Do political preferences depend on age? Evidence from British general elections 2005

> Any man who is under 30, and is not a liberal, has no heart; and any man who is over 30, and is not a conservative, has no brains.
>
> (Whiston Churchill, attributed)

Introduction

Uncertainty has always been one of the most difficult variables to model and measure in the Voting Theory. In studying the political process we realise that uncertainty is bi-directional: on the one hand there exists uncertainty of voters towards political candidates, meaning that they are not perfectly able to evaluate whether policies implemented by politicians are good or bad; on the other hand there is uncertainty amongst politicians towards voters' preferred issues, meaning that they are not able perfectly to observe electorate's preference for a given policy.

Nowadays we have very advanced theoretical tools to study uncertainty in elections. Perhaps, the most useful is the Probabilistic Voting Theory [see Enelow and Hinich (1984), Coughlin (1992)]. A branch of this science suggests that voters' preferences may be represented in a multidimensional space and synthesized by Ideal Points. It assumes also that a candidate's goal is minimising the distance between these Ideal Points and a chosen policy, whose results is equivalent to maximising the probability of winning elections. Nevertheless, from a methodological perspective, the most difficult problem to solve is related to measurement aspects. This topic is effectively studied in Alvarez (1997). He identifies two distinct levels for measuring uncertainty: the first is represented by *aggregate* measurements, which analyse aggregated variations in voter's perceptions towards candidate policy positions and the second by *individual* measeurements, which in turn may be divided into *inferential* and *direct* meas-

urement. The following scheme reports a complete taxonomy of measurement systems to detect political uncertainty.

1. Aggregate
2. Individual
   (a) Inferential
   (b) Direct
      i. Direct Survey Question
      ii. Direct Operationalization

The Direct Survey Question is an appoach based on asking respondents directly about the certainty of their political perceptions, whilst the Direct Operationalization is based on measuring the variation in voter's perception of candidate issue positions, relative to the positions of the candidates towards these issues.

Unfortunately, the numerous results achieved by the Voting Theory are not equally supported by robust empirical evidence. For instance we lack deep evidence on whether a significant difference of judgement amongst the electorate with respect to some characteristics of individuduals exists.

Literature on voting behaviour has divided between two strands: one which considers vote choices as the product of a `personal` calculus and depends on individuals' personal characteristics, attitudes and interests and another which considers vote choices as a `social` calculus focusing on the role played by interpersonal communication and intermediaries such as media and organizations (see Beck et al. (2002)).

In this paper I will not consider social factors, even though it would be interesting to analyse the role played by the bias of political communications due to perception and exposure to messages sent by politicians and intermediaries[23]. Otherwise, I will present fresh empirical evidence upon political preferences of British voters and upon the judgements they give to the Government's job on specific policies (i.e. taxation) to assess whether different generations (the old and the young) have different political tendencies. The linkage between age and political tastes has already been studied in empirical studies on voting. There are many works which witness that this relationship is strongly significant. Miller et al. (1998) discovered that the older Russians participated in the Russian 1996 presidential elections at a higher rate than the average citizen

and that voters aged 60+ preferred the Communist Gennadii Zyuganov, whilst people under that age preferred the pro-reform democratic party led by Boris Yeltsin. Rose and Mishler (1998) used survey data from 1995 in Hungary, Poland, Romania and Slovenia to demonstrate that older people are more likely to have positive support, a function of lifetime learning, and more educated people, who are disproportionately young, are also more likely to be positive supporters. Pammet and DeBardeleben (1996) used a multivariate analysis to demonstrate that age is important in predicting political/election interest in Russia and Ukraine, in that older voters prove to be more interested in politics. Ruding et al. (1996), in an attempt to build a precise profile of the British Green Party voter, discovered that the main socio-demographic correlates of voting are youth and education. Other studies which found statistically significant relations between age on political tastes may be found in Nadeau et al. (2002), Tranter (2003), Dorussen and Taylor (2001), Jackson and Carsey (2007).

To measure the attitude of the British electorate towards specific issues I will rely on Direct Survey Questions, since they do not suffer from problems which frequently affect inferential measures related to econometric analysis, in particular reliance on the vagaries of different estimation methods. In fact, Direct Survey Questions ask respondents to locate either themselves or political candidates on scales related to one or more issue. The British Election Study 2005 (BES) is particularly suitable to achieve this goal, due to its broad coverage of issues, to the large sample dimension and to the reliability of answers provided by respondents.

Political Parties in the United Kingdom

Over the last two centuries the United Kingdom has had a prevailingly two-party system. Before the mid-19th century British politics was dominated by the Whigs and the Tories, where the former, more keen on reform, were associated with the newly emerging industrial classes, and the latter were associated with the conservative and landed gentry and the Church. After 1834 the Tories changed their name and evolved into the Conservative Party, and the Whigs evolved into the Liberal Party. These two parties dominated the political scene until the 1920s, when the Liberal Party was replaced as the main left-wing party by the emerging Labour Party, who represented an alliance between the Trade Unions and various socialist societies. The Liberals later merged with the Social

Democratic Party, which was founded in 1981, because they had very similar views and became the Liberal Democrats which are now a sizeable third party whose electoral results have improved in recent years.

Nowadays, the UK's "first-past-the-post" electoral system leaves small parties disadvantaged on a national scale. It can, however, allow parties with concentrations of supporters to flourish. These parties include two national parties, Plaid Cymru, the Party of Wales (founded in 1925), and the Scottish National Party (founded in 1934). Northern Ireland parties include the Ulster Unionists, formed in the early part of the 20th century, the Democratic Unionists, founded in 1971 by a group that broke away from the Ulster Unionists, the Social Democratic and Labour Party, founded in 1970, and Sinn Féin. In Scotland, Wales and Northern Ireland these parties have indeed won seats on the "first-past-the-post" system.

In recent years, proportional representation-based voting systems have been adopted for elections to the Scottish Parliament, the National Assembly for Wales, the Northern Ireland Assembly, the London Assembly and the UK's seats in the European Parliament. In these bodies, minor parties have also had some success.

Traditionally political parties have been private organisations with no official recognition by the state. The Registration of Political Parties Act 1998 changed that by creating a register of parties. The Electoral Commission's register of political parties lists the details of parties registered to fight elections with their name in the United Kingdom. Under current electoral law only registered party names can be used on ballot papers by those wishing to fight elections. As of 12 January 2007 it shows the number of registered political parties as below.

185 parties have their name registered for use only in England

1 party has its name registered for use in England and Scotland.

6 parties have their name registered for use in England and Wales.

144 parties have their name registered for use in England, Scotland and Wales.

17 parties have their name registered for use only in Scotland.

10 parties have their name registered for use in Wales only

In Northern Ireland, 58 parties are on the register, including the Conservative Party which fights elections in the province.

Three parties dominate politics in the House of Commons. They all operate throughout Great Britain (only the Conservative Party runs candidates in Northern Ireland). Most of the British Members of the European Parliament,

the Scottish Parliament, and the National Assembly for Wales represent one of these parties:

Labour Party, centre-right to left-wing (traditionally left-wing but now more centre-right), *Co-operative Party* (all Co-operative Party MPs are also Labour MPs as part of a long-standing electoral agreement), *Conservative Party*, centrist to right (traditionally centre-right), and Liberal Democrats, centrist to centre-left.

