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ABSTRACT

What Mattered Most in the Brexit Vote? Evidence from Detailed Regression and Decomposition Analysis*

The UK's decision to leave the EU continues to have major economic, political and social implications. It is therefore unsurprising that the reasons behind Brexit have been widely discussed. However, whilst existing empirical evidence has tended to focus on specific factors, we undertake a comprehensive analysis of the leave vote using a large-scale survey dataset to identify the relative importance of key underlying factors. Specifically, we apply regression- based techniques, including decomposition analysis, to quantify the impact of different influences. Our results indicate that a complex range of factors are able to explain a high proportion of differences in the leave vote across sub-groups of the British electorate. Moreover, Brexit voting was underpinned by cultural factors, especially attitudes towards immigration, with educational differences also playing an important role. We find that other influences such as age and economic factors become less important after other influences have been taken into account. Our findings are discussed within the context of some of the economic and social consequences that have emanated from the decision to leave the EU.

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1. Introduction

The historic decision made by the United Kingdom (UK)'s electorate in June 2016 to leave the European Union (EU) has had major economic, political and social ramifications. In terms of the economy, there was an initial short-term adverse reaction from stock and foreign exchange markets (Hudson *et al.*, 2020). Dhingra *et al.* (2022) report that the value of sterling fell by 12% in the year following the referendum and stayed around this level, which has caused the price level to increase by an estimated 2.9% due to the higher cost of imports. The process of exiting the EU also produced a period of uncertainty for the business community (Bloom *et al.*, 2018). Born *et al.* (2019) estimate that the adverse effect of Brexit on the UK economy resulted in a reduction in output of between 1.7% and 2.5% in the period that immediately followed the vote up until the end of 2018. Taking a longer-term perspective, the analysis undertaken by Hantzsche *et al.* (2019) concluded that Brexit will have a negative impact on living standards in the UK, causing GDP per capita to fall by 2% under the situation where the UK remained in the customs union and even larger declines under more restrictive trading arrangements. There is also expected to be an economic impact of the UK's departure on countries that remain within the EU. Lawless and Morgaroth (2019) predict significant variations across the EU by sector and country due to Brexit. This is because it will have larger effects on particular countries, especially those that have the closest trading relationships with the UK. For example, Chen *et al.* (2018) report that regions in Ireland face similar levels of exposure to the negative trade-related consequences of Brexit to some UK regions.

From a social perspective, the referendum caused considerable disagreement within families, with members not mentioning politics in order to maintain relationships (Davies, 2022). Brexit also resulted in bitter divisions within communities and an increase in racist and xenophobic incidents (Rzepnikowska, 2019). Di Iasso and Wahba (2023) report that after Brexit referendum, the flow of EU migrants to the UK fell. There was also increase of EU

migration from the UK and net migration from the EU to the UK declined. For EU migrants intending to stay in the UK, the requirement for most to apply for settled or pre-settled status led many of these individuals to feel anxious, unsettled or 'othered' (Barnard, Fraser Butlin and Costello 2022). In addition, Brexit also had a negative impact on some non-EU migrants. For example, Turcatti and Vargas-Silva (2022) find that the EU Settlement Scheme introduced a significant loss of rights and status for onward migrants from Latin America who held EU passports, especially as many non-EU family members could not make successful applications to the scheme. The Brexit vote also affected individual well-being since Powdthavee *et al.* (2019) and Kavetsos *et al.* (2021) find that there was an increase in mental distress and an overall decrease in subjective well-being following the referendum. Moreover, Hervey *et al.* (2021) argue that not only will Brexit produce overwhelmingly negative consequences for the health and health care in the UK, it will also have an adverse effect for health services in the EU. Brexit has also created instability on the political structures that exist in both the UK and Europe. In particular, with regards to the former Martill (2023) highlights how Brexit has increased demands for a second independence referendum in Scotland. Whilst Leruth *et al.* (2019) discuss the short and medium term consequences of the UK's decision to leave the EU on differentiated integration and disintegration.

Therefore, given the wide-ranging consequences of the UK's decision to leave the EU (both short and long run), it is important to obtain a clear understanding of its precise causes. Previous empirical studies have used a range of datasets to examine various aspects of the decision (Koplinskaya and Fox, 2019; Liberini *et al.*, 2019). Moreover, and perhaps unsurprisingly, these studies have generally focused on key variables of interest along disciplinary lines. For example, economists have tended to highlight the role played by economic variables, in addition to socio-demographic influences (Alabrese *et al.*, 2019; Fetzer, 2019). Whilst studies in political science have typically approached the causes of Brexit from

a broader perspective by considering a wider range of influences including attitudinal variables, especially in relation to an individual's national identity and their views towards immigration (Henderson *et al.*, 2016; Goodwin and Milazzo, 2017). Our intention is to bridge the gap between these literatures in order to produce a more forensic analysis of the decision to leave the EU. This is achieved by estimating regressions that include the key sets of influences identified in the empirical literature on the causes of Brexit. The results from these regressions are then augmented by decomposition analysis, in which differences between sub-sections of voters are split into different components.

In accordance with several previous empirical studies, we confirm that Brexit was caused by a multi-faceted set of influences. However, our aim is to quantify the relative importance of different factors on the Brexit vote. In particular, this is the first study to our knowledge that applies decomposition analysis within this context to identify the importance of different influences, especially for sub-groups of the electorate. Moreover, by using data from the *British Social Attitudes Survey*, we are able to include several attitudinal variables in our analysis, which is important given the impact of personality traits on the Brexit vote (Garretson *et al.*, 2018). Our results indicate that views on immigration, (English) national identity and education had the largest impact on the UK's decision to leave the EU. In contrast, age in itself only has a limited impact, especially when other explanatory variables are included in our regression models. We go onto discuss the implications of these findings, including with regards to some initial problems that have occurred with the new trading arrangements that came into force in January 2021 following the ending of the transitional period.

2.   Motivations for Voting for Brexit

Healy *et al.* (2017) begin their article with the observation that "economic performance is one of the best predictors of election outcomes" (p. 771). They go on to discuss the different

transmission mechanisms. These include contrasting views such as voters being sociotropic, since they care more about their personal economic conditions, backward looking and myopic versus voters on average being forward looking and able to discipline politicians for economic performance. Within the context of the Brexit referendum, Fetzer (2019) finds that the welfare reforms introduced in the Coalition government's austerity programme in 2010 was a major cause of the rise in support for leaving the EU. Rodrik (2021) examines the influence that globalisation had on the growth of populist movements by focusing on four distinct channels through which it can increase support for populism. One of these is trade and strong empirical support is found for the view that the rise in support for Donald Trump in the 2016 Presidential Election (Autor *et al.,* 2020) and Brexit (Colatone and Stanig, 2018) was greatest in those areas most exposed to import competition from China.

