MPs for Sale? Estimating Returns to Office in Post-War British Politics

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While the role of money in policymaking is a central question in political economy research, surprisingly little attention has been given to the rents politicians actually derive from politics. We use both matching and a regression discontinuity design to analyze an original dataset on the estates of recently deceased British politicians. We find that serving in Parliament roughly doubled the wealth at death of Conservative MPs but had no discernible effect on the wealth of Labour MPs. We argue that Conservative MPs profited from office in a lax regulatory environment by using their political positions to obtain outside work as directors, consultants, and lobbyists, both while in office and after retirement. Our results are consistent with anecdotal evidence on MPs' outside financial dealings but suggest that the magnitude of Conservatives' financial gains from office was larger than has been appreciated.

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"We are not supposed to be an assembly of gentlemen who have no interests of any kind and no association of any kind. That is ridiculous. That may apply in Heaven, but not, happily, here."

Winston Churchill, characterizing the House of Commons in 1947

I. Introduction

The role of money in politics is a central issue in democracies. To most observers, the power of money to elect candidates, shape legislation, and gain access to valuable government information violates the democratic principle of equal representation. Democratic governments therefore attempt to restrict what money can accomplish by criminalizing some types of payments to politicians and civil servants (i.e. bribes), restricting the extent of others (e.g. campaign contributions), and requiring unusually detailed financial disclosure from both individuals and organizations involved in politics.

Given the importance of money in politics it is surprising how little attention has been given to the financial returns politicians actually derive from politics. Money is certainly not the only attraction of politics, but the financial benefits available to politicians (official salary, outside income available while in office, and employment opportunities after they step down) are an important factor that influences both who enters politics (Schlesinger 1966, Rohde 1979, Fiorina 1994, Osborne & Slivinski 1996, Besley & Coate 1997, Messner & Polborn 2004, Caselli & Morelli 2004, Besley 2005, Mattozzi et al. 2007) and when politicians choose to leave office (Groseclose & Krehbiel 1994, Hall & van Houweling 1995, Diermeier et al. 2005). In addition, sitting politicians may make policy decisions in part to attract personal financial benefits. High-profile cases of political corruption around the world confirm that special interests are often willing to offer, and some politicians are willing to accept, bribes in return for political favors (Johnson 1986, Doig 1984, Tanzi 1998, Dal Bó et al. 2006, Gorodnichenko & Sabrianova 2007). While candidate recruitment and influence peddling are central to political economy research, surprisingly few studies have used data on the finances of politicians to shed light on them. (Diermeier et al. (2005), Querubin & Snyder (2008), and Gagliarducci et al. (2008) are important exceptions.)

In this paper we examine the wealth of British politicians in order to assess the extent to which Members of Parliament (MPs) appear to have personally profited from office. Our approach is to compare the wealth at death (measured by probate values) of former MPs with that of parliamentary candidates who were narrowly defeated and thus never served in Parliament. In very close elections the winner is chosen almost at random, such that narrowly unsuccessful candidates are quite similar to narrow winners in measured characteristics such as age, education, and occupation, as well as in harder-to-measure characteristics like inherited wealth, well-connectedness, and charisma. The lives of narrowly defeated candidates thus illuminate the "road not taken" by MPs – the experiences they passed up by entering politics. A careful comparison of the post-election lives of MPs and narrow losers can therefore provide a valid estimate of the effects (financial and otherwise) of serving in Parliament.

To carry out this comparison, we created an original dataset consisting of the names, backgrounds, and electoral fortunes of every politician who stood for the House of Commons between 1950 and 1970, and we collected the probate values for a subset of relatively competitive candidates (both successful and unsuccessful) who have since died. Using both non-parametric matching methods and a regression discontinuity design to account for remaining differences between winners and losers, we find that serving in Parliament in fact had a large financial benefit for members of the Conservative party but not for Labour MPs. We estimate that Conservative MPs roughly doubled their wealth by serving in Parliament; the median Conservative MP bequeathed around 530,000 GBP (in 2007 prices) but would have left around 245,000 GBP if he had not been elected. (For comparison, in the general population of England the median male over 65 in 2002 had around 120,000 GBP in wealth.)

While ours is the first study to look in such depth at the finances of British politicians, our results are consistent with existing knowledge about money in Parliament. The House of Commons offers its members relatively modest pay but allows them to engage in almost any sort of outside financial arrangement short of outright bribery. It is not unusual (let

alone illegal) for an MP to earn much more than his parliamentary salary by working as a (non-executive) board director or "parliamentary consultant" to private firms (Jordan 1998, Rush et al. 2001, Norton 2003). Consistent with our findings, these lucrative outside arrangements are known to be much more common among Conservative MPs than among Labourites (Doig 1984, Hollingsworth 1991). The British public has generally taken a dim view of MPs' financial arrangements, with 65% of respondents agreeing that "most MPs make a lot of money by using public office improperly" in a 1994 Gallup poll (Norton 2003, pg. 367). Three years later, public fatigue with perceived conflict of interest and financial "sleaze" among Conservative MPs contributed to the ascendancy of Tony Blair's Labour Party after eighteen years of Conservative rule. It should be well noted that our data do not permit us to say whether the financial gains enjoyed by Conservative MPs compromised their independence or were otherwise improper. Our findings are however consistent with the perception that Conservative politicians disproportionately profited from their political positions.

While our empirical analysis focuses on the private financial consequences of being elected to Parliament, our results have implications well beyond the politicians involved. We believe that our finding of large financial rewards from office suggests the need for a re-evaluation of the reach of lobbying at Westminster, which has been downplayed in much of the British politics literature (King 1984). In addition, the same approach can certainly be applied to other legislatures and in other time periods, making possible the comparison of financial returns to office in situations with different degrees of legislative power, legislator independence, and ethics regulation (e.g., Querubin & Snyder (2008)).

A distinction should be drawn between the approach we employ here and that of Diermeier et al. (2005), who estimate the value of winning a Congressional seat using a structural model of legislators' career decisions. Diermeier et al. (2005) used wage surveys to estimate the salaries earned by former legislators in their first jobs after leaving office; the extent of the pay raise awaiting them in the private sector, combined with legislators' revealed decisions, allowed Diermeier et al. (2005) to impute a non-pecuniary value that members of

Congress ascribe to holding office. While their approach is useful for analyzing the career decisions of sitting legislators, by the authors' own admission their analysis is silent on the value of entering office in the first place, which is our focus and an important consideration in the literature on legislative careers. The case we examine also makes clear that the innovative approach of Diermeier et al. (2005) may be difficult to apply in other settings: when legislators have significant, hard-to-measure outside income (as is the case in the UK and many other legislatures (Gagliarducci et al. 2008)), estimates of the financial rewards of office - and therefore many other parameters in their model - will likely be biased. We believe that our estimates of the effect of office on wealth are highly credible, given that we rely on few modeling assumptions and more complete financial data from individual legislators.