Tables 3-4 show the composition of the House of Commons and the House of Lords.

Affiliation	**Members**
Labour Party	352
Conservative Party	196
Liberal Democrats	63
Democratic Unionist Party	9
Scottish National Party	6
Sinn Féin	5
Plaid Cymru	3
Social Democratic and Labour Party	3
Independents	1
Independent Labour	1
Ulster Unionist Party	1
RESPECT The Unity Coalition	1
Health Concern	1
Speaker and Deputies	4
Total	**646**

Table 3: Composition of the House of Commons

Affiliation	Life peers	Hereditary peers	Lords spiritual	Total
Labour	208	4	0	212
Conservative	159	47	0	206
Liberal Democrats	73	5	0	78
UKIP	1	1	0	2
Green	1	0	0	1
Cross-benchers	168	33	0	201
Non-affiliated	9	2	0	11
Lords Spiritual	0	0	26	26
Total	620	92	26	737

Table 4: Composition of the House of Lords

British Election Study (2005): characteristics and dimension of the sample

According to Sanders et al. (2007) the 2005 BES is based on two parallel panel surveys. The main study is a two-wave face-to-face national probability panel survey, with the first wave conducted between February and March 2005 and the second wave conducted between May and July 2005, starting right after the May 5th general election. The face-to-face study is complemented by a three-wave internet panel survey. The pre-election wave questionnaires in both the face and internet surveys are identical, insofar as this was possible given that different modes were involved.

In-Person Surveys: the 2005 BES in-person pre-election baseline survey was conducted before the election campaign officially began. The survey was designed to yield a representative sample of 'non-institutionalized' adults aged 18 and older living in Great Britain (people living in Northern Ireland and Scots living north of the Caledonian canal were excluded). A clustered multi-stage design was employed. First, 128 constituencies were sampled (77 in England, 29 in Scotland and 22 in Wales). Constituencies were sampled using three stratification criteria: (i) electoral marginality in the 2001 general election, (ii) region in England/Scotland and percent Welsh speakers in Wales, and (iii) population density. Within each constituency selected, two wards were randomly chosen, and within each ward household addresses were selected with equal probability from the national postcode address file. For households with multiple occupants, one person (the potential respondent) was selected at random using a modified Kish grid.

The N for the pre-election campaign survey was, 3589, with a response rate of 60.5%. Beginning immediately after the election, all of the pre-election respondents were asked to do a second in-person interview. The resulting pre-post panel N was 2959 (panel retention rate = 82.4%). To provide a representative national post-election sample, the panel was supplemented by a 'top-up' sample (N = 1202) chosen using the methods described above. All of the post-election top-up respondents were interviewed in-person. The unweighted post-election sample N thus was 4161 and, altogether, 4791 respondents participated in one or both of the in-person interviews.

The in-person survey data were weighted using a combination of factors designed to correct for unequal selection probabilities arising from deliberate

oversampling in Scotland and Wales, deliberate oversampling of marginal constituencies, variation in the number of households at selected addresses, and variation in the number of people living in selected households. In addition, a set of post-stratification or 'calibration' weights for age and gender were employed.

Internet Surveys: Similar to the in-person pre-election survey, the first wave of the internet survey was conducted just before the election campaign formally began. Potential internet respondents were selected from YouGov's master panel which included 89,000 people at the time the study was conducted.8 People join the YouGov master panel in one of three ways: (i) by visiting the YouGov website (www.YouGov.com) and registering; (ii) by being recruited by one of several professional third-party recruiters (e.g., Win4Now) employed by YouGov; (iii) through ad-hoc alliances between YouGov and partners such as media outlets interested in conducting specific survey research projects. Respondents in such surveys can be invited to join the YouGov master panel.

Potential respondents for the BES pre-election baseline internet survey were randomly selected from subsections of the master panel defined in terms of demographics (age, gender), media consumption (newspaper readership) and a political criterion (reported vote in the preceding (2001) general election). The total (unweighted) N for the YouGov pre-campaign survey was 7793. During the election campaign 6068 of these respondents participated in a rolling campaign panel survey designed to track the dynamics of public opinion as the campaign unfolded. Immediately after the election, 5910 of the pre-campaign respondents participated in a post-election survey. The response rate for the initial pre-campaign survey was 52.0%, and panel retention rates were 77.9% (campaign survey), and 75.8% (post-election survey).

After the three waves of the internet survey were completed, post-stratification weights for the data were developed using demographic criteria (gender, age within gender, region and social class), as well as newspaper readership and vote in the 2001 general election. Similar to the in-person surveys, information from the 2001 UK census was used to develop the demographic weighting factors for the internet surveys. Data from the National Readership Survey (an annual random probability in-person survey with 34,000 respondents) were used to construct the newspaper readership weighting factor, and the past vote weighting factor was developed based on the results of a large in-house analysis of false-memory effects.

Econometric framework

This paper aims to assess whether differences in political preferences amongst constituencies depend on age[24]. In particular, I want to evaluate whether there exists a significant relationship between the positioning of voters on a political scale and their age. Furthermore, I want to examine the existence of a connection between age and political judgement given by voters on the Government's work and the manner in which it handles political issues, such as economy and taxation. The idea that social groups may have different political preferences about some issues is taken by the Single-mindedness Theory (see Canegrati (2006)) which states that a difference in individuals' preferences generates different distributions and, since some groups are more compact than others around some issues, they are more able to influence the political competition outcome. For instance, let us assume that workers choose their labour supply taking into account both their preferences and marginal tax rates on labour chosen by the government, and that candidates choose tax rates to maximise the probability of winning elections. Then, equilibrium policies are driven by social groups' power which is statistically captured by the distribution function of the electorate. Should this assumption be correct we expect to find variable *age*, used as a regressor, statistically significant in an econometric model where preferences or judgements of voters are used as dependent variables.

The goal of the econometric analysis is then verifying the existence of a difference in distributions of voters with respect to their age.

First, I will verify the existence of this difference by performing a Kernel Density Estimation (see Parzen (1962)) which enables to extrapolate the data to the entire population given some data about a sample. Furthermore, I will exploit the Kolmogorov-Smirnov test to inquire whether the distribution of the old differs from that of the young, under the null hypothesis of equality in distributions.

Secondly, in order to assess whether age shapes political preferences of individuals, I will perform some regressions under different specificiations of the model.

The first specification is:

$$y_i^1 = \alpha + \Sigma_{i=1}^3 x_i + \varepsilon_i \tag{69}$$

where y_i^1 represents the positioning of a voter on the left-right political scale

and x_i are regressors which summarize some basic characteristics of the individual, such as region, age and gender. Nevertheless, since we might not exclude that other variables may influence the positioning on the political scale, a second specification is introduced:

$$y_i^2 = \alpha + \Sigma_{i=1}^{3} x_i + \Sigma_{i=1}^{7} s_i + \varepsilon_i \tag{70}$$

where some new regressors, s_i, are added, which denote social and economical characteristics of the voter, such as level of education, marital and employment status, type of job, size of community where the individual lives, ethnicity and membership in a religious group.