However, Hessami (2016) argues that voters in direct democratic decisions face considerable information demands. Moreover, the causes of Brexit are likely to run far deeper than just economic factors. Initial overall assessments of the result, such as those by Dorling (2016), Curtice (2017) and O'Reilly (2016), focused on the idea that Brexit was the product of a divided nation. Whilst Hobolt (2016) and Ford and Goodwin (2017) also provide a discussion of the factors underlying the vote as well as its possible implications. In addition to economic change, globalisation has produced cultural change as a result of increased levels of immigration. Norris and Inglehart (2019) argue that older, more conservative voters in liberal societies have increasingly come to support authoritarian-populist parties. Carreras *et al.* (2019) focus on the interplay between economic and cultural factors and find that Britons living in more economically deprived areas were more likely to develop anti-immigrant and Eurosceptic attitudes. Rona-Tas (2016) highlights some nuances in the role that globalisation played in Brexit since it was supported by both nationalists who wanted to take back control from the EU and globalist libertarians who thought the EU had interfered in free markets.

Subsequent empirical studies have examined different aspects of the leave vote - either by using aggregate (geographically based) or individual level data that have been obtained from sample surveys. These include analysing the impact of age (Liberini *et al.*, 2019), attitudes towards immigration (Goodwin and Milazzo, 2017), national identity (Henderson *et al.*, 2016), and religion (Koplinskaya and Fox, 2019; McAndrew, 2020). With reference to these and other studies, we now summarise the influences on the Brexit vote into five sets of factors.

Socio-Demographic (SD)

Virtually every empirical study on Brexit has identified a significant impact of age and education, with older voters and those with lower levels of or no formal qualifications significantly more likely to be leave voters. This finding has been found both in studies that use aggregate data (Arnorsson and Zoega, 2018; Becker *et al.,* 2017; Goodwin and Heath, 2016) and individual-level survey data (Alabrese *et al.*, 2019; Kolpinskaya and Fox, 2019; Liberini *et al.* (2019).

Liberini *et al.* (2019) report that gender has a significant effect, with females more likely to believe that the UK should stay in the EU. Their results also indicate that there are ethnic differences in views towards membership of the EU since those from Black and Mixed ethnic backgrounds reported a more positive attitude towards EU membership in comparison to Whites. Kolpinskaya and Fox (2019) also find significant effects of religious denomination on the leave vote, with Anglicans more likely to be in this category in comparison to individuals without a religion.

Economic (E)

Warhurst (2016) discusses several changes in the labour market that may have contribution into rising support for leaving the EU. These included declining real wages, especially amongst

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those workers at the bottom end of the pay distribution, and the replacement of permanent full-time jobs with more non-standard roles including part-time and self-employment. In terms of economic activity, Becker *et al.* (2017) find that the local unemployment rate had a positive and significant impact on the percentage voting to leave the UK. However, individual unemployment does not appear to have a significant effect on views towards being a member of the EU (Alabrese *et al.*, 2019; Liberini *et al.* (2019). Alabrese *et al.* (2019) report that the self-employed were significantly more likely to be leave voters compared to the paid-employed in some of their models. In a comprehensive analysis of the Brexit vote from an economic perspective, Fetzer (2019) concludes that austerity was important, especially in providing the platform for the UK Independence Party (UKIP) in certain geographical areas that had been affected by economic decline as a result of de-industrialisation and globalisation. Goodwin and Heath (2016) argue that Brexit was underpinned by voters who had been 'left behind' with regards to poverty and a general lack of education and opportunities. Colatone and Stanig (2018) focus on the impact of globalization and find that support for Brexit was systematically higher in areas that were more affected by imports from China. Fox (2021) includes controls for both social grade and occupation in his regression models and reports that leave voting was higher amongst individuals in social grades D and E as well as unskilled, semi-skilled, sales, clerical, supervisory and skilled manual workers in comparison to those who have professional occupations.

Liberini *et al.* (2019) find that an individual's subjective views on their financial situation is a significant determinant of views towards the UK's membership of the EU, with those reporting that they were finding it very difficult significantly more likely to be in favour of leaving the EU compared to those who indicated that they were living comfortably. They also note that feelings about income were a more accurate predictor of support for leave than actual income. Alabrese *et al.* (2019) include controls for housing tenure and also report a

positive and significant effect for a variable capturing house ownership, which combines owned outright and purchasing with a mortgage, when compared to renting through a housing association.

Cultural (C)

Several studies have focused on the impact that immigration had on the leave vote. Becker *et al.* (2017) report mixed findings with regards to the influence that stocks and flows of EU migrants had on the percentage of leave voters in local authority districts. In contrast, several studies have found that individuals expressing negative views towards migrants were far more likely to be leave voters (Clarke *et al.*, 2017; Goodwin and Milazzo, 2017; Henderson *et al.*, 2017). Dennison and Geddes (2018) argue that such attitudes have evolved over the last six decades and thus it is important to place these within a historical context given long-term tensions in UK migration policy and politics. Kaufman (2019) finds that anti-immigration views were most prevalent amongst white working-class voters and that the degree of hostility displayed by this group could be reduced by drawing attention to the notion that assimilation did not impact on the white majority. Brunner and Kuhn (2018) argue that cultural identity exerts a more direct, and possibly more powerful, influence on an individual's attitudes towards immigration than their views regarding immgrants' real or perceived impact on labour market competition.

Henderson *et al.* (2017) highlight the role played by national identity in producing the Brexit outcome, especially in relation to individuals identifying as being English far more likely to be leave voters. They therefore argue that Brexit was made in England and was specifically the result of increased levels of Englishness. Henderson *et al.* (2016) discuss how this position evolved after the 1975 Referendum when support to join the European Economic Community was strongest in England and far weaker in Scotland and Northern Ireland.