We present our evidence and argument as follows. In the next section, we introduce our data on the wealth of British politicians. In Section 3 we use this data to estimate the effect of serving in Parliament on wealth. In Section 4 we consider possible channels through which MPs likely increased their wealth, focusing on opportunities for earning outside income through consultancies and directorships.

II. The Wealth of Candidates to the House of Commons

A. Data and Estimation Sample

The crucial question facing any attempt to estimate the financial rewards of political office is, "To whom should legislators be compared?" The difficulty of finding a valid control group is vexing for any observational study, whether the treatment under consideration be job training, education, or, as here, political office. Our approach is to compare MPs with unsuccessful candidates, many of whom were very similar to MPs in important ways (including age, education, occupation, ability, and inherited wealth) but, through no particular fault of their own, never attained office.

One of the challenges in comparing legislators with unsuccessful candidates is that history is generally not kind to the losers. While there are extensive datasets documenting the characteristics and career trajectories of legislators, very few researchers have collected

detailed data about the people those legislators defeated to obtain office. Fortunately, until recently *The Times Guide to the House of Commons*, a standard reference in British politics, published short biographies of all candidates running for the House of Commons, along with complete election returns, for every general election.[1] Using this rich resource, we created a database of every candidate who ran for the House of Commons between 1950 and 1970 (some 5,729 individuals), a period of close two-party competition between the Conservative and Labour parties.[2] For each candidate, we recorded year (and often month) of birth, a detailed set of biographical characteristics, and the complete record of the candidate's campaigns during this period.

Using the year and month of birth provided in each candidate's bio, we first searched a public database[3] for the date of death of 2,904 relatively competitive candidates. At this stage we defined "competitive candidates" as those who, not having previously won an election, either won or lost by fewer than 10,000 votes in a general election between 1950 and 1970. This restriction was intended to exclude incumbents, unbeatable candidates, and non-contenders for whom the implicit counterfactual is not well-defined. We found near-certain matches for 665 candidates; we were unable to find a record in cases where the candidate had not yet died, died before 1984 (the start of the death record database), or produced so many matching death records (because of a common name) that we were not able to identify the right one with sufficient certainty.[4]

[1] A sample entry from the *Guide*'s 1966 edition is shown in Figure 1.

[2] We chose the time period to maximize the number of candidates for whom we could find probate values. *The Times Guide to the House of Commons* started providing candidates' ages (or years of birth), which were necessary for finding death records, in its 1950 edition, which prevents us from going back further than that. We stopped collecting data after the 1970 election because candidates by then were young enough that a relatively small proportion would have died by now.

[3] `www.thegenealogist.co.uk`

[4] To ensure that the rate of false-positives was the same for winners and losers, we did not use public information on the dates of death of MPs in collecting these death records. We created a sample of public figures (scientists, authors, athletes, etc.) whose death dates are publicly available from the *Oxford Dictionary of National Biography* and other sources and whose years of birth match the distribution in our sample of parliamentary candidates. We then trained our death record collection algorithm (a set of rules for dealing with ambiguous name matches) to maximize the proportion of accurately identified death records in this training set. Cross-validation indicated that we could achieve a Type I error rate of around 5%. Once we obtained death dates for our sample of parliamentary candidates using this algorithm, we checked our collected death dates against the true death dates for successful candidates (which are easily available from public records) and confirmed that we indeed had an error rate of 5.2%.

With the death records we were then able to find probate values for 561 candidates in the probate calendar stored at First Avenue House in London.[5] Probate values allow us to measure the total value of a candidate's estate at death.[6] We are confident that probate values give a good indication of the true wealth of the individuals in our sample. Probate values are widely used in the economic history literature to measure wealth, for example in studies of economic mobility during the industrial revolution.[7] Probates also provide the basis for official data on the current distribution of wealth. In a recent review comparing methods of estimating the wealth distribution, HM Revenue & Customs (HMRC) concluded that the approach based on probate values remains "the best available means," surpassing alternate approaches based on investment income and direct household surveys (HMRC 2007, pg. 3).

Finally, we exclude from our estimation sample 67 candidates who were from minor parties (36 Liberals and 31 from regional parties) and a further 60 candidates who were found to have served before 1950, which leaves us with 434 candidates overall. Of these, 186 candidates are "competitive winners" in the sense that they entered Parliament in a race they won by fewer than 10,000 votes; the remaining 248 candidates are "competitive losers" in the sense that at some point they came within 10,000 votes of winnning.[8] The candidates in our estimation sample are spread quite evenly geographically across Britain (with candidates appearing in 432 out of 658 possible constituencies between 1950 and

[5]The few missing probates were mostly due to common names. Probates are listed under the quarter in which they are registered, which might be as much as a year after the date when the death was registered, and entries in the probate calendar do not list birth dates (unlike death records). As a result, there might be several possible probate records listed in the year or so following the death of a candidate with a common name, making it impossible to tell which one is the correct estate. These cases were left missing.

[6]In the UK, a probate is needed in order for a deceased person's representative to administer the assets of the estate. A probate is normally filed for all estates containing real property and/or a single class of asset worth GBP 5,000 or more. By law, the estate includes the value of all assets and monies at the time of death, after debts and expenses have been deducted, plus any gifts exceeding GBP 3000 that have been made within the previous seven years and the value of any trust from which the deceased has received an income. Jointly held property is also exempt, with certain restrictions. At the time of writing, a 40% inheritance tax is applied to the estate, with the first 300,000 GBP exempt. Tax avoidance may affect the reported wealth but this effect is mitigated by the fact that gifts given within seven years of death are taxable.

[7]See Owens et al. (2006) for an application, discussion, and many citations.

[8]We also discarded the very few "losing" candidates who eventually won a seat post 1970. Including them as winners or losers does not change the results (available upon request).

1970) and temporally across our period (with about 60 candidates making their debut in each of the seven elections between 1950 and 1970). As far as we know, our database is unique in the richness of the background information and electoral results it provides about both winning and losing candidates over several elections. With Querubin & Snyder (2008), we are also among the first to collect direct measures of candidate wealth.