The third specification is:

$$y_i^3 = \alpha + \Sigma_{i=1}^{2} x_i + \Sigma_{i=1}^{3} s_i + \Sigma_{i=1}^{4} a_i + \varepsilon_i \tag{71}$$

I introduced four new regressors, a_i, which represent the level of involvement of the voter in political actions, such as the attempt to persuade other voters to vote for a candidate, the degree of participation in political meetings or protests and other variables such as the level of satisfaction about democracy in Great Britain.

Finally, in a fourth specification:

$$y_i^4 = \alpha + \Sigma_{i=1}^{2} x_i + \Sigma_{i=1}^{3} s_i + \Sigma_{i=1}^{2} a_i + \Sigma_{i=1}^{7} j_i + \varepsilon_i \tag{72}$$

I add seven regressors which represent the judgement of a voter on the political situation in the United Kingdom. There is both a general judgement over the job made by Blair's government and more specific judgements on how the cabinet handled some issues such as crime, asylum seekers, National Health Service, terrorism, economy and taxation.

Regressions were performed using Ordered LOGIT and PROBIT. The choice on these models naturally arose by considering that independent variables are treated as ordinal, since a political scale has a natural ordering (left to right), even though distances between adjacent levels are not quantifiable. In these models an uderlying score has been estimated as a linear function of the regressors and a set of cut points. The probability of observing an outcome equal to o corresponds to the probability that the estimated linear function and an error term lies within an interval delimited by the estimated cut points. For instance, the probability that a responder i finds himself/herself at the fourth

level of the left-right scale is equal to:

$\Pr(level_i = o) = \Pr(h_{o-1} < \gamma_1 x_{1i} + ... + \gamma_h x_{hi} + v_i \leq h_i)$

where v_i is assumed to be distributed according to a LOGIT (PROBIT) distribution

$$\begin{cases} = \frac{1}{1=\exp(-h_o+\sum \gamma_h x_h)} - \frac{1}{1=\exp(-h_{o-1}+\sum \gamma_h x_h)}, & in\ the\ case\ of\ LOGIT \\ = \Phi(h_o - \sum \gamma_h x_h) - \Phi(h_{o-1} - \sum \gamma_h x_h), & in\ the\ case\ of\ PROBIT \end{cases}$$

where $\Phi(\cdot)$ is the standard normal cdf.

Estimation's outcomes consists both in a set of h coefficients and in a set of $O-1$ cut points, with O equal to the number of possible outcomes.

Descriptive Statistics

Table 5 summarizes descriptive statistics. Appendix 1 reports the questions of the survey used for the analysis with the relative answers, expressed in percentage. Questions 1-10 refer to the basic characteristics of the respondent, such as region, age, gender, marital status, socio-economical status, employment status, size of the community, ethnicity and affiliation to a religion. Questions 11-21 refer to political preferences. In particular questions 11-12 refer to the level of political activism of the individual. Question 11 shows that the great majority of respondents have never tried to talk to people in order to persuade them to vote for a particular candidate (55.16 per cent) and that only 5.83 per cent have, whilst other responders answered that rarely (19.58 per cent) or occasionally (18.59 per cent) have. Furthermore question 12 shows that 74.8 per cent of individuals have never tried to directly show their support for a political candidate by attending a meeting, and only 5.38 per cent answered that they did it frequently. According to the joint reading of these two questions, it seems that the percentage of political activists may be quantified at around 5 per cent, whilst the percentage of totally inactive may be quantified between 55 and 75 per cent. Question 13 shows the percentage of respondents who took part in a protest. The percentage of individuals who answered "yes" (11.4) is distinctly lower than those who answered "no" (87,12), again confirming the existence of a political inertia amongst the electorate. Question 14 shows the level of satisfaction for the degree of democracy in the United Kingdom. It emerges that

the percentage of those who answered "very" (5.71) or "fairly" (44.68) satisfied is almost equal to that of those who answered "not very" (29.68) or "not at all" satisfied (17.02). Questions 15-21 refer to the judgement made by respondents on the Government's job. In particular, question 15 asks to express an overall judgement on the most important issues: answers show that the great majority of individuals have a negative opinion about how the Government has operated, 32,68 per cent believe that the Government has made a bad job and 27.42 per cent believe that the Government has made a very bad job. Only 21.44 per cent believe that the job has been good and 6.16 per cent that the job has been very good. Questions 16-21 refer to more specific topics such as crime, asylum seekers, the NHS, terrorism, the economy and taxation. Here, judgements seem to be worse for security issues and slightly better for economic issues. In particular the judgement on how government has handled crime and asylum seekers is particularly negative, whilst it gets better for the management of the NHS and terrorism. As for economic issues, the general judgement on how the Government has managed the economy is firmly positive: only 6.58 per cent expressed a very bad judgement and 14.22 per cent a fairly bad one, whilst 36.35 per cent expressed a fairly good judgment and 14.37 per cent a very good one, even though this judgement gets worse once individuals were asked to express an opinion about the taxation issue; there, 19.27 per cent expressed a very bad opinion and 22.7 per cent a fairly bad one, against 25.53 per cent who expressed a fairly good opinion and 3.78 per cent who expressed a very good opinion. Finally, question 22 asked individuals to place themselves on a eleven-level left-right political scale. The lowest level (0) corresponds to the extreme left position, whilst the highest level (11) corresponds to the extreme right position. It can be easily seen that the majority of respondents are located at the centre-left position, which reflects the political tendency which the British electorate assumed during 2005 general elections.

Variable	Observation	Mean	Std. Dev.	Min	Max
Persuasion attempt	3325	3.265865	.9664927	1	5
Meeting attendance	3325	3.571429	.8697147	1	5
Vote in 2005	3326	1.191221	.3933216	1	2
When decided to vote	2690	2.375465	1.341721	1	5
Contact	3326	1.6819	.4958324	1	3
Take part in protests	3326	1.900782	.3447819	1	3
Work with others	3326	1.806073	.4601135	1	3
Government affects personal finances	3326	2.084787	.9216021	1	5
Age	3326	44.69092	14.88701	19	76
Gender	3326	1.517739	.4997604	1	2
Education	3234	10.99474	5.482896	1	20
Belong trade union	3326	.1767889	.3815473	0	1
Belong business association	3326	.0222489	.1475143	0	1
Belong farmer association	3326	.002706	.0519562	0	1
Belong professional association	3326	.1304871	.3368892	0	1

Table 5: Descriptive statistics

Non-parametric Analysis

Kernel Density Estimation

Kernel Density Estimation intends to give a shape to the distribution of the electorate for chosen variables (left-right political scale, judgement on how the Government handled the economy and taxation). Kernel estimators smooth out the contribution of each observed data point over a local neighbourhood of that data point. Data point x_i contributes to the estimate at point x depending on how apart x_i and x are. The extent of this contribution depends on two factors: the shape of the kernel function chosen and its bandwidth. The estimated density may be written as:

$$\widehat{\beta} = \frac{1}{n}\sum_{i=1}^{n} Ke\left(\frac{x - x_i}{j}\right)$$

where Ke is a kernel function, j the bandwidth and x the point where the density is evaluated. The Epanechnikov

$$Ke\left[z\right] = \begin{cases} \frac{3}{4}\left(1 - \frac{1}{5}z^2\right)/5 & \text{if } |z| < \sqrt{5} \\ 0 & \text{otherwise} \end{cases}$$

is the kernel function I used, since it is the most efficient in minimizing the

mean integrated squared error. Notice that the choice of j will decide how many values are included in estimating the density at each point and in this model is determined as

$$m = \min\left(\sqrt{variance_x}, \frac{\text{interquartile range}_x}{1.349}\right)$$

$$j = \frac{0.9m}{n^{\frac{1}{5}}}$$

where x is the variable for which the kernel is estimated and n the number of observations.