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Political (P)

Voting in the EU Referendum was split along party lines to a certain extent, with UKIP supporters overwhelmingly voting leave and supporters of the Liberal Democrats to remain. This finding is confirmed by Koplinskaya and Fox (2019), who also report that a majority of Labour voters supported remain, whereas there was no significant difference between those not identifying with any political party and supporters of the Conservative party. However, Hobolt and Rodon (2020) argue that the issue of European integration is not closely aligned to the left-right dimension and find that it has the potential to become a cross-cutting dimension that rivals the left-right dimension.

Liberini *et al.* (2019) include a linear variable indicating an individual's interest in politics in their models and find that those with a greater interest were more likely to have a negative view towards EU membership. Koplinskaya and Fox (2019) do not find that either the attention to politics or interest in the referendum variables have a significant effect on how the individual voted after controlling for other influences. Particular political issues are also likely to have influenced voting in the EU referendum. These include views on climate change (Lockwood, 2018) and the funding of health services (Simpkin and Mossialos, 2017). In particular, Lockwood (2018) argues that right-wing populism is often at odds with policy designed to address climate change and its supporters express climate scepticism.

Media (M)

Curtice (2017) notes that the media played a very active in the referendum campaign, with most of the popular press (the *Daily Mail*, the *Daily Express* and *The Sun*), as well as the *Daily Telegraph* supporting the leave vote. Zappetini (2021) examines how tabloid newspapers legitimised Brexit. He argues that this was achieved through strategies of fear, resentment and

empowerment as well as through exclusionary definitions of the people. Goodwin *et al.* (2020) also argue that the elements of the British tabloid press that have published anti-EU articles over several decades had produced a familiarity with the main Eurosceptic arguments. The way in which individuals access news can also be important. For example, Alabrese *et al.* (2019) find that individuals who use the internet every day were significantly less likely to think that the UK should leave the EU. Gavin (2018) analyses the view that the media re-inforces pre-existing attitudes with regards to public opinion. He finds that the media can have subtle but pervasive effects on political attitudes, especially when coverage across a range of media has persistent patterns.

Therefore, many of these aspects appear to have had a significant impact on the leave vote. However, the extent to which they drive as opposed to proxying for other influences can only be disentangled through the application of robust statistical techniques to detailed individual level data. As a result, the regression models that we go on to estimate provide a comprehensive analysis of the factors underlying the leave vote.

3. Data and Methodology

The data used in this paper are taken from the 2016 *British Social Attitudes Survey* (*BSAS*), which included questions on whether the respondent voted in the Referendum and, if so, how they voted - either to remain or leave the EU. We use the unweighted data from the survey in our subsequent regression analysis. Amongst the entire sample of respondents, the percentage of leave voters in the 2016 *BSAS* was 50.5%. This was fairly close to actual percentage voting leave in the Referendum, which was 52.1% in Great Britain.[1] This relatively close alignment

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[1] There was a small majority in favour of remain (56%) in Northern Ireland, which resulted in a slightly lower percentage of leave voters (51.9%) in the UK. The empirical analysis in this paper does not include any respondents from Northern Ireland given that the *BSAS* is not

of the leave vote compares favourably with other studies since the degree of under-sampling of leave voters is higher in other surveys that have been used to examine the Brexit vote such as Understanding Society, where only around 44% of respondents were identified as leave voters. Table A1 in the Appendix reports the proportion of leave voters for different sub-groups of the sample. It can also be noted that these statistics are generally in line with post-Referendum polls on the percentage voting leave for different sections of the UK electorate such as those undertaken by IPSOS Mori and Ashcroft.

In the regression analysis that has been undertaken, the dependent variable (Y_i) indicates whether or not the individual voted to leave the EU in the 2016 Referendum. This variable takes a value of 1 if the respondent stated that were a leave voter and 0 if they voted to remain. As noted above, just over 50% of the full sample of respondents can be found in the first category comprising just of leave voters. This figure has been calculated by excluding the small percentage of respondents who did not answer the questions on whether they voted in the EU referendum or how they voted – either because they preferred not/refused to say or couldn't remember.

Given the five sets of influences that were identified in the previous section, we now go onto estimate two regression models. The first only includes a particular set of influences on their own, followed by an overall regression containing all five sets of factors.[2] This allows the estimates from these two sets of regressions to be compared for each set of factors in order to establish the impact of including of other influences on the leave vote.

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administered there. See Drinkwater *et al.* (2020) for further details of the BSAS data within the context of the EU referendum, including issues in relation to weighting.

[2] In addition to region, our models capture local levels of economic deprivation through the identification of areas in relation to the quintile in which the individual resides according to an Index of Multiple Deprivation (IMD).

Therefore, by denoting $\boldsymbol{Z}_{in} = (SD_i;\ E_i;\ C_i;\ P_i;\ M_i)$, where n=1…5, and $\boldsymbol{X_i} = (SD_i+E_i+C_i+P_i+M_i)$, we estimate the following regression models:

$$Y_{in} = \alpha + \gamma \boldsymbol{Z}_{in} + U_{in} \tag{1}$$

$$Y_i = \alpha + \beta \boldsymbol{X}_i + U_i \tag{2}$$

where α is the constant, γ and β are the vectors of coefficients to be estimated and U_i is the error term. The models are estimated using Ordinary Least Squares (OLS) for reasons of simplicity, following Alabrese *et al.* (2019) and Liberini *et al.* (2019).[3]

We then use equation (2) to undertake the decompositions of the leave vote for some key variables - namely education, age, national identity and attitudes towards immigration.

$$\bar{Y}_1 - \bar{Y}_2 = (\bar{X}_1 - \bar{X}_2)\widehat{\boldsymbol{\beta}} + \bar{X}(\widehat{\boldsymbol{\beta}}_1 - \widehat{\boldsymbol{\beta}}_2) \tag{3}$$

where the subscript (either 1 or 2) refers to the categories that are being compared. The bars represent average levels within the relevant samples and the hats the estimated coefficients that are obtained from a pooled regression model.