B. Wealth Distributions

Table 1 displays the distribution of wealth at the time of death for the candidates in our sample. To make the comparison meaningful, we converted the gross value of the estate into real 2007 British Pounds (GBP) using the Consumer Price Index from the Office for National Statistics. We find that gross wealth at death varies widely across candidates ranging from $4,597$ GBP for the poorest candidate (Conservative Robert Youngson) to $31,070,000$ GBP for the richest candidate (Conservative Basil de Ferranti). The median wealth at death is $264,300$ GBP. As a benchmark, the median gross value of the estate for the whole of England and Wales in 2002 was about $80,388$ GBP for males of all ages. The median age at death in our sample is 79 years, so another instructive benchmark is the median gross value of the estate for males aged 65 and above, which was about $113,477$ GBP in 2002.[9] This indicates that the median candidate died more than twice as wealthy as the median senior citizen in recent years.

Given the well-known differences in social class between politicians from the two parties, it should not be surprising that Conservative candidates died significantly richer than their Labour counterparts. The median wealth among Conservatives exceeded that among Labourites by $78,000$ GBP. The lower right panel in Figure 2 compares the two wealth distributions graphically using a Quantile-Quantile (QQ) plot. We use a log transformation given the right skew of the wealth distributions. We find that Conservatives were more wealthy over almost the entire range of the data, i.e. at almost every percentile of each party the Conservative candidate was wealthier. The Labour candidates by no means died poor,

[9] All figures converted to real 2007 prices. Median wealth is computed from HM Revenue & Customs (HMRC) statistics table 13.2 "Estimated wealth of individuals in the U.K., 2002 (year of death basis)," which uses the estate multiplier method to estimate wealth from probate values.

however. For example, Eric Hurst, a lawyer and entrepreneur who unsuccessfully stood as a Labour candidate in 1951 and 1955, died with 7,926,000 GPB. The median estate among Labour candidates was 250,300 GPB (more than twice the nationwide median in recent years) and a quarter of the candidates died with more than 346,000 GPB.

Next we turn to the comparison of winning versus losing candidates (rows 2 and 3 in Table 1). Quite remarkably, we find that winning candidates died much richer than their losing counterparts. The median MP died with 332,700 GBP, compared to the median losing candidate who passed away with 250,300 GBP. The difference between the medians, 82,400 GBP, is roughly as large as the difference between the median Conservative and Labour estates.[10] The lower left panel in Figure 2 shows the QQ-plot comparing the log wealth distributions of winners and losers, indicating again that, percentile by percentile, winners died richer than losers. The size of the wealth difference is striking, although of course at this point we cannot rule out that it may be due to differences between winners and losers for which we have not yet accounted.

When we break the wealth comparison down by party (rows 4-6 and 7-9 in Table 1), we find that the pronounced difference in the wealth of winning and losing candidates is entirely driven by the Conservative party. The median Conservative winning candidate died with 532,200 GBP while his unsuccessful counterpart passed away with a "mere" 257,300 GBP. We detect no such difference for the Labour party; the difference between the median losing and the median winning Labour candidate was around 3,400 GBP. The upper panels in Figure 2 display the visual comparison of the log wealth distributions. For Labour (left panel), most points cluster tightly around the 45 degree line indicating that the two distributions are almost identical. For the Conservative party (right panel) in contrast, we again find a very pronounced additive location shift in the distributions (on the log scale), indicating that the wealth difference between candidates who ended up serving and candidates who did not serve holds over the entire distribution and grows larger

[10] As a purchasing power benchmark, the average house price (all dwellings) in the Greater London area in 2006 was about 300,000 GBP and in the whole of England it was about 200,000 GBP. Regulated Mortgage Survey (2007) "Table 511: Housing market: simple average house prices, by dwelling type and region, United Kingdom." Department of Communities and Local Government.

at higher quantiles (in real terms). This difference must reflect either a substantial effect of office on wealth or a systematic electoral preference for wealthier candidates; in the next section we attempt to disentangle these possibilities.

III. Estimating the effect of office on wealth

Since political office is not randomly assigned among candidates, MPs and losing candidates may differ in terms of observed and unobserved characteristics that are correlated with both wealth and the probability of gaining office. The most obvious reason why winners and losers would differ is that voters choose winners in a democracy, and voters have preferences over candidate characteristics that are likely to be correlated with wealth. If voters prefer wealthy or wealth-prone candidates, differences in wealth at death between winners and losers could derive entirely from this selection effect rather than the effect of office itself. The selection effect in fact likely starts well before the general election, at the stage when candidates are chosen by local party organizations. Strong candidates are more likely to emerge in winnable districts (Rush 1969, Norris & Lovenduski 1995), meaning that even if voters ignore candidate characteristics we might still expect winners to be systematically wealthier or abler than losers. This early-stage selection effect was probably particularly strong in Britain in the period we are examining because, with no residency requirement for being staged in a particular constituency, would-be candidates often auditioned in multiple constituencies in a quest for the safest districts (Rush 1969). As noted in the previous section, our first line of defense against these selection issues is to restrict our sample to relatively competitive candidates. In this section we describe statistical approaches we use to address remaining confounding factors.

A. Matching Estimates

Our dataset includes an unusually rich set of background factors for each candidate, which makes it possible to control for many likely differences between winners and losers. In particular, for every candidate we record the year of birth, gender, party, schooling, university

education, detailed occupation, whether the candidate has an aristocratic background,[11] and year of death. Descriptive statistics for the covariates are presented in Table 2. All characteristics except the year of death and wealth are measured from the *Times Guide to the House of Commons* biography that appears for the first constituency race of each candidate. The covariates are therefore "pre-treatment" in the sense that they are not affected by whether the candidate won office.[12]

To conduct the estimations and to clarify the assumptions we introduce a minimal amount of standard notation. Let W_i be a binary treatment indicator coded one if candidate i served at least one period in the House of Commons, and zero if candidate i never attained office. X is an $(n \times k)$ matrix that includes our k observed covariates for all n candidates with row X_i referring to the characteristics of candidate i. The variables $Y_i(0)$ and $Y_i(1)$ represent the wealth that candidate i would realize with and without gaining political office (i.e., "potential outcomes"). Evidently, one of the potential outcomes is unobserved for each candidate. In the following we proceed by assuming unconfoundeness given the observed covariates, i.e. $(Y_1, Y_0) \perp W|X$, and common support so $0 < Pr(W = 1|X) < 1$ holds with probability one for (almost) every value of X (Rosenbaum & Rubin 1983).

The validity of the unconfoundeness assumption depends on the quality of the covariates in capturing the assignment mechanism. Arguably our unusually rich set of covariates captures the most obvious confounders. To the extent that wealthier candidates were better able to attain office (perhaps by using their connections to be placed in more favorable districts), the omission of wealth at the time of candidacy may be particularly problematic. However, while we do not measure pre-existing wealth explicitly (no such data is available), many of our covariates – such as whether a candidate was schooled at Eton, studied

[11] We define aristocratic background as the appearance of the words "Sir", "Viscount", "Lady" or "Lord" in the biography.

