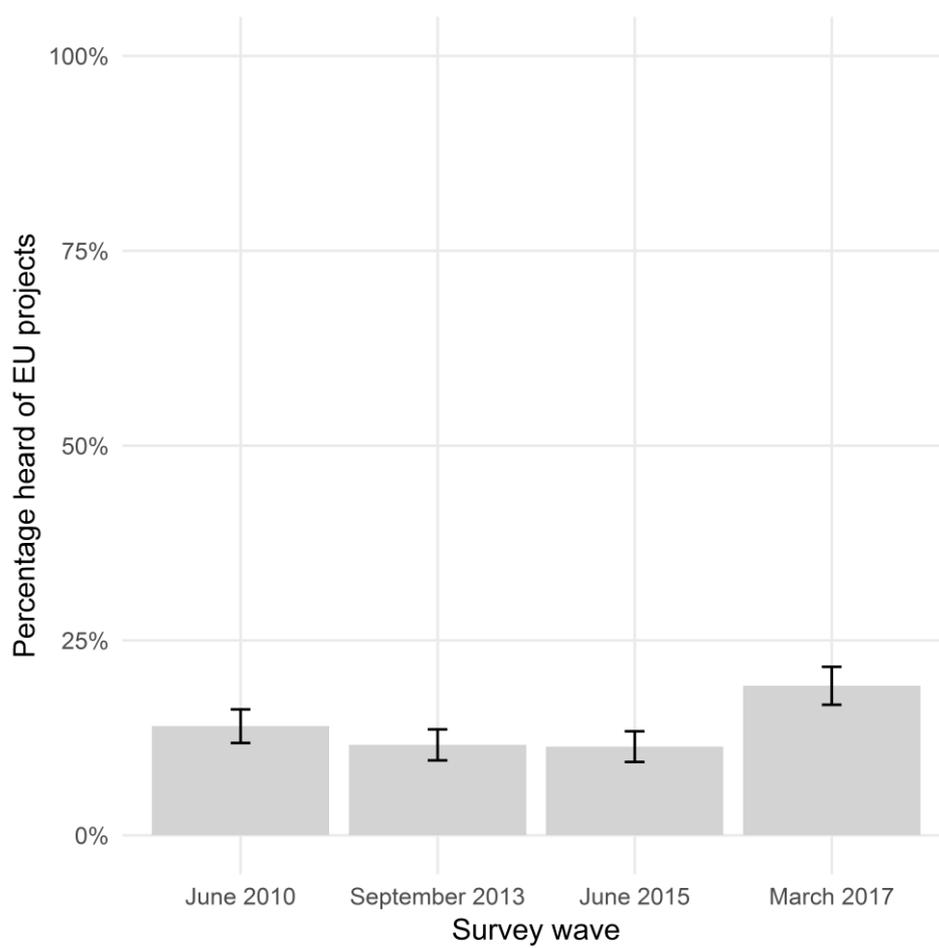


Figure 4. Citizen awareness of EU funded projects in the UK.





## Did EU regional spending affect the Brexit referendum?

### Online appendix

Two-step hierarchical regression for variables predicting remain vote at the NUTS3 level (with log of per capita EU regional spending variable)

	<b>Step one</b>	<b>Step two</b>
Constant	0.010 (0.040)	-0.060 (0.042)
% under aged 45	0.317*** (0.070)	0.335*** (0.066)
% degree qualifications or above	1.031*** (0.068)	1.124*** (0.069)
Scotland / Northern Ireland dummy variable	0.160*** (0.010)	0.151*** (0.010)
Log of per capita EU regional spending		0.010*** (0.003)
Multiple R <sup>2</sup>	0.808	0.829
Difference in R <sup>2</sup>		0.021
F for difference in R <sup>2</sup>		14.903***
*** p < 0.001, ** p < 0.01 , * p < 0.05		