This method has been used extensively in (labour) economics since its introduction by Blinder (1973) and Oaxaca (1973), especially to explain differences in wage rates between groups. However, it has also been applied in wide range of contexts since then. These include in studies that have examined political behaviour (Butler, 2021; Dassonneville and Kostelka, 2021; Kolstelka *et al.*, 2019). In our context, decomposition analysis enables the difference in the leave vote between two groups to be split into an explained (characteristics) and unexplained (coefficients) effect. The explained effect is represented by the first term on the right-hand side of equation (3) and the unexplained effect by the second term. The explained

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[3] Results from probit and logit models are very similar to those from OLS from a qualitative perspective and available from the corresponding author on request.

effect can be further split into individual components, which in our study correspondent to the variables that are found in the five sets of influences.[4]

4. Regression Results

The results from estimating equations (1) and (2) are reported in Tables 1-5. In addition to the coefficients, standard errors and significance levels, these tables also contain the proportion of leave voters and whether there is a difference in the mean proportion voting to leave in comparison to the reference category. The first thing to note from Table 1 is that the estimates are generally in line with previous studies, especially when focusing on model (1). These include that the proportion of leave voters is increasing with age and qualifications. However, the impact of both of these variables is vastly reduced when other factors are added in model (2). For example, the age dummies are only typically significant at the 5% (rather than the 1%) level in model (2) when compared to the reference category of 18-24. With regards to education, the only significant differences in model (2) are found for post-graduate and first degree holders in comparison to individuals with no qualifications.

In line with the official and raw statistics, there are large regional differences, with respondents in Scotland and London far more likely to be remain voters than in other parts of Great Britain. These regional variations are generally significant at the 1% level in model (1) but lower significance levels are again observed in model (2). As in Liberini *et al.* (2019), some ethnic differences can be detected, with respondents reporting a Black ethnicity less likely to be leave voters but also that Chinese/Other Asians more likely after controlling for other influences. The gender, rural and religious denomination dummies are not significant in either

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[4] Abreu and Öner (2020) aim to disentangle the impact of economic, social and cultural influences on the Brexit vote by applying a Coarsened Exact Modelling approach to data from the British Election Survey.

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of the models, whereas there is a significant positive effect on the probability of being a remain voter for regular church attenders in model (1). The marital status and health variables are typically not significant in either of the models. In total, the socio-economic variables explain around 19% of the variation in the dependent variable, compared to 36% in the full model. In addition to including a list of as well as the means of the explanatory variables that comprise the socio-demographic variables in X_i, Table A1 reports the estimates for the full regression using model (2), the proportion of graduates an average age.

The economic variables that have been included in the models do not have a large influence on the leave vote. This is reflected in Table 2 both by the lower value of R-squared (0.12) and the generally insignificant effect of the individual dummy variables, especially in model (2). This includes the controls for occupation, which lose their significance in the full model – as a result of the high degree of correlation with other variables, especially educational attainment. The only significant variable with regards to the economic activity/employment variables in model (2) is for permanently sick individuals, who are significantly more likely to be leave voters. In comparison, the impact of other variables reduces the impact of some of the other dummies indicating an individual's economic activity. This is most noticeable for students and the retired. Similarly, the significant effects found for two of the housing tenure variables in model (1) are absent in the full model. The controls measuring local levels of deprivation are not significant at the 5% level in either of the models.

As reported in other studies, including Henderson *et al.* (2016) and Goodwin and Milazzo (2017), both national identity and attitudes towards immigration are critical factors in explaining the leave vote. We also find strong support for these effects since those respondents indicating an English national identity and holding negative views towards migrants are significantly more likely to be leave voters, whereas those with a European identity were at the opposing extreme. These findings generally hold in both models but again the significance of

these variables is diminished in model (2). For example, Table 3 indicates that the coefficient attached to the English national identity dummy (in comparison to individuals identifying themselves as British) falls from 0.15 to 0.08 and from 0.25 to 0.15 for individuals reporting that they were concerned about immigration. In addition to the general indicator on attitudes towards immigration, the probability of voting leave was increasing with views on how long EU migrants should wait to claim benefits in the UK. The magnitude of these effects is large, with the difference between those respondents who reported that they thought that EU migrants should never have access to benefits compared to those believing there should be no such restrictions being 25 percentage points. In total, the indicators for national identity and attitudes towards migration explain 21% of the variation in the dependent variable.

In addition to dummy variables identifying which political party the respondent supports, Table 4 also contains estimates for other politically-oriented variables – namely views on climate change, satisfaction levels with the National Health Service (NHS) and interest in politics. With regards to political party, the expected signs are observed for Liberal Democrat and UKIP voters in both models, with these effects significant at the 1% level despite the reduced impact of these variables after controlling for other factors. This is also the case for supporters of the Labour party, who were significantly more likely to be leave voters compared to respondents with no political affiliation, whereas no significant differences were found for Conservative party supporters. Although the magnitude of the effect of being a Green party supporter voting remain is reduced in model (2) it is still significant at the 5% level. Staying on this theme, climate change deniers are significantly more likely at the 1% level to be leave voters in model (1) but this difference becomes insignificant in model (2). In contrast, respondents who believe the climate change is not man made were significantly more likely to be leave voters in comparison to those believe that it is man-made, even after controlling for the full set of other influences. This is consistent with evidence from the US (McCright and

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Dunlap, 2011) and Western Europe (McCright *et al.*, 2016) where left-leaning individuals are far more likely than those on the right to believe in climate change and to support policies to reduce it. Respondents who are dissatisfied with the NHS were more likely to be leave voters but the difference is not significant for those reporting that they are very dissatisfied in model (2). The significant impact of interest in politics variables observed in model (1) are not present in model (2), apart from the higher likelihood of respondents with no interest in politics being a leave voter at the 10% level. Taken together, the political variables explain 15% of the variation in the dependent variable.

There is a significant association between newspaper readership and voting behaviour in the EU referendum, as shown in Table 5. This is particularly the case for readers of the *Daily Express* and *Daily Mail*, who were more likely to be leave voters at the 1% level in both models. This is also true for *Times* readers with respect to being remain voters, whereas the significance levels for *Guardian* and *Independent* readers are vastly reduced in model (2). The significant effects found in model (1) of watching TV news - less frequent viewers more likely to be remain voters – and looking at online news – where those respondents who look at news sites on the internet less frequently are more likely to be remain voters are completely absent in model (2). Age again plays an important role in explaining the loss of significance given the ways that different generations access news (Nielsen and Schrøder, 2014).

5. Decomposition Analysis

Decompositions have been estimated for the following variables: age (3 groups: 18-29, over 50s and 65 & over), education (2 groups: graduates and individuals with no qualifications), those concerned versus not concerned about immigration, English national identity versus other identifiers and the English born versus those born outside England. The results from estimating these decompositions are reported in Table 6. For each of the decompositions, the aggregated

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characteristics effect is reported according to the contribution made by the key factors, with some of 5 sets discussed above further split into their constituent elements. In particular the socio-demographic factors have been divided into age, education & other socio-demographic variables and cultural factors into national identity & attitudes towards immigration. These sub-divisions into their individual components are reported in each decomposition apart from for the variable under consideration. For example, age has been excluded from the socio-demographic variables when age groups are compared.