[12] One question is whether we should condition on the year of death or not given that it is measured post-treatment and may be affected by wealth and political office. Below we report estimates including the year of death, but excluding it does not change the results (available upon request). The direction of the bias introduced by including or excluding year of death as a covariate is somewhat ambiguous. Candidates who lived longer may have had more time to make money, but on the other hand they may have drawn down their savings further; winning office, on the other hand, may lead to longer life or it may bring stress and an earlier demise. In separate tests, we find no systematic effect of gaining office on longevity, which suggests that post-treatment bias is not a concern.

at Oxbridge, worked as a barrister, or has an aristocratic background – will be highly correlated with pre-existing wealth and therefore will indirectly control for this omitted factor. Later in the paper, we employ a different estimation strategy based on a regression discontinuity design that relies on close elections to control for unobservable factors.

In order to avoid parametric assumptions and to keep the analysis transparent, we chose matching as our main method of covariate adjustment.[13] Specifically, we employ Genetic Matching (with replacement) following Diamond & Sekhon (2006), because in our tests it produces the highest covariate balance compared to other matching techniques.[14] Other matching techniques, such as propensity score matching or regular Mahalanobis distance matching, led to substantively similar results. Since the above findings suggest that the effect of political office on wealth may depend on party, we conduct all estimations separately for each party.

A.1. Matching Results for the Conservative Party

Figure 3 presents the balance results for the Conservative party using $M = 1$ (i.e. one-to-one matching). For each covariate, we plot standardized bias as measured by the difference in means between the two groups scaled by the pooled standard deviation. Accordingly, circles to the right (left) of the dashed vertical line at zero indicate a higher incidence of a certain characteristic in the group of winning (losing) candidates. As expected, there are

[13] See Imbens (2004) and Rubin (2006) for reviews. We also provide results from an OLS regression for comparison. We have tried several other techniques for covariate adjustment such as weighting on the propensity score and subclassification. All of these techniques lead to very similar results (available upon request).

[14] For each candidate we pick the M nearest neighbors according to the following distance metric

$$d(X_i, X_j) = \{(X_i - X_j)'(S^{-1/2})'WS^{-1/2}(X_i - X_j)\}^{1/2}$$

where W is a $(k \times k)$ positive definite weight matrix with zero in all elements except the main diagonal and $S^{1/2}$ is the Cholesky decomposition of S, the variance-covariance matrix of X. Notice that the only difference between this approach and regular Mahalanobis distance matching is the use of a generalized weight matrix W. If each of the k parameters in the diagonal of W are set equal to 1, $d()$ is the Mahalanobis distance. In Genetic Matching, the weights in the diagonal of W are chosen by an evolutionary algorithm such that balance across treatment and control groups is maximized. Balance is measured by the lowest p-value across covariate-by-covariate paired t-tests for differences in means and bootstrapped Kolmogorov-Smirnov tests for the equality of distributions. See Sekhon (2007) for details. We also employ the bias correction via post-matching regression adjustment as proposed in Abadie & Imbens (2002).

clear differences in the distribution of pre-existing characteristics between the two groups before matching (unfilled circles). MPs were more likely than unsuccessful candidates to have aristocratic backgrounds and elite educations. Winning candidates were also more likely to be in white-collar professions (engineering, accounting, or public relations) and less likely to have business backgrounds. After matching, however, we achieve a very high degree of covariate balance (filled circles). Across variables, the standardized bias is now within 0.1. The lowest p-value across paired t-tests and KS tests is 0.16, which indicates that the corresponding distributions are similar across all covariates. The two matched groups have very similar observed characteristics, such that any remaining difference between the wealth of winning and losing candidates can plausibly be attributed to the effect of treatment rather than these pre-existing differences.[15]

The upper panel in Table 3 displays our effect estimates. The first two columns present the results from a simple OLS regression (with robust standard errors) of wealth on the treatment indicator including all the covariates. Columns three and four display the results from the matching estimator for two quantities of interest: The average treatment effect (ATE) given by $\tau_{ATE} = E[(Y_i(1) - Y_i(0)]$ and the average treatment effect for the treated (ATT) given by $\tau_{ATT} = E[(Y_i(1) - Y_i(0)|W_i = 1]$ with Abadie & Imbens (2006) standard errors. Across specifications, we find a robust and substantial impact of serving on wealth at the time of death. We estimate that serving in Parliament increased wealth at death by between 92 and 148 percent, depending on the specification. For all specifications we soundly reject the null hypothesis of no effect at conventional levels.

A.2. Matching Results for Labour Party

Balance results for Labour candidates are reported in Figure 4. Again, we find some pronounced differences in the covariate distributions between MPs and unsuccessful candidates before matching. The discrepancies between winners and losers are roughly the reverse of those for the Conservative party: among the winning Labourites there is a smaller fraction of candidates with an Oxbridge education, a public school background, or a white collar

[15]The dummy variable for elementary schooling is omitted here because of lack of variation.

profession than among the unsuccessful candidates, but a higher fraction of union officials and miners. After matching, these differences are almost completely removed. We obtain a very high degree of balance on all covariates, with the lowest p-value across all balance tests being .32.[16]

The lower panel in Table 3 presents the matching-based effect estimates for Labour candidates. Consistent with the QQ-plots shown earlier, we find no effect of serving on wealth at death. The point estimates across all models are very close to zero. Although this null finding is not very precisely estimated, it is still striking to to see that among Labour candidates there appears to be no financial reward for serving.

Overall the matching results suggest that the financial returns to political office for candidates running in our time period were high for candidates of the Conservative party, whose winning candidates roughly doubled their wealth on average compared to otherwise similar candidates who did not end up serving. For Labourites we find that winning office had no effect on wealth. The difference in the estimated effects between parties is strongly statistically significant. (The p-value on a one-sided t-test is below .02 for each specification.)

B. Regression Discontinuity Design Results

The matching results presented so far rest on the assumption of unconfoundedness, which fails if conditional on the observed covariates there remain imbalances in important unobserved factors between winners and losers. Controlling for unobserved confounding is impossible in most observational studies, but the unique nature of political contests provides an opportunity to apply a regression discontinuity (RD) design to the problem (Thistlethwaite & Campbell 1960). Following pioneering work by Lee (2008), we note that in very close elections, the assignment to political office is largely based on random factors. While winning candidates may generally be different from losing candidates at the time of the election (e.g., better looks, more money, or greater speaking ability), there is no reason to expect that the winners of elections decided by razor-thin margins systematically differ in

[16]Notice that the measure of aristocratic background is omitted here because of lack of variation.

these ways from the losers. Very close elections are more likely to be decided by chance factors (such as the weather on the election day or the pseudo-random timing of world events) that are uncorrelated with wealth. The RD design therefore attempts to estimate the difference in wealth precisely at the threshold where winners and losers are decided, i.e. where the margin of victory approaches zero. If local random assignment holds at the threshold, the RD estimate will not be affected by unobserved confounders and can thus be as credible as an estimate from a randomized experiment.