In order to perform a Kernel density estimation the presence of a continuous random variable is required. Our data are taken from a survey based on scales, which are discrete by definition; as a consequence Kernel density estimation cannot be made, unless we transform the data from discrete to continuous. To solve this problem, I then perform the analysis on predicted (*ex-post*) values obtained by regressing age upon political variables. Since predicted values are the probability which a single voter has to be located on a point of the scale we have obtained a continuous random variable which may be tested.

Kolmogorov-Smirnov test

The Kolmogorov-Smirnov tests the equality of the comulative density function of two distinct samples. In our case we have two sub-samples; I denote by X_o the sub-sample of the old voters and by X_y the sub-sample of the young voters. The size of the first sub-sample is equal to o and that of the second sub-sample is equal to y. Furthermore, I call $F(X_o)$ the comulative density function of the old and $F(X_y)$ the comulative density function of the young. The goal of the test is verify that:

$$H_0 : F(X_o) = F(X_y) \quad vs \quad H_1 : F(X_o) \neq F(X_y)$$

That is, the null hypothesis H_0 assume the equality in distributions. In order to pass the test, the statistic

$$\Phi_{oy} = \left(\frac{oy}{o+y}\right)^{\frac{1}{2}} \sup_x |F_o(x) - F_y(x)|$$

must not depend on F (*distribution free* property) and the comulative density

function of the true underlying distribution of the data must converge to the comulative density function of the Kolmogorov-Smirnov distribution

$$H(t) = 1 - 2\sum_{i=1}^{\infty} (-1)^{i-1} \exp\left(-2i^2 t\right)$$

where t denotes the upper limit of the interval.

Performing the Kolmogorov-Smirnov test in our case may cause problems with the standard errors, due to the transformation of the data from discrete to continuous. As a consequence, the test is made on predicted values at the second stage of the analysis. In principle, a correction in the standard errors should be made, unless the test provides very low p-values which make this correction useless.

Main findings

Positioning on the Left-Right political scale

Table 6 reports the results of regressions. First of all, notice that results do not differ with respect to the two methods: this is not surprising if we consider that the LOGIT distribution differs from the PROBIT only because of its fatter tails. Due to this similarity, I will only comment the results obtained with LOGIT estimations, but the same hold for PROBIT.

- The first specification of the model says that variable **region** is not statistically significant, whilst variables **age** and **gender** are significant at one per cent and ten per cent of the confidence interval respectively. The insignificance of the variable region is not surprising, since we do not expect that a region is statistically oriented to the left rather than to the right. Otherwise, age is strongly significant, meaning that for an increase of one year in age, the level on the left-right scale increases by 0.012 while the other variables are held constant. Since higher values in the political scale means one is more right-oriented, the sign of the log-odds indicates that the old are more conservative than the young. Also the variable gender is statistically significant, this time with a negative coefficient equal to -0.12. This means that being a female decreases the expected change in the level of the political scale which in an ultimate analysis indicates that women are more labourist than conservative.

- The second specification introduces other socio-economic variables, but we can see that only **education, size of community** and **religion membership** are statistically significant. Interpreting the education coefficient is not an easy task since elements of the variable do not follow a particular ordering; thus we cannot say whether an increase in the level of education increases the probability to be located on a higher level of the political scale. Otherwise, size of community indicates that living in a bigger community decreases the expectation to be conservative by 0.055. Finally not being a member of a religious group entails a decrease in the dependent variable of 0.281, meaning that religious responders are more conservative.

- The third specification adds some proxies which measure the political activism. With respect to the previous specification we may see that the level of education is no longer significant, whilst two new variables, **level of satisfaction about democracy in Britain** and **taking part in protests** are. In particular most satisfied people tend to be more conservative (the expected increase on the political scale is 0.366) and so are people who take part in protests.

- Finally, the fourth specification adds opinions about the Government's job. It is interesting to notice that the overall judgement is not significant at all, whilst more specific assessments (apart from the management of asylum seekers) are very significant. As we expected a worse opinion about the government's job on a single issue increases the expectation to find in higher levels on the left-right scale, or in other words to be more conservative. Notice that this does not hold if we refers to the opinion about terrorism where the higher the level of dissatisfaction, the higher the expectations to be labourist (-0.249).

Dependent variable	LOGIT	PROBIT	LOGIT	PROBIT	LOGIT	PROBIT	LOGIT	PROBIT
left-right scale (Left-Right)	(1)	(1)	(2)	(2)	(3)	(3)	(4)	(4)
Region	.001	.001	-.002	.000				
	(0.868)	*(0.798)*	*(0.857)*	*(0.963)*				
Age	.012***	.006***	.005*	.003*	.005*	.003**	.005**	.0034**
	(0.000)	*(0.000)*	*(0.065)*	*(0.061)*	*(0.067)*	*(0.048)*	*(0.050)*	*(0.023)*
Gender	-.12*	-.062	-.135*	-.070*	-.143**	-.069*	-.173**	-.1042**
	(0.085)	*(0.124)*	*(0.063)*	*(0.093)*	*(0.045)*	*(0.093)*	*(0.020)*	*(0.015)*
Education			-.018**	-.009**	-.009	-.004	.003	.001
			(0.015)	*(0.032)*	*(0.165)*	*(0.208)*	*(0.641)*	*(0.803)*
Marital status			-.024	-.015				
			(0.202)	*(0.163)*				
Employment status			.002	.000				
			(0.875)	*(0.948)*				
Social-economic			-.022	-.010				
conditions			*(0.174)*	*(0.260)*				
Size of community			-.055***	-.031***	-.055***	-.03***	-.033**	-.02**
			(0.000)	*(0.001)*	*(0.000)*	*(0.001)*	*(0.029)*	*(0.026)*
Ethnicity			-.019	-.009				
			(0.269)	*(0.320)*				
Member of religion			-.281***	-.170***	-.305***	-.181***	-.239***	-.147***
			(0.000)	*(0.000)*	*(0.000)*	*(0.000)*	*(0.000)*	*(0.000)*
Persuasion attempt					.039	.012		
					(0.393)	*(0.639)*		
Meeting attendance					-.059	-.032		
					(0.247)	*(0.246)*		
Satisfaction about Democracy					.366***	.192***	-.118**	-.057*
					(0.000)	*(0.000)*	*(0.030)*	*(0.070)*
Take part to protest					.869***	.465***	.626***	.353***
					(0.000)	*(0.000)*	*(0.000)*	*(0.000)*
Judgement on Government job							-.005	-.0024
							(0.873)	*(0.901)*
Judgement how Labour							.207***	.099***
Government handled crime							*(0.000)*	*(0.001)*
Judgement how Labour							.329***	.19***
Government handled asylum							*(0.000)*	*(0.000)*
Judgement how Labour							.083*	.053**
Government handled NHS							*(0.063)*	*(0.036)*
Judgement how Labour							-.249***	-.135***
Government handled terrorism							*(0.000)*	*(0.000)*
Judgement how Labour							.33***	.171***
Government handled economy							*(.000)*	*(0.000)*
Judgement how Labour							.191***	.094***
Government handled taxation							*(.000)*	*(0.000)*
Cut point 1	-3.47	-1.80	-5.02	-2.68	-2.39	-1.30	-.98	-.46
Cut point 2	-2.84	-1.54	-4.44	-2.43	-1.78	-1.04	-.36	-.20
Cut point 3	-1.79	-1.03	-3.32	-1.90	-.66	-.50	.78	.35
Cut point 4	-.85	-.52	-2.37	-1.38	.30	.02	1.83	.92
Cut point 5	-.18	-.12	-1.68	-.96	1.01	.44	2.64	1.39
Cut point 6	1.05	.64	-.43	-.19	2.32	1.24	4.16	2.28
Cut point 7	1.59	.97	.11	.13	2.88	1.58	4.79	2.65
Cut point 8	2.37	1.40	.89	.56	3.67	2.02	5.65	3.13
Cut point 9	3.41	1.91	1.91	1.07	4.72	2.54	6.75	3.69
Cut point 10	4.19	2.26	2.73	1.43	5.53	2.90	7.58	4.06
Number of observations	2557	2557	2432	2432	2479	2479	2480	2480
Pseudo R2	0.0027	0.0026	0.0074	0.0195	0.0180	0.0180	0.0644	0.0586