In each of the decompositions, other than for the concerns about immigration split, the explained effect accounts for the majority of the differential between leave and remain voters. This implies that the variables that have been included in the regression models are able to capture a large portion of the observed variations in the leave vote for different sections of the British population. For two of the groups: respondents with no qualifications (compared to those with intermediate qualifications) and the English born (in comparison to those born outside England) the differential is more than explained by the characteristics effect. The explained effect also accounts for more than three-quarters of the large differentials observed in the three age categories reported in the table. In particular, the explanatory variables included in the model explain 83% of the difference in leave voting between the under 30s and older voters. The explained component is even higher for the over 50s at 90% but is lower for the over 65s. Specifically, the political and media variables have a much larger influence on leave voting for the over 50s.

In terms of the particular characteristics making a contribution to the explained effect, then attitudes towards immigration are significant at the 1% level in each of the decompositions. National identity, political and media, as well as other socio-demographic, variables are also important determinants - especially for the education and cultural variables. The educational variables also have significant impact at the 5% level in each of the

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decompositions, although the size of this component appears relatively small in comparison to some of the other components. In contrast, age only contributes a small part of the explained effect, with the only significant finding observed for the no qualifications split at the 10% level. The economic variables only have a significant effect in the decompositions for education.

6. Conclusions

The UK's decision to leave the EU is one of the major political events of modern European history (Liberini *et al.*, 2019) and one of the biggest blows to the European project since the establishment of the Common Market in 1958 (Curtice, 2017). The empirical analysis undertaken in this paper has enabled the importance of different sets of factors in the EU referendum to be identified. The paper also provides evidence, particularly through the application of decomposition analysis, on differences in the leave vote for sub-groups of the population. As a result, this analysis provides a deeper understanding of how such voting patterns contributed to the populist vote that the Brexit referendum represented within the UK context (Rodrik, 2021), which is different to elections given that the outcome is essentially irreversible (Drinkwater and Jennings, 2022). In particular, we find consistently strong support for the role played by short-term public opinion in the leave campaign's victory. This especially related to the way in which the debate on immigration was appropriated by Leave campaigners such as by highlighting the possibility of large inflows of migrants to the UK if Turkey and other countries in Southern and Eastern Europe were to join the EU (Ford and Goodwin, 2017). However, it could also be argued that negative attitudes towards immigration have evolved over a much longer time frame (Dennison and Geddes, 2018). Other influences including education, national identity, as well as some media and political variables are also found to be important, both in the overall results and for particular groups. A notable finding with regards to the political influences is the significant effect that views towards climate change had on the

probability of being a leave voter. In contrast, age does not have much of an effect on the probability of voting leave once other factors have been controlled for. The influence of economic variables is also reduced in the full model and these variables only have an impact on the splits by education in the decomposition analysis.

There is already a large amount of evidence that supports the generally pessimistic pre-Brexit forecasts regarding the negative impact of a leave vote on the UK economy (Dhingra and Sampson, 2022). In particular, there are numerous examples of problems that have disrupted trade flows between the UK and EU after the existing trading arrangements were replaced at the end of 2020 (Dhingra *et al.*, 2022). These include extra costs and documentation faced by UK exporters, hold ups at customs following changes in regulations due to Brexit, which have particularly affected the (sea)food industry, supply problems experienced by some retail outlets in the EU, the requirement for distribution centres and warehouse space within the EU for some UK companies and the bypassing of some UK ports by hauliers travelling to Ireland. In addition to the increase in import and consumer prices following the decision to leave the EU (Dhingra and Sampson, 2022), Portes and Springford (2023) argue that the ending of the free movement of labour from the EU has substantially reduced labour supply in several sectors. This will have further exacerbated the cost pressures experienced by many employers. Geiger and Güntner (2024) confirm that Brexit lowered real GDP growth and increased consumer prices in the UK and that the impact would have been larger without the interventions of the Bank of England.

The introduction of new trade frictions have meant that the UK has become a far less open economy, with Dhingra *et al.* (2022) estimating that trade openness fell by 8 percentage points between 2019 and 2021. This compares with a reduction of 2 percentage points in France. Whilst, Buigut and Kapar (2024) estimate that EU-UK trade fell by 10.5% in the immiediate post-Brexit referendum phase and by 15% in the Brexit transition phase. This is

consistent with the estimates of Kren and Lawless (2024), who report that Brexit reduced trade by around 20% in both directions. Evidence of the impact of Brexit on a specific EU member state is provided by de Lucio *et al.* (2024), who estimate that Spanish exports and imports to and from the UK were 24% and 27% than levels observed before the EU referendum. Moreover, Brakman *et al.* (2023) report that trade between the UK and the rest of the world also fell slightly after the Brexit referendum and that the strategy of 'Global Britain' has yielded insufficient trade creation to make up for the trade losses caused by Brexit. Therefore, from an overall perspective, the decision to leave the EU turns back the trend of greater global integration for which the UK has engaged with since the Industrial Revolution, with the associated increase in economic prosperity (Maddison, 2004).

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Table 1. Estimates for the Probability of Voting Leave: Socio-Demographic Variables