In particular, let Z_i be the vote margin for candidate i. For winning candidates, Z_i is computed from their first successful race as the difference between their own vote share and that of the runner-up. For losing candidates, Z_i is computed from their best race as the difference between their vote share and that of the winner.[17]

Given this definition, gaining office is a deterministic function of the margin $W_i = 1\{Z_i \geq 0\}$.[18] In other words, all candidates with $Z_i > 0$ are assigned to the group of winners and enter Parliament while candidates who score just below the threshold are assigned to the group of losing candidates and do not enter Parliament. The average treatment effect at the threshold $Z = 0$ is then defined as

$$\tau_{RDD} = lim_{z\downarrow 0} E[Y_i|Z_i = z] - lim_{z\uparrow 0} E[Y_i|Z_i = z] = E[Y_i(1) - Y_i(0)|Z_i = 0] \qquad (1)$$

which is identified under the assumption that $E[Y(0)|Z = z]$ and $E[Y(1)|Z = z]$ are continuous in z.[19] This assumption is fairly weak and will fail only if candidates can

[17]The application of a regression discontinuity design to a candidate-level outcome such as wealth requires addressing the fact that many candidates stand for election more than once, and thus losers sometimes reappear as winners in later elections. Our approach obviates the resulting compliance problems (Angrist et al. 1996) by defining the assignment variable in the context of a candidate's entire electoral history: the best race for losers and the first successful race for winners. This definition implies that close winners will be compared to the most competitive losers available. As our balance tests later show, close winners and losers defined in this way do not differ in any observed covariate, including the number of previous races the candidate has run. We have conducted additional tests using a fuzzy regression discontinuity design, which uses success in a candidate's first race as an instrument for serving in Parliament. The point estimates are somewhat similar but very imprecise given our limited sample size and the efficiency loss incurred. The fuzzy design is not a very attractive option in the setting of UK elections because new candidates are often staged in unwinnable districts in order to gain experience, which means that the first race provides only a very noisy signal of candidate quality.

[18]There are no ties in our data.

[19]Notice that compared to the matching estimates shown above, unconfoundedness holds trivially here

strategically sort around the threshold. In fact, Lee (2008) shows that as long as the vote share includes some random component with a continuous density, treatment status is randomized at the threshold of winning.

It is important to notice that while the RD design is likely to have a very high degree of internal validity, we pay a price in terms of decreased external validity and also efficiency. Most importantly, τ_{RDD} is a local average treatment effect that is informative for marginal candidates close to the threshold. Unless additional homogeneity assumptions are introduced, the effect estimate is not informative about the effect of gaining office for candidates very far away from the threshold of winning.

Figure 5 presents the graphical results from the RD design for Conservative candidates. Log wealth is plotted against the vote share margin (Z_i). The dotted vertical line at zero indicates the threshold separating MPs (to the right of the threshold, denoted by squares) and unsuccessful candidates (to the left of the threshold, denoted by circles). The solid lines represent the conditional expectation functions of wealth given the vote share margin approximated using a locally weighted polynomial regression fitted to both sides of the threshold; pointwise .95 confidence bounds are indicated by dashed lines. Recall that the effect of office on wealth in the RD design is the difference of two regression functions at the threshold. The graph indicates a discontinuity of about 0.7, which is very close to the matching results and again suggests that Conservative candidates roughly doubled their wealth by winning office. Given the weak assumptions underlying this estimate, we have strong confidence in this finding. It is unlikely that this difference in wealth could be driven by unobserved differences between the two groups of candidates, given the local random assignment around the threshold of winning (formal balance tests are provided below).

Another notable feature in this graph is that the conditional expectation of wealth is not steeply increasing in the vote share margin over most of the support of the vote

since W does not vary conditional on Z, but the overlap assumption is violated because the probability of assignment is either $Pr(W_i = 1|Z_i > 0) = 1$ or $Pr(W_i = 1|Z_i < 0) = 0$ depending on whether a candidate scores below or above the threshold. By construction, there are no units at the threshold for which $Y_i(0)$ can be observed, but we can simply use units very close to the threshold to infer this conditional expectation of the outcome. The amount of extrapolation required becomes arbitrarily small in large samples. See (Imbens & Lemieux 2007) for an excellent discussion.

share variable. Assuming that post-treatment wealth is highly correlated with pre-existing wealth (i.e. wealth at the time a candidate ran for office) this would provide evidence against the claim that candidates could simply buy office via placement in very safe seats. The exception is the top quartile of the vote share margin; candidates who entered office with large majorities died quite a bit richer than candidates who entered office in more competitive races. This could reflect the fact that MPs in relatively safe seats were free to stay in office longer and were therefore better able to reap the rewards of being an MP, or it could reflect the fact that wealthier candidates used their resources to get assigned to run in safer seats. As the figure shows, wealth was not increasing in vote margin for the large majority of candidates, though, which might explain why the RD results do not differ much from the matching findings presented earlier.

Figure 6 displays similar graphical results for the Labour candidates. Again, the RD findings correspond very closely with the matching results. There is no discontinuity at the threshold, suggesting that there is no effect of winning office on wealth among Labourites.

To formally estimate the difference of the two regression functions at the discontinuity point, we follow the proposal by Imbens & Lemieux (2007) and fit a local linear regression of the form:[20]

$$\min_{\alpha,\beta,\tau,\gamma,\delta} \sum_{i=1}^{N} 1\{-h \leq Z_i \leq h\} \cdot (Y_i - \alpha - \beta \cdot Z_i - \tau \cdot W_i - \gamma \cdot Z_i \cdot W_i - \delta' X_i)^2 \qquad (2)$$

where τ identifies our treatment effect estimate. The variance of τ can simply be estimated using the standard robust variance from the OLS regression. h, the bandwidth around the threshold of winning, is chosen by the Imbens and Lemieux (two-sided) cross-validation criterion.[21] The optimal bandwidth according to this criterion is $h = .15$, meaning that the optimal regression estimates the discontinuity by including candidates who won or lost by fewer than 15 percentage points.[22] We present results for this regression with and

[20] See Imbens & Lemieux (2007) for a discussion of alternative estimation strategies. They key issue is that the RD estimand is a single boundary point, so that nonparametric kernel regression may contain a high order bias due to slow convergence. Local linear regression provides a practical solution to this problem and makes estimates less sensitive to points far away from the threshold than other parametric alternatives such as series regression or sieve methods.