TABLE 6: Positioning on the left-right scale. *Regressions with robust standard errors (p-values in parenthesis); (***) significant at 1% of the C.I.; (**) significant at 5% of the C.I.; (*) significant at 10% of the C.I.*

Judgement on Government's policies

Tables 7-8 show results about judgements made by respondents on the way the Government managed the economy and taxation.

- *economy*: the judgement on how Blair's Government handled the economy statistically depends on **gender**, **being a member of a trade union and being a member of a farmer association** (all statistically significant at the 1 per cent of the confidence interval) and on the **level of education** (5 per cent of the confidence interval).

- *taxation*: the judgement on how Blair's Government handled taxation statistically depends on **age**, **gender, being a member of a trade union** and **being member of a business association** (all statistically significant at the 1 per cent of the confidence interval) and on the **size of community** (10 per cent of the confidence interval).

Of course these are quite remarkable results. First, notice how the judgement which voters give to how government handled taxation depends upon a more complex set of variables, suggesting that taxation is a more specific and targeted policy than the economy in general. Secondly, age is strongly statistically significant in the judgement on the taxation policy; the coefficient has a positive sign, meaning that an increase in age generates more negative judgement on policies.

Dependent variable government handles economy	
Age	*-.000*
	(0.742)
Gender	*.328***
	(0.000)
Education	*-.013***
	(0.036)
Marital status	*-.008*
	(0.622)
Employment status	*.005*
	(0.697)
Religion	*.029*
	(0.591)
Belong trade union	*-.330****
	(0.000)
Belong business association	*.165*
	(0.500)
Belong farmer association	*2.535****
	(0.000)
Belong professional union	*-.044*
	(0.684)
Size of community	*-.014*
	(0.310)
Number of observations	*3067*
Pseudo R2	*0.0072*

TABLE 7: Judgement on how the Government handled the economy. *Ordered Logit regressions with robust standard errors (p-values in parenthesis); (***) significant at 1% of the C.I.; (**) significant at 5% of the C.I.; (*) significant at 10% of the C.I.*

Dependent variable government handles taxation	
Age	*.008***
	(0.002)
Gender	*-.306****
	(0.000)
Education	*-.001*
	(0.823)
Marital status	*.016*
	(0.326)
Employment status	*-.005*
	(0.714)
Religion	*-.045*
	(0.385)
Belong trade union	*-.448****
	(0.000)
Belong business association	*.401****
	(0.09)
Belong farmer association	*.46*
	(0.577)
Belong professional union	*.067*
	(0.527)
Size of community	*-.023**
	(0.078)
Number of observations	*3064*
Pseudo R2	*0.0079*

Table 8: Judgement on how the Government handled taxation. *Ordered Logit regressions with robust standard errors (p-values in parenthesis); (***) significant at 1% of the C.I.; (**) significant at 5% of the C.I.; (*) significant at 10% of the C.I.*

Results of non parametric analysis

Appendix 2 shows results of the non parametric analysis. Graphs show Kernel Density estimations performed for the old and the young for every predicted level of the left-right scale and for every question, whilst tables 9-11 show results of the Kolmogorov-Smirnov test. As for the Kernel Density estimation it is easy to see by the meaning of the graphs (Figure 7) how the two distribution functions are separated, meaning that there is a clear difference in distributions between the two cohorts. Only in a single case this does not happen, Figure 7.a, which refers to the probability to be located on the fifth level of the left-right scale; here the two distribution functions almost overlap, meaning that the difference in distributions is minimal. However, since this is an isolated case, we do not

have elements to provide a plausible explanation about why this happens at this level of the scale.

Analysing results obtained performing the Kolmogorov-Smirnov test, it is easy to see that the hypothesis of equality of distribution functions is strongly rejected at 1 per cent of the significance level, again allowing us to conclude that the old and the young have different distributions. Notice that in the Kolmogorov-Smirnov test, p-values are always perfectly equal to zero, which is absolutely a strong result and allow us to skip the correction of the standard errors.

Corrected K-S	D	P-value	Corrected
p1	1.0000	0.000	0.000
p2	1.0000	0.000	0.000
p3	1.0000	0.000	0.000
p4	0.4531	0.000	0.000
p5	1.0000	0.000	0.000
p6	1.0000	0.000	0.000
p7	1.0000	0.000	0.000
p8	1.0000	0.000	0.000
p9	1.0000	0.000	0.000
p10	1.0000	0.000	0.000
p11	1.0000	0.000	0.000

Table 9: Two-sample Kolmogorov-Smirnov test for equality of distribution functions: *Positioning on the left-right scale*

Corrected K-S	D	P-value	Corrected
p1	1.0000	0.000	0.000
p2	1.0000	0.000	0.000
p3	1.0000	0.000	0.000
p4	0.4531	0.000	0.000
p5	1.0000	0.000	0.000
p6	1.0000	0.000	0.000

Table 10: Two-sample Kolmogorov-Smirnov test for equality of distribution functions: *How government handled the economy*

Corrected K-S	D	P-value	Corrected
p1	1.0000	0.000	0.000
p2	1.0000	0.000	0.000
p3	1.0000	0.000	0.000
p4	0.4531	0.000	0.000
p5	1.0000	0.000	0.000
p6	1.0000	0.000	0.000

Table 11: Two-sample Kolmogorov-Smirnov test for equality of distribution functions: *How government handled taxation*