	Prop. Leave Voters	Socio-Demographic Variables Only		Full Model	
		Coef.	St. Err.	Coef.	St. Err.
Female	0.493*	-0.026	0.021	-0.023	0.021
Age 25-34	0.394**	0.147***	0.056	0.112**	0.056
Age 35-44	0.374*	0.114**	0.057	0.107*	0.059
Age 45-54	0.487***	0.150***	0.056	0.116**	0.058
Age 55-64	0.554***	0.180***	0.059	0.131**	0.062
Age 65-74	0.634***	0.212***	0.061	0.168**	0.071
Age 75 and over	0.627***	0.222***	0.066	0.191**	0.077
North East	0.593***	0.190***	0.055	0.115*	0.064
North West	0.504***	0.140***	0.044	0.073	0.058
Yorkshire & the Humber	0.576***	0.226***	0.048	0.124**	0.060
East Midlands	0.566***	0.190***	0.054	0.105*	0.064
West Midlands	0.657***	0.272***	0.050	0.194***	0.062
East of England	0.558***	0.176***	0.045	0.087	0.059
London	0.274*	0.048	0.049	0.056	0.061
South East	0.488***	0.168***	0.044	0.115**	0.056
South West	0.528***	0.180***	0.046	0.112*	0.059
Wales	0.543***	0.170***	0.059	0.133*	0.073
Rural location	0.568***	0.031	0.026	0.022	0.025
Black	0.206***	-0.145*	0.076	-0.162**	0.073
South Asian	0.286***	-0.021	0.106	-0.130	0.099
Chinese/Other Asian	0.550	0.239**	0.117	0.198*	0.109
Other Ethnic Group	0.464	0.014	0.087	-0.004	0.081
Born in the UK	0.526***	0.057	0.044	0.035	0.045
Co-habitating	0.441**	-0.035	0.038	-0.036	0.034
Divorced or Separated	0.595**	0.023	0.030	0.019	0.029
Widowed	0.543	-0.133***	0.040	-0.079**	0.038
Single	0.420***	-0.045	0.033	-0.052	0.032
No. of children in household	_	-0.004	0.012	-0.009	0.011
Post Graduate Degree	0.133***	-0.495***	0.040	-0.184***	0.045
First Degree	0.276***	-0.362***	0.037	-0.103**	0.041
Higher Ed. below degree	0.386***	-0.119***	0.041	0.020	0.040
A level or equivalent	0.484***	-0.163***	0.037	-0.014	0.038
O level or equivalent	0.640***	-0.034	0.035	0.027	0.034
CSE or equivalent	0.679	-0.001	0.045	0.041	0.043
Foreign or other qualification	0.517**	-0.181**	0.091	-0.113	0.091
Non-limiting health problem	0.557***	0.045	0.028	0.039	0.026
Limiting health problem	0.643***	0.066**	0.029	0.007	0.030
Church of England/Anglican	0.591***	0.030	0.028	-0.009	0.027
Roman Catholic	0.434	-0.034	0.042	-0.045	0.039

Other Christian	0.536	0.034	0.030	0.017	0.028
Other Religion	0.320***	0.017	0.082	0.010	0.076
Regular church attender	0.410***	-0.073**	0.031	-0.031	0.029
Constant	_	0.301***	0.081	0.068	0.124
R-Squared (42)		0.189		0.364	

Notes: N for all regressions is 2,112. The proportion of leavers in this sample is 0.511. ***, ** and * indicate significance at the 1%, 5% and 10% levels respectively using two-tailed tests and robust standard errors. The number of explanatory variables in the model is reported in parentheses following 'R-Squared'. Reference categories are Aged 18-24, Scotland, White, Married, No Qualifications, No health problem and No Religion. Further information is provided in Table A1 in the Appendix, which also contains the proportion of leave voters for the number of children in the household variable.

Table 2. Estimates for the Probability of Voting Leave: Economic Variables

	Prop. Leave voters	Economic Variables Only		Full Model	
		Coef.	St. Error	Coef.	St. Err.
Private Sector - Services: PT worker	0.457	-0.012	0.065	-0.079	0.057
Private Sector - Non-Services: FT	0.548***	0.151***	0.045	0.070	0.041
Private Sector - Non-Services: PT	0.571***	0.090	0.071	0.046	0.070
Self-Employed	0.457**	-0.030	0.054	0.015	0.048
Employed in Public Sector	0.385	0.004	0.041	0.057	0.037
Employed in Charity/Other Org.	0.400	-0.001	0.077	0.013	0.072
Unemployed	0.557***	0.086	0.067	0.094	0.059
Student	0.146***	-0.321***	0.065	-0.005	0.070
Permanently Sick	0.778***	0.268***	0.065	0.167**	0.067
Retired	0.616***	0.136***	0.040	0.001	0.047
Looking after the home	0.527***	0.079	0.060	0.044	0.053
Other inactive	0.467	-0.032	0.126	0.090	0.089
Owner Occupied: Buying	0.405***	-0.084***	0.029	-0.024	0.029
Social: Local Authority	0.652**	-0.013	0.046	0.004	0.045
Social: Housing Association	0.701***	0.044	0.045	0.041	0.043
Private Renter	0.390***	-0.151***	0.036	-0.052	0.035
Other Renter	0.524	-0.019	0.118	0.056	0.117
Lives in IMD Quintile 2 Area	0.548	0.046	0.037	0.059*	0.035
Lives in IMD Quintile 3 Area	0.513	0.043	0.037	0.003	0.035
Lives in IMD Quintile 4 Area	0.532	0.057	0.037	0.008	0.035
Lives in IMD Quintile 5 Area	0.435***	0.010	0.037	-0.007	0.035
Higher Professional and Managers	0.340***	-0.283***	0.044	-0.067	0.044
Lower Professional & Managers	0.405***	-0.233***	0.039	-0.052	0.039
Intermediate Occupations	0.550***	-0.107**	0.044	-0.021	0.042
Small Employers/Own Account	0.623	0.001	0.053	0.014	0.048
Lower Supervisory/Technical	0.631	-0.047	0.050	0.024	0.047
Semi Routine Occupation	0.620	-0.055	0.041	0.013	0.039
Comfortable on present income	0.492	0.015	0.033	-0.007	0.029
Neither comfortable/uncomfortable	0.521	0.041	0.035	0.016	0.032
Struggling on present income	0.625***	0.102**	0.047	0.081*	0.044
Really struggling on present income	0.500	-0.068	0.083	-0.103	0.077
Constant	_	0.562***	0.063	0.068	0.055
R-Squared (31)	_	0.119		0.364	

Note: See Notes to Table 1. Default categories are Private Sector: Services Full-Time worker, owner occupied – bought, lives in Index of Multiple Deprivation (IMD) Quintile 1 Area, Routine occupation and really comfortable on present income.