[21] Imbens & Lemieux (2007, equation 5.12).

[22] As suggested by the flatness of the conditional expectation, our results are fairly insensitive to the choice

without our full set of covariates (including schooling, university education, occupation, gender, year of birth, and year of death). Just as in a randomized experiment, we expect the inclusion of covariates to have only a small effect on the estimate of τ because, in the close neighborhood of the threshold, all observed and unobserved covariates should be independent of W. Covariates may help to eliminate some residual bias that is the result of the inclusion of observations further away from the threshold, and they may improve precision to the extent that they are predictive of the outcome.

Our RD estimates, presented in Table 4, mirror the graphical and matching results presented above: we find that Conservatives roughly doubled their wealth by winning a seat in Parliament, while Labourites did not financially gain from office. We again reject the null at conventional levels but the standard errors, as expected, are slightly larger than in the matching analysis because the RD approach focuses on the neighborhood of the threshold, where there are fewer observations. Also as might be expected, the inclusion of covariates does not change the substantive conclusions.

C. Robustness Tests for RD Estimation

C.1. Test for Wealth Jumps at Non-discontinuity Points

Following the proposal by Imbens and Lemieux (2007), we test for jumps in wealth at points other than the threshold at which office was assigned. We produce RD estimates at several points along the range of the vote share variable, in each case limiting analysis to either the winning or losing candidates.[23] Figure 7 compares these placebo effect estimates with our estimate of the effect of winning office on wealth. (We focus on Conservative candidates, since we did not find an effect for Labour.) The upper panel presents the point estimates for each of the placebo runs contrasted with the estimate at the true threshold; the lower panel presents the corresponding t-values. The true effect estimate clearly stands

of bandwidth, although obviously the standard errors tend to increase as the bandwidth is decreased due to the smaller number of observations. For example, for the Conservatives the estimated treatment effect (including all covariates) is .98 (.64) when we use half the optimal threshold (i.e. 7.5 percentage points) and .54 (.28) when double the optimal bandwidth (i.e. 30 percentage points) is used.

[23] By focusing on each subsample separately, we follow Imbens & Lemieux (2007, pg. 27), who note that otherwise our regression function would assume continuity at a point where we know there is a break.

out from the placebo effects. The placebo effects are generally negative and relatively small in magnitude; all of the them are insignificant at conventional levels. This finding increases our confidence that our estimate measures the effect of gaining office rather than a random artifact of the data.

C.2. Test for Zero Average Effect on Placebo Outcomes

Here we assess whether winning office appears to have affected candidate characteristics (such as year of birth) that could not possibly have been affected by serving in Parliament. This type of test, which was first applied in an RD setting by Lee et al. (2004),[24] looks for evidence that the winners of very close elections do not appear to have been randomly selected; if they were, we would expect to see no treatment effect on these placebo outcomes. We repeatedly obtain RD estimates at the threshold between losers and winners, where instead of wealth as the outcome we used each of our covariates in turn. Table 5 displays the results. For both parties, we find no significant differences between winners and losers at the threshold.

As a further robustness test, we check whether winning and losing candidates appear to have run in similarly competitive seats, measured by the vote share won by the candidate's party in the previous election in the same district. This variable is a good proxy for the attractiveness of the seat, which particularly in the British electoral system is likely to be correlated with candidate quality. This covariate is almost perfectly balanced at the threshold for both parties, which further strengthens our confidence in the RD assumption of quasi-random assignment to office at the threshold. Finally, we also checked whether the close winner and losers differ in the number of races the candidate ran before the decisive race (i.e. the first winning race for winners or the best losing race for losers). Again, there is no significant difference at the threshold. Conservatives close winners on average made about .19 more previous attempts than close losers (about .65 to .46) but the difference is highly statistically insignificant; the median close winner and median close loser are both first-time candidates.

[24] See Imbens & Lemieux (2007) for a discussion.

IV. Discussion

Based on the analysis in the previous section, we conclude that serving in the House of Commons roughly doubled the wealth at death of Conservative candidates on average but had no effect for candidates of the Labour party. Since our identification strategy is based on fairly weak assumptions, our confidence in which is bolstered by robustness checks, we are confident that we have uncovered a genuine effect of office on wealth rather than an artifact of candidate selection. This begs the question of what explains the strong apparent effect of serving in office on personal wealth.

A. Did MPs Make their Money in Office or After Retiring?

As a starting point, we examine our data for evidence of when Conservative MPs made their money – while sitting in Parliament or after retiring (see Table 8). We first regressed the log wealth on the total time the MP lived after being elected (denoted "Years as MP and Former MP"), as well as the MP's year of birth, margin of winning (in first successful race), and indicators for whether the MP attained front bench or cabinet positions and attended elite educational institutions (reported in column 1). The regression indicates that MPs who had longer careers as MPs or ex-MPs died with more money (p-value = .065). The point estimate suggests that living an additional year after entering office (or, equivalently, entering office one year earlier) is correlated with about a 2 percent increase in wealth. In a similar vein, the dummy variable for front bench or cabinet service enters positively and with a substantial magnitude, although we lack sufficient precision to reject the null at conventional levels. The coefficients on the other control variables have the expected positive signs, and the coefficients on year of birth, Oxbridge education, and margin of winning are significant at conventional levels. Consistent with the top right part of Figure 5, we believe that the positive correlation between margin of winning and wealth somewhat reflects the ability of very wealthy candidates to secure candidacies in more favorable districts.[25]

[25]Note that specification checks suggest that a simple linear model provides a good approximation of the conditional expectation function. More flexible models did not lead to different conclusions.

In an attempt to disentangle money made in office and after retiring, we ran a further regression (reported in column 2) in which we separated post-election years into "years served as MP" and "years lived as a former MP," conditional on the same set of covariates. We find that the coefficients on the two variables are almost the same in magnitude (indicating that an additional year in office and an additional year out of office are both associated with a roughly 2.3% increase in wealth at death) and statistical significance (p-values around .09). This is consistent with the interpretation that the financial benefit of office came both while an MP was sitting in Parliament and after his or her retirement. It is also consistent with the interpretation that MPs made their money after leaving Parliament but their post-office earnings depended on the extent of their parliamentary experience. (According to this interpretation, serving in Parliament could be thought of as an investment in human capital that paid off after retirement from government.) We therefore conduct a third regression where we interact years in office and years out of office. If serving in Parliament was indeed an investment in human capital and increased wealth only by making post-office employment more valuable, we would expect a substantial positive coefficient on the interaction term and a zero coefficient on "years as MP." In fact, as indicated by column 3 of Table 8, the interaction term is essentially zero and the magnitude of the "years as MP" coefficient does not diminish. This suggests that extra years in Parliament did not increase wealth primarily by raising post-office earnings, but rather that an MP's years in office were themselves lucrative.