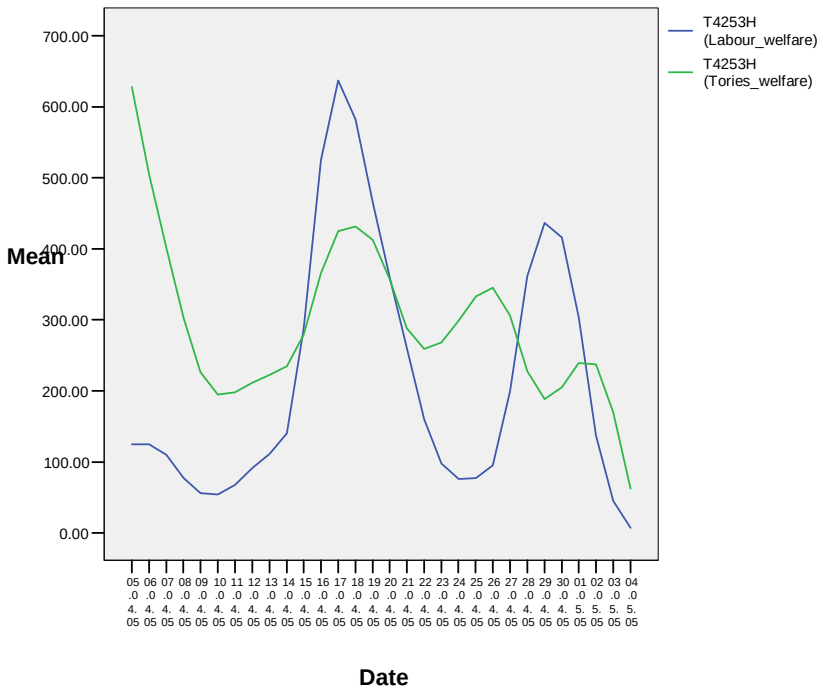
Political competition and campaigning

As I said in the introductory chapter, political choices can be analysed either as the product of a personal calculus or as a sum of sociological factors. The model I presented spouses the former approach. Nevertheless, one may argue that also the latter must be explored in order to have more robust results. From this perspective it would be useful to analyse the manifestos of political parties, press releases and the strategies used during the electoral campaign because it is easy to image how these factors might have been influencing voters' opinion. Since our empirical evidence demonstrated how the old are more conservative than the young, one may wonder if the Conservative party was more focused on issues related to the old's needs (i.e. social welfare, pensions, etc.). If so, this evidence could represent a possible cause to explain this age bias. An interesting work by Brandemburg (2005) collected all press releases published during the campaign period from the websites of the three main parties (Labours, Tories and Liberal Democrats)[25] and discovered that "the Labour government was most single-minded, devoting over a third of their output to economic questions, while the Conservatives divided their attention almost equally between economy, welfare and crime". Table 12 shows how the Labour party devoted 27.1 per cent of its output to social welfare whilst the Tories only the 22.4 per cent and the Liberal Democrats the 29.9 per cent.

Labour		Conservatives		Liberal Democrats	
Economy	33.6%	Economy	25.6%	Social Welfare	29.9%
Social Welfare	27.1%	Social Welfare	22.4%	Economy	22.1%
Education	15.8%	Crime/Justice	18.6%	Education	11.3%
Crime/Justice	8.2%	Education	12.9%	Iraq	10.7%
Immigration	4.4%	Immigration	8.0%	Crime/Justice	7.5%
Arts/Culture	2.9%	Political System	3.6%	Environment	5.8%

Table 12: Main Policy dimensions during the campaign

Furthermore, time series data found out (Graph 1) the existence of a significant correlation between Labour and Tories on social welfare (0.37)



Graph 1: Time-series data, Labour-Tories: social welfare

This evidence clarifies that the idea according to which the old voted the Conservative party because it devoted more emphasis to social welfare during the electoral campaign is wrong. Actually these data show the opposite situation. One may also argue that the Conservative party was more covered by

the media, but the study showed how "the 2005 campaign was notably in the overrepresentation that the Labour party received". In fact the Labour party obtained the 53.1 per cent of the total party coverage in the national press, whilst the Conservative party only the 27.6 per cent[26]. Thus, also this argument cannot be brough as evidence against the age bias.

Conclusions

In this paper I analysed the British Election Study 2005 in order to assess whether political preferences for candidates and judgments made by voters on Government's job depend on age. To achieve this goal, I run Ordered LOGIT and PROBIT regressions using different specifications of the model. Furthermore, I performed non-parametric analysis, using the Kernel Density estimation and the Kolmogorov-Smirnov test. Results are robust in showing that variable age is strongly significant, demonstrating that in the British electorate the old are more conservative than the young. In particular, the old seem to be more conservative than the young and particularly strict in their judgments on the Government's policies. Even though statistical results are particularly robust in showing this correlation it would be interesting to evaluate whether this phenomenon takes place also in other countries. Furthermore, an interesting research agenda can be set, in order to discover which individual characteristics are statistically significant in shaping electoral preferences. I hope these hints may find a room in future works.

Appendix 1

List of questions with relative answers

1. REGION

In which of the following do you live?

East Anglia	7.398%
East Midlands	7.489%
Greater London	10.59%
North	5.113%
North West	10.92%
Scotland	9.383%
South East	16.3%
South West	9.835%
Wales	5.143%
West Midlands	7.218%
Yorkshire & Humberside	10.62%

2. AGE

What is your age (in years)?

3. GENDER

What is your gender?

Male	48.23%
Female	51.77

4. EDUCATION

What is your highest level of qualification?

no formal qualifications	9.802%
youth training certificate/skillseekers	0.371%
recognized trade apprenticeship	2.041%
clerical and commercial	2.566%
city and guild certificate	6.648%
city and guild certificate - advanced	2.721%
onc	1.33%
cse grades 2-5	1.701%
cse grade 1, gce o level, gcse, school	14.81%
scottish ordinary/ lower certificate	0.865%
gce a level or higher certificate	13.76%
scottish higher certificate	1.763%
nursing qualification (eg sen, srn, scm, rgn)	1.608%
teaching qualification (not degree)	2.257%
university diploma	3.741%
university or cnaa first degree (eg ba)	16.2%
university or cnaa higher degree (eg m.phil, ph.d.)	5.226%
other technical, professional or higher	10.79%
don't know	1.2%
refused	0.556%

5. MARITAL STATUS

What is your marital status?

married	49.62%
living as married	14.26%
separated (after being married)	2.392%
divorced	8.235%
widowed	2.785%
never married	22.71%

6. EMPLOYMENT STATUS

What is your employment status?

working full time (30 or more hours per week)	47.6%
working part time (8 - 29 hours per week)	13.09%
working part time (less than 8 hours a week)	1.451%
full time student	5.11%
retired	17.87%
unemployed	2.419%
not working	8.618%
other	3.84%

7. SOCIAL AND ECONOMICAL CONDITIONS

What is your type of work?

professional or higher technical work	21.53%
manager or senior administrator	17.67%
clerical	17.55%
sales or services	10.76%
foreman or supervisor of other workers	2.894%
skilled manual work	6.301%
semi-skilled or unskilled manual work	9.466%
other	11.97%
have never worked	1.896%

8. SIZE OF COMMUNITY

What is the size of the community you live in?