Table 3. Estimates for the Probability of Voting Leave: Cultural Variables

	Prop. Leave voters	Cultural Variables Only		Full Model	
		Coef.	St. Err.	Coef.	St. Err.
English National Identity	0.675***	0.149***	0.023	0.084***	0.022
Scottish National Identity	0.400	-0.025	0.042	-0.012	0.057
Welsh National Identity	0.517	0.047	0.054	-0.019	0.060
Irish (incl. NI) National Identity	0.355	-0.034	0.073	0.021	0.084
European National Identity	0.019***	-0.317***	0.029	-0.183***	0.039
Other National Identity	0.289***	-0.133***	0.052	-0.041	0.050
Concerned about immigration	0.740***	0.247***	0.022	0.154***	0.022
EU migrants should wait 1 year for benefits	0.346***	0.114***	0.040	0.073**	0.037
EU migrants should wait 2 years for benefits	0.399***	0.134***	0.039	0.090**	0.036
EU migrants should wait 3 years for benefits	0.534***	0.234***	0.044	0.161***	0.042
EU migrants should wait 4 years for benefits	0.589***	0.279***	0.043	0.178***	0.041
EU migrants should wait >4 years for benefits	0.658***	0.333***	0.039	0.209***	0.039
EU migrants should never have access	0.778***	0.406***	0.045	0.247***	0.045
Other answer to question on welfare benefits	0.493***	0.236***	0.062	0.165***	0.058
Constant	_	0.163***	0.033	0.068	0.055
R-Squared (14)	_	0.209		0.364	

Note: See Notes to Table 1. Default categories are British national identity and EU migrants should have to wait less than 1 year before getting welfare benefits in the UK.

Table 4. Estimates for the Probability of Voting Leave: Political Variables

	Prop. Leave voters	Political Variables Only		Full Model	
		Coef.	St. Err.	Coef.	St. Err.
Don't believe in climate change	0.739***	0.200***	0.050	0.082	0.050
Believe in it but not man made	0.716***	0.178***	0.032	0.077**	0.031
Quite satisfied with the NHS	0.487	0.012	0.028	0.038	0.026
Neither sat./dissat. with the NHS	0.531	0.058	0.037	0.057*	0.034
Quite dissatisfied with the NHS	0.557*	0.074**	0.034	0.072***	0.032
Very dissatisfied with the NHS	0.590*	0.087*	0.048	0.043	0.043
Quite a lot of interest in politics	0.452	0.025	0.030	-0.038	0.026
Some interest in politics	0.530***	0.095***	0.030	-0.022	0.029
Not very interested in politics	0.626***	0.171***	0.036	0.010	0.036
No interest at all in politics	0.750***	0.256***	0.054	0.100*	0.055
Conservative	0.563**	-0.028	0.047	-0.043	0.045
Labour	0.375***	-0.226***	0.047	-0.139***	0.044
Liberal Democrat	0.288***	-0.285***	0.057	-0.165***	0.054
SNP	0.407***	-0.172**	0.068	-0.004	0.079
UKIP	1.000***	0.357***	0.044	0.181***	0.045
Greens	0.255***	-0.327***	0.077	-0.137**	0.068
Other	0.611	-0.024	0.123	0.026	0.117
Don't Know/Refused	0.653	0.020	0.064	0.048	0.061
Constant		0.469***	0.053	0.068	0.055
R-Squared (18)		0.149		0.364	

Notes: See Notes to Table 1. Default categories are believes in climate change and is man-made, very satisfied with the National Health Service (NHS), very interested in politics and does not support any political party.

Table 5. Estimates for the Probability of Voting Leave: Media Variables

	Prop. Leave voters	Media Variables Only		Full Model	
		Coef.	St. Err.	Coef.	St. Err.
Daily Express reader	0.842***	0.272***	0.061	0.207***	0.057
Daily Mail reader	0.771***	0.235***	0.036	0.135***	0.036
Daily Mirror reader	0.483	-0.069	0.068	-0.093	0.065
Daily Star reader	0.762**	0.186**	0.096	0.061	0.083
Sun reader	0.745***	0.200***	0.046	0.078*	0.043
Daily Telegraph reader	0.561	0.056	0.067	0.058	0.060
Guardian reader	0.083***	-0.392***	0.043	-0.122**	0.047
Independent reader	0.320*	-0.214**	0.090	-0.112	0.077
Times reader	0.264***	-0.233***	0.061	-0.197***	0.056
Scottish/Irish Times reader	0.326***	-0.172***	0.050	-0.058	0.050
Reads another newspaper	0.333	-0.132	0.122	-0.009	0.095
Watches TV news every day	0.531***	-0.055*	0.029	-0.025	0.026
Watches TV news at least once a week	0.450***	-0.092***	0.034	-0.025	0.032
Watches TV news once a month or less	0.430***	-0.121**	0.048	-0.055	0.045
Never watches TV news	0.451**	-0.080	0.054	0.023	0.049
Looks at online news every day	0.433***	0.114***	0.036	0.035	0.031
Looks at online news at least once a week	0.490***	0.170***	0.040	0.050	0.035
Looks at online news once a month or less	0.542***	0.217***	0.045	0.053	0.041
Never looks at online news	0.633***	0.269***	0.035	0.060	0.035
Constant	_	0.385***	0.037	0.068	0.124
R-Squared (19)	_	0.112		0.364	

Notes: See Notes to Table 1. Default categories are does not read a newspaper, watches TV news several times a day and looks at online news several times a day.

Table 6. Decompositions of the Leave Vote

	Age			Education		Cultural		
	Under 30	**Over 50**	**65 and over**	**Graduate**	**No Quals**	**English National Identity**	**Concerned About Immigration**	**English Born**
Mean Differential	-0.178***	0.197***	0.179***	-0.374***	0.240***	0.249***	0.356***	0.143***
Unexplained Effect	-0.030	0.020	0.044	-0.132***	-0.006	0.092***	0.183***	-0.017
Explained Effect	-0.148***	0.177***	0.135***	-0.241***	0.246***	0.157***	0.174***	0.160***
Components of Explained Effect								
Education	-0.017**	0.028***	0.025**	_	_	0.018***	0.033***	0.011***
Age	_	_	_	-0.014	0.038*	0.008	0.010	0.003
Other Socio-Demographic	-0.047**	0.037**	0.023	-0.010	0.009	0.027***	0.019***	0.060***
Economic	-0.026	0.019	-0.005	-0.040**	0.056***	0.004	0.008	-0.005
National Identity	-0.005	0.008**	0.011***	-0.026***	0.013	_	0.024***	0.049**
Attitudes towards Immigration	-0.038***	0.035***	0.026***	-0.070***	0.043***	0.050***	_	0.029***
Political	0.005	0.016**	0.014**	-0.044***	0.043***	0.033***	0.053***	0.004
Media	-0.022*	0.033***	0.039***	-0.038***	0.044***	0.018***	0.026***	0.009*
% Accounted by *Explained Effect*	83.1	89.7	75.4	64.6	102.6	63.2	48.8	111.9
N (Category)	192	1,305	689	535	365	720	743	1,649

Note: Total number of observations is 2,112. N(Category) refers to the number of observations for the category labelled in row 2. ***, ** and * indicate significance at the 1%, 5% and 10% levels respectively.