B. How Did MPs Make Money In Office?

One possibility to address immediately is that MPs' official pay explains the financial benefit of office; perhaps Conservative MPs received a significantly higher salary than what they would have earned outside of Parliament. This conjecture is completely at odds with the evidence, however. Not only was the MP salary modest compared to wages in professions MPs commonly pursued before entering office,[26] Conservatives were more likely to face a

[26]Data from a survey conducted among new members of Parliament in 1979 indicate that over three-quarters of entering MPs took a pay cut to serve in Parliament; at a time when an MP's salary was

pay cut after being elected, given that they tended to come from lucrative professions in law and business. If salaries were the dominant factor, we might expect to see the union officials, journalists, and lecturers of the Labour party profit, but not the accountants, barristers, and managing directors of the Conservative party. Given that we see the opposite, salary evidently does not explain the observed pattern of benefits from office.

Instead, the source of MPs' financial gains appears to be outside income earned from directorships, private sector employment, shareholdings, and lobby sponsorships directly related to their political positions. Conservative MPs took advantage of a relatively lax system of ethics regulation to accumulate extensive and often lucrative outside financial arrangements. The House has forbidden outright bribery since at least the 17th century, but until the last decade sitting MPs faced essentially no other restrictions on their dealings with outside interests, leaving ample room for MPs to use their positions to financial advantage. Sitting MPs were free to serve on boards of directors, work as "parliamentary consultants" for private firms, and even work on behalf of lobbyists.[27] The only real means of regulation has been disclosure. Since 1975, MPs have been required to annually disclosure the names of outside employers in the Register of Members' Interests (RMI); since 1996, the Register has also listed the amount paid for consultancies and journalism work. While critics have claimed that disclosure has been incomplete and ineffective at constraining conflicts of interest (Strudwick & Cole (2005, pg. 395), Hollingsworth (1991, pg. 165)),[28] the RMI makes clear that, consistent with our findings, Conservatives disproportionately availed themselves of lucrative financial opportunities while in office.

Figure 8 depicts the proportion of MPs who reported at least one outside interest in

6,897 GBP, the median backbencher had left a job paying 11,000 GBP (Judge 1984, pg, 68). The New Earnings Survey, which was first conducted in 1971, indicates that over the last several decades MPs have consistently earned somewhat more than journalists and university professors but less than legal professionals and managers in large companies.

[27]After the "cash-for-questions" scandal in late 1994, the House of Commons explicitly outlawed "paid advocacy," which forced many MPs to stop working for lobbyists. But the new rules explicitly did not forbid "paid advice" related to the business of Parliament, and as of 2007 over a third of Conservative MPs reported holding consultancies related to their parliamentary work.

[28]For example, MP Enoch Powell simply refused to declare his interests until he retired in 1987. He was not sanctioned for this lack of compliance. The first Nolan report in 1995 also highlighted the insufficiency of the RMI.

1975 (the first year the RMI was published), 1990, and 2007 (the latest available) within each of six categories.[29] The plots indicate that Conservative MPs (solid line) were much more likely to report a paid directorship or consulting arrangement in all three years.[30] Overall, 45 percent of Conservative MPs held at least one directorship in the three register years; the corresponding figure for Labour MPs is 6 percent. Many Conservative MPs reported multiple directorships, such that in total 848 Conservative MPs held almost 1000 directorships over the three years combined. The average number of directorships per MP among Conservatives is slightly declining over time from 1.43 in 1975, 1.14 in 1990, to 0.70 in 2007; by contrast, the corresponding number among Labour MPs is 0.07 overall, with little variation across the three years. For consultancies the differences are equally stark. Over the three years, 48 percent of Conservative MPs had at least one consultancy contract compared to 7 percent for Labourites. The one category where Labour members reported significantly more outside arrangements was union sponsorships, which had long provided a steady (if small) source of income for Labour MPs. As reflected in the figure, the Labour Party ended the practice in 1996 in part to sharpen its attacks on Conservatives' outside financial dealings.[31]

[29]Specifically, we used *Register of Members' Interests* published on 1 November 1975, 8 January 1990, and 26 March 2007.

[30]Details on each type of income, and our approach to recording it, are as follows: Directorships include only remunerated directorships. Consultancies include all remunerated consulting activities classified as parliamentary affairs advisor, economic advisor, liaison officer, public affairs consultant, parliamentary consultant, management consultant or advisor for firms when in connection to MP work, public relations consultant, public relations agents, members of parliamentary panels. Lloyd's underwriter are also included. We excluded all consulting that is declared as unremunerated, charitable, or obviously unrelated to commercial lobbying (eg. council work). Note that consultancy work for trade union related groups is included. For 2007, speech engagements that are clearly connected to consulting work are also included. If a list of clients is declared, then each client is counted as one client (up to a total of 5 clients). Journalism includes any type of remunerated journalistic activity such as broadcasting, TV appearances, newspaper, occasional journalism, novelists, documentaries, and scholarly articles, work as editor for the house magazine, and (especially in 2007) also book contracts. Journalistic activities classified as unremunerated are excluded, and so are activities where fees are reported to be transferred to charities. Employment here includes part time employment that is declared as unrelated to MP work, such as work as a barrister at law, a partner in a law firm, medical practitioner, farmer, or family business, etc. Work that is clearly declared as infrequent (such as occasional work as Queen's Council) is excluded. Members are required to register the name of any public or private company or other body in which, to their knowledge, they have a beneficial interest in a shareholding (a) of more than 15 percent of the issued share capital or (b) worth more than 100 percent of an MP's salary (for example 60,675 GBP in 2007).