Live on a farm	0.751%
Village under 500 people	4.059%
500 to 1,000 people	5.292%
1,001 to 10,000 people	17.14%
10,000 to 50,000 people	17.23%
50,001 to 100,000 people	11.76%
100,001 to 500,000 people	13.71%
500,001 to 1,000,000 people	5.532%
Over 1,000,000 people	9.02%
Don't know	15.51%

9. ETHNICITY

What is your Ethnicity?

white british	92.067%
any other white background	2.851%
white and black caribbean	0.558%
white and black african	0.124%
white and asian	0.403%
any other mixed background	0.496%
indian	0.620%
pakistani	0.341%
bangladeshi	0.062%
any other asian background	0.279%
black caribbean	0.434%
black african	0.155%
any other black background	0.031%
chinese	0.403%
other ethnic group	1.023%
refused	0.155%

10. MEMBER OF RELIGION

Are you a member of any religion?

yes	48.42%
no	48.08%
not sure/don't know	2.702%
refused	0.798%

11. PERSUASION ATTEMPT

Talked to other people to persuade them to vote for a particular party of candidate?

Frequently	5.835%
Occasionally	18.59%
Rarely	19.58%
Never	55.16%
Don't know	0.842%

12. MEETING ATTENDANCE

Showed your support for a particular party or candidate by, for example, attending a meeting, putting up campaign signs, or in some other way?

Frequently	5.383%
Occasionally	8.571%
Rarely	10.41%
Never	74.8%
Don't know	0.842%

13. TAKE PART IN A PROTEST

Taken part in a protest, march or demonstration?

Yes	11.4%
No	87.13%
Don't know	1.473%

14. SATISFACTION ABOUT DEMOCRACY

On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in Great Britain?

Very satisfied	5.713%
Fairly satisfied	44.68%
Not very satisfied	29.68%
Not at all satisfied	17.02%
Don't know	2.916%

15. JUDGMENT ON GOVERNMENT JOB

How do you judge the job done by present Government about the most important issue over the last 4 years?

there was no one most important issue	6.434%
very good job	6.164%
good job	21.44%
bad job	32.68%
very bad job	27.42%
don't know	5.863%

16. JUDGMENT HOW LABOUR GOVERNMENT HANDLED CRIME

How well do you think the present Government has handled crime in general?

Very well	1.443%
Fairly well	20.05%
Neither well nor badly	28.56%
Fairly badly	24.71%
Very badly	22.7%
Don't know	2.526%

17. JUDGMENT HOW LABOUR GOVERNMENT HANDLED ASYLUM SEEKERS

How well do you think the present Government has handled asylum seekers in general?

Very well	1.323%
Fairly well	11.4%
Neither well nor badly	16.69%
Fairly badly	25.14%
Very badly	42.72%
Don't know	2.736%

18. JUDGMENT HOW LABOUR GOVERNMENT HANDLED THE NHS

How well do you think the present Government has handled NHS in general?

Very well	4.991%
Fairly well	26.43%
Neither well nor badly	20.54%
Fairly badly	27.42%
Very badly	18.49%
Don't know	2.135

19. JUDGMENT HOW LABOUR GOVERNMENT HANDLED TERRORISM

How well do you think the present Government has handled terrorism in general?

Very well	7.907%
Fairly well	33.13%
Neither well nor badly	24.38%
Fairly badly	15.63%
Very badly	14.85%
Don't know	4.089%

20. JUDGMENT HOW LABOUR GOVERNMENT HANDLED THE ECONOMY

How well do you think the present Government has handled the economy in general?

Very well	14.37%
Fairly well	36.35%
Neither well nor badly	24.35%
Fairly badly	14.22%
Very badly	6.584%
Don't know	4.119%

21. JUDGMENT HOW LABOUR GOVERNMENT HANDLED TAXATION

How well do you think the present Government has handled taxation in general?

Very well	3.788%
Fairly well	25.53%
Neither well nor badly	24.5%
Fairly badly	22.7%
Very badly	19.27%
Don't know	4.209%

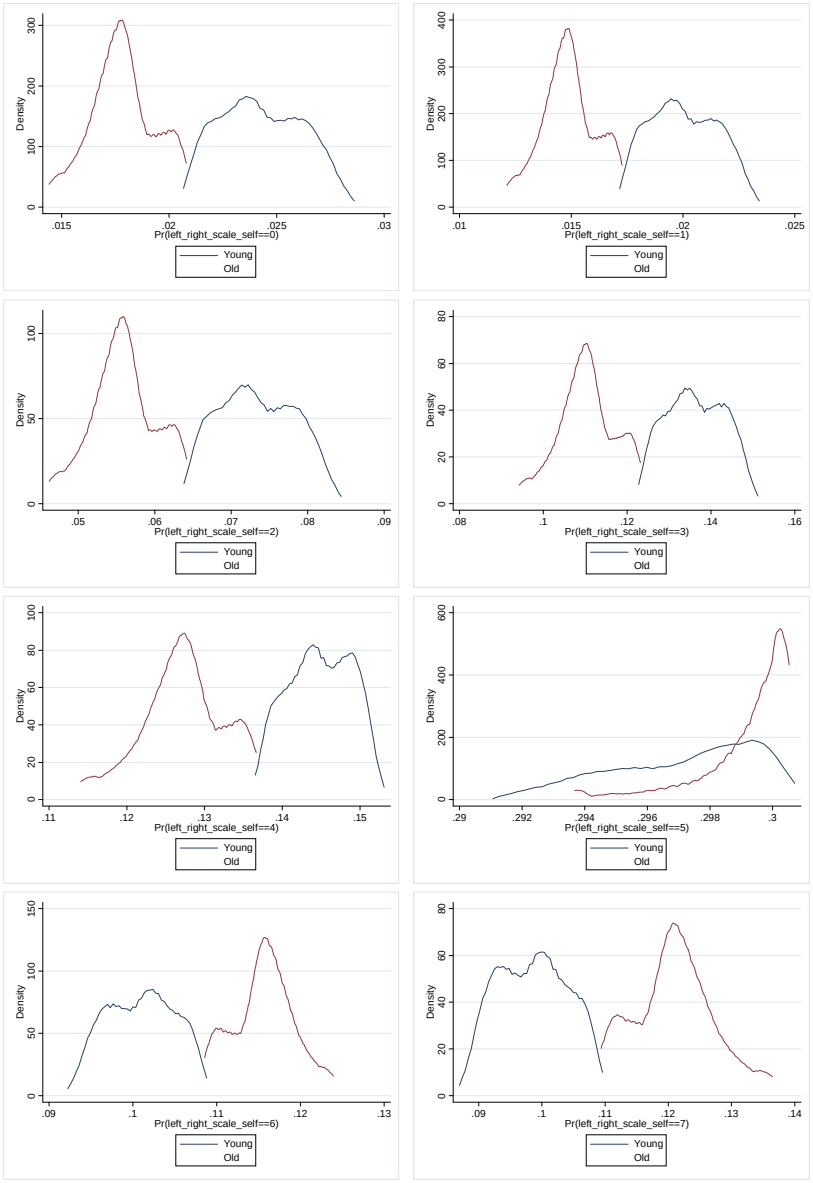
22. LEFT-RIGHT SCALE

Thinking to the 'left-right' scale. In politics people sometimes talk of left and right. Where would you place yourself on a scale from 0 to 10 where 0 means the 'left', and 10 means the 'right'?