Table A1. Descriptive Statistics and Estimates from the Full Model for the Probability of Voting Leave: Socio-Demographic Variables

	Prop. Leave	p-value	Full Model		Mean		Proportion		
			Coef.	p-value	Category	Age	Graduate	Eng. Nat. ID	Immig. Concerns
Male #	0.532	–	–	–	0.453	55.2	0.253	0.365	0.360
Female	0.493	0.072	0.021	0.283	0.547	53.9	0.253	0.321	0.342
Age 18-24 #	0.273	–	–	–	0.042	21.2	0.227	0.250	0.193
Age 25-34	0.394	0.043	0.112	0.045	0.114	29.9	0.444	0.336	0.249
Age 35-44	0.374	0.081	0.107	0.069	0.144	39.6	0.410	0.256	0.275
Age 45-54	0.487	0.000	0.116	0.045	0.184	49.7	0.260	0.304	0.340
Age 55-64	0.554	0.000	0.131	0.034	0.190	59.5	0.227	0.349	0.399
Age 65-74	0.634	0.000	0.168	0.018	0.194	69.1	0.141	0.398	0.437
Age 75 and over	0.627	0.000	0.191	0.014	0.132	80.6	0.118	0.423	0.384
North East	0.593	0.000	0.115	0.074	0.058	54.3	0.130	0.366	0.317
North West	0.504	0.003	0.073	0.210	0.129	54.5	0.213	0.419	0.364
Yorkshire & the Humber	0.576	0.000	0.124	0.040	0.084	55.6	0.288	0.407	0.463
East Midlands	0.566	0.000	0.105	0.099	0.068	58.0	0.231	0.448	0.357
West Midlands	0.657	0.000	0.194	0.002	0.079	56.4	0.205	0.416	0.373
East of England	0.558	0.000	0.087	0.136	0.114	54.2	0.192	0.413	0.429
London	0.274	0.076	0.056	0.363	0.074	51.4	0.471	0.248	0.185
South East	0.488	0.007	0.115	0.042	0.143	52.9	0.312	0.375	0.329
South West	0.528	0.001	0.112	0.059	0.110	55.8	0.262	0.421	0.425
Wales	0.543	0.002	0.133	0.068	0.055	56.1	0.276	0.052	0.336
Scotland #	0.364	–	–	–	0.087	52.5	0.196	0.005	0.201

Urban location	0.495	_	_	_	0.780	53.9	0.259	0.344	0.338
Rural location	0.568	0.006	0.022	0.373	0.220	56.9	0.232	0.329	0.394
White #	0.522	_	_	_	0.938	55.1	0.244	0.355	0.355
Black	0.206	0.000	-0.162	0.027	0.016	47.7	0.324	0.059	0.206
South Asian	0.286	0.001	-0.130	0.188	0.023	41.2	0.490	0.020	0.286
Chinese/Other Asian	0.550	0.803	0.198	0.068	0.009	46.3	0.500	0.200	0.200
Other Ethnic Group	0.464	0.544	-0.004	0.957	0.013	48.5	0.250	0.357	0.357
Born Outside the UK	0.296	0.000	_	_	0.064	48.0	0.459	0.089	0.244
Born in the UK	0.526	_	0.035	0.432	0.936	55.0	0.239	0.358	0.357
Married #	0.522	_	_	_	0.499	55.8	0.290	0.354	0.370
Co-habitating	0.441	0.047	-0.036	0.290	0.085	42.1	0.296	0.358	0.335
Divorced or Separated	0.595	0.022	0.019	0.519	0.150	58.6	0.177	0.307	0.380
Widowed	0.543	0.572	-0.079	0.035	0.098	74.6	0.087	0.361	0.351
Single	0.420	0.001	-0.052	0.108	0.168	41.5	0.287	0.313	0.270
No children in household #	0.539	_	_	_	0.751	59.1	0.223	0.359	0.364
1 child in household	0.489	0.202			0.082	40.2	0.299	0.276	0.299
2 children in household	0.372	0.000	-0.009	0.417	0.098	40.6	0.435	0.280	0.314
3 children in household	0.480	0.314			0.036	40.4	0.320	0.347	0.333
4 or more children in household	0.362	0.004			0.033	42.0	0.217	0.261	0.290
Post Graduate Degree	0.133	0.000	-0.184	0.000	0.078	47.7	1.000	0.212	0.152
First Degree	0.276	0.000	-0.103	0.011	0.175	48.2	1.000	0.241	0.195
Higher Ed. below degree	0.544	0.000	0.020	0.625	0.123	53.8	0.000	0.340	0.355
A level or equivalent	0.484	0.000	-0.014	0.716	0.174	48.3	0.000	0.370	0.321
O level or equivalent	0.640	0.040	0.027	0.436	0.189	54.1	0.000	0.380	0.470
CSE or equivalent	0.679	0.493	0.041	0.340	0.074	60.1	0.000	0.359	0.481
Foreign or other qualification	0.517	0.030	-0.113	0.213	0.014	61.7	0.000	0.379	0.345
No qualifications #	0.710	_	_	_	0.173	68.3	0.000	0.419	0.436

No LT limiting health problem #	0.465	_	_	_	0.659	51.4	0.300	0.335	0.330
Non-limiting health problem	0.557	0.002	0.039	0.137	0.171	59.8	0.224	0.330	0.396
Limiting health problem	0.643	0.000	0.007	0.815	0.170	61.4	0.103	0.376	0.382
Church of England/Anglican	0.591	0.001	-0.009	0.747	0.210	63.9	0.178	0.449	0.436
Roman Catholic	0.434	0.150	-0.045	0.252	0.079	55.5	0.247	0.271	0.373
Other Christian	0.536	0.159	0.017	0.536	0.176	58.3	0.237	0.253	0.337
Other Religion	0.320	0.004	0.010	0.897	0.036	43.9	0.467	0.080	0.280
No Religion #	0.494		_	_	0.500	49.9	0.276	0.356	0.320
Not regular/Non-attender #	0.531	_	_	_	0.828	53.5	0.236	0.362	0.359
Regular church attender	0.410	0.000	-0.031	0.290	0.172	59.6	0.339	0.240	0.306

Note: # indicates the default category.