[31]James Blitz, "Labour poised to end trade union sponsorship of MPs," *Financial Times*, February 28,

Since 1996, the RMI has provided further detail on the amounts of outside income received from consultancy and journalism fees obtained through "providing services in the capacity of a Member of Parliament." Table 6 summarizes the total amount reported from both categories combined for the year 2007.[32] Outside income from journalism and consultancies varies widely across candidates, with some reporting no income and the highest-earning MP reporting an annual total of 713,000 GBP. The distributions are highly skewed. For Conservatives, about 65 percent of MPs report no fees, about 23 percent report fees up to 10,000 GBP, another 10 percent report fees between 10,000 and 50,000 GBP. The top 3 MPs report an annual outside income of more than 200,000 GBP. (As a benchmark, the MP salary in 2007 was 60,675 GBP.) In the Labour party, reported outside income from both journalism and consultancies is generally significantly lower, except for the top earners who earn more than 75,000 in fees. It is important to note that the RMI earnings figures do not include compensation for directorships, disclosure of which is not required under RMI rules. Based on public records and anecdotal accounts, though, directorships were lucrative. In 1990 the average annual fee for outside directors was about 15,000 GBP plus benefits, with some directorships paying over 60,000 (Hollingsworth 1991, pp. 21,157).[33] Considering how much more common directorships were among Conservative MPs, the difference in outside income between the parties was likely to be significantly greater than the RMI indicates.

It bears noting that the difference in earnings between winners and losers was likely to be quite a bit larger than the difference in estimated wealth. As noted above, we estimate that the median Conservative MP, who died with around 530,000 GBP, would have died with about 245,000 GBP if he had not served. Only a fraction of earnings ultimately is bequeathed; using US probates from the 1960's and 1970's Menchik & David (1983) estimated the marginal propensity to bequeath from earnings at about .25 for the top

1996.

[32]Earnings are reported within bands of 5,000 GBP; we used midpoint values unless the actual amount for an engagement was reported (eg. so for the 45,001-50,000 band, 47,500 GBP is used).

[33]Conservative MP Sir Geoffrey Rippon, the sixth wealthiest person among the Conservative candidates in our estimation sample, had a directorship with the Britannia Arrows financial group that paid him Pounds 60,000 in 1986 Hollingsworth (1991, pg. 21). According to the RMI of that year, Rippon had accumulated 33 directorships overall.

quintile of his sample. If Menchik & David (1983)'s data is an appropriate rough guide in this context, the median MP would have had to earn an additional 1.1 million pounds compared to an unsuccessful candidate in order to raise his wealth at death by the estimated amount. Given that the median MP in our sample lived for 39 years after being elected, this would require the median Conservative MP to earn around 30,000 GBP extra (compared to an unsuccessful candidate) each year from the time he was elected to Parliament until his death. We believe this is plausible given what we know about the opportunities available to MPs as a result of their office.

Anecdotal evidence suggests that the pattern of outside interests revealed by the first Register of Members' Interests in 1975 extends back well before then. While the pattern of MPs serving as corporate directors was evident by the late 19th century,[34] the rise of the MP-as-lobbyist appears to date from the first few decades after World War II (see Stewart (1958) for an early study). In 1950 the Attlee Commission (convened to investigate outside interests and lobbying in the House of Commons) concluded that commercial lobbyists were "few in number," but by 1962, Finer warned in his landmark study of a rising "army" of professional lobbyists and MPs under contract, noting that "Parliament is not 'above' the battle between associations and counter-associations; it is the cockpit" (Finer (1962, pg. 43), also see Stewart (1958) for evidence on sponsored MPs in the 1950s). In 1961, Labour MP Frances Noel-Baker estimated that the number of MPs employed by advertising and public relations firms had risen from 18 in 1958 to 27 in 1961 Noel-Baker (1961), and Hollingsworth (1991, pg. 113) put this number at at least fifty in 1965. The *Business Background of MPs*, periodically published by journalist Andrew Roth beginning in 1957, confirms that the disproportionate involvement of Conservatives in consulting, directorships, and public relations was consistent throughout the careers of the MPs in our sample (Roth 1957).

[34] Already in 1896 the Economist complained that "Notoriously, men are often placed on boards of directorship simply and solely because they are Members of Parliament and are, therefore, believed to be able to exercise unusual influence." *The Economist*, April 18, 1896.

C. Why Were Conservative MPs Valuable?

Considering the evidence above, why were Conservative MPs so valuable to private firms – both more valuable than Labour MPs and more valuable than losing Conservative candidates? The most convincing interpretation is that Conservative MPs were more effective at selling policy influence and policy information to outside firms. About 40% of the Conservative MPs in our sample either served in the cabinet or in a frontbench position, which provided them with the opportunity to influence policy on behalf of outside interests. Even backbench MPs, who are often thought to have little autonomy and policy influence (Searing 1994, Butt 1969, Wiseman 1966, Rush et al. 2001), could further a client's policy goals through interventions in committee meetings or by using their access to ministers. Aside from influencing policy, MPs' connections give them access to valuable information about government policy; they could serve as an outside interest's "eyes and ears in Westminster" (Finer 1962, pg. 52), providing advance intelligence about the direction in which policy is moving (see also Davies 1985, Rush 1990, Judge 1993, Moloney 1996, Marsh 2004). Conservative MPs might have been more effective in selling both policy and information in part because their party was in power for almost 70% of the period in which the MPs in our sample served (1951-1964, 1970-1974, 1979-1997). Moloney (1996) argues that the program of deregulation and privatization introduced by the Thatcher government in 1979 created unprecedented opportunities for firms to obtain profits by lobbying the government, which undoubtedly opened up income sources for Conservative MPs. In separate regressions we do not find a relationship between wealth and whether the party was in power when an MP was serving, although with limited data our tests have low power against the null.

The idea that Conservative MPs made outside money by selling policy and information about policy is confirmed by anecdotal evidence. A month after leaving office as Chancellor of the Exchequer in the wake of the 1964 general election, Reginald Maudling accepted a position as executive director of a merchant banking firm, with fees estimated at over five times his MP salary. Andrew Roth noted that "the firm made it clear to the financial writers present that it was very useful indeed to have on tap the knowledge and contacts made

by a former Cabinet Minister who had been Chancellor of the Exchequer and President of the Board of Trade" (Roth 1965, pg. xii). As Conservative MP Anthony Courtney candidly explained in 1968, "Election to the House of Commons not only consolidated but also improved my business affairs. I had acquired for the benefit of the firms with which I was connected improved personal contact with the Board of Trade and other ministers." (Courtney 1968, pg. 63) Three months after stepping down as Chancellor of the Exchequer in 1989 (but while still in office as an MP), Nigel Lawson became a non-executive director at Barclays Bank PLC with a salary of 100,000 GBP; the afternoon his appointment was announced, Barclay's market value rose by nearly 90 million pounds, indicating the extent of the services he was expected to render (Hollingsworth 1991, pg. 150).

There are a number of reasons why Labour MPs would have been less equipped to offer lucrative services to outside interests. In addition to the fact that they held power less often during the period we examine, their socialist policy platform (particularly in early years) was for the most part inconsistent with the interests of regulated firms. While firms might have wanted to buy the support of opponents (Dixit & Londregan 1996), the penalties resulting from