0 – left	2.072%
1	1.720%
2	6.372%
3	12.197%
4	13.526%
5	29.867%
6	10.907%
7	11.063%
8	7.506%
9	2.541%
10 - right	2.228%

Appendix 2

Kernel-Density estimation



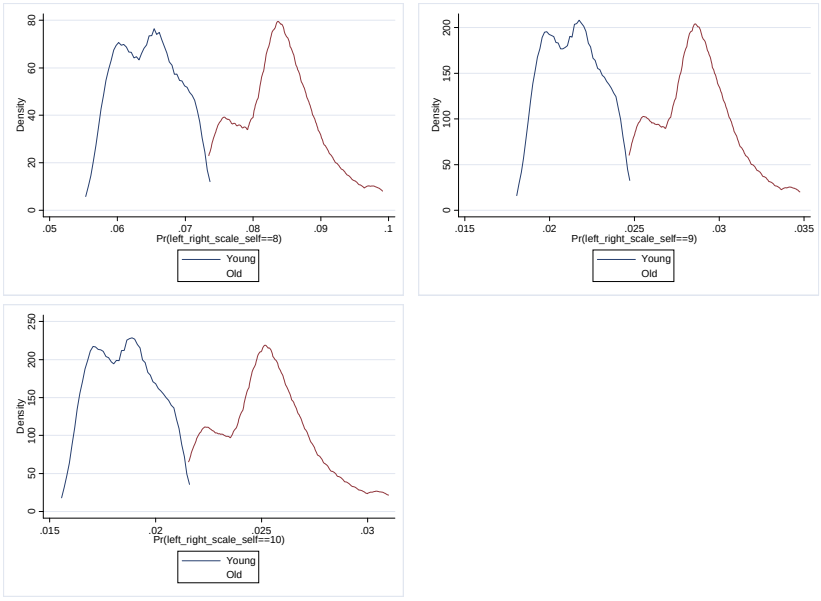


Figure 7.a**:** Positioning on the left-right scale

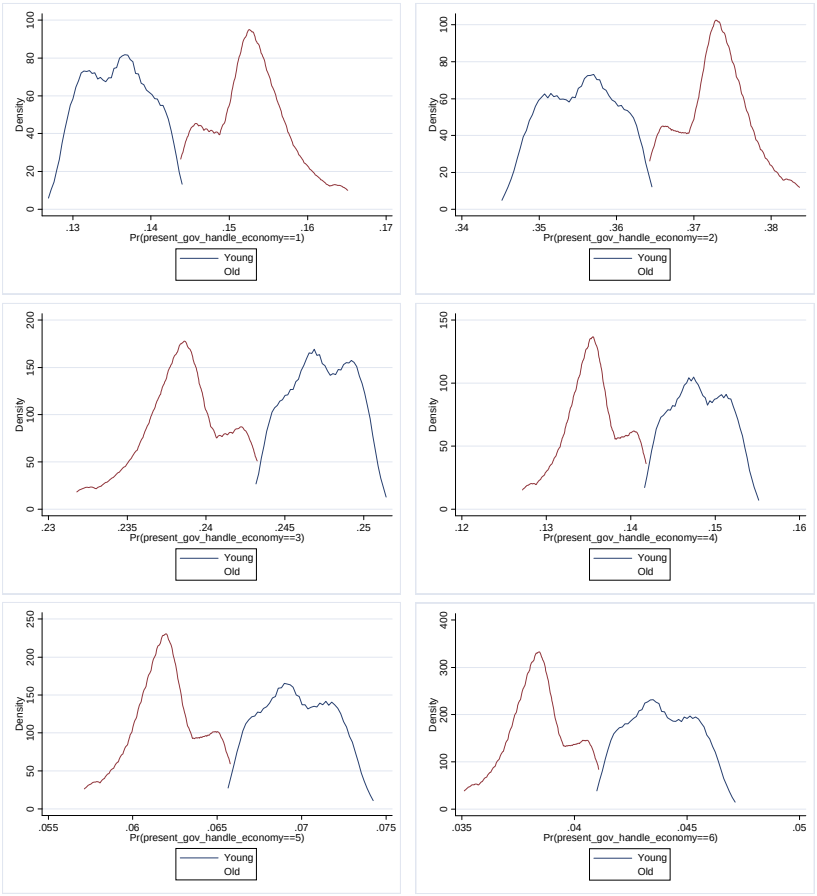


Figure 7.b: How government handled the economy

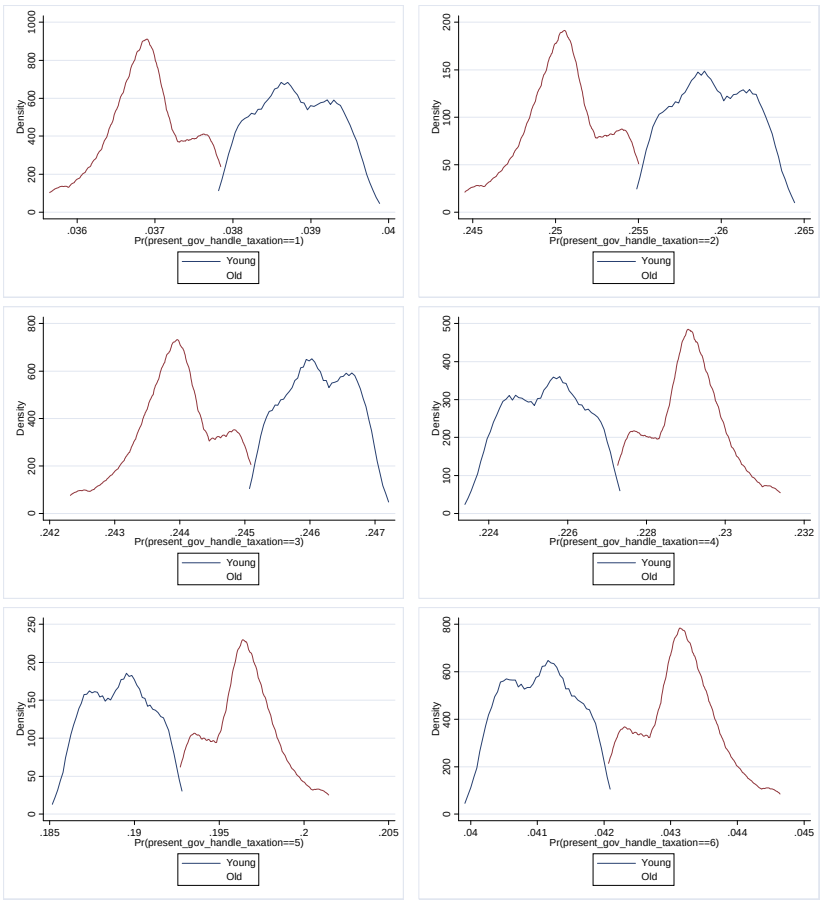


Figure 7.c: How government handled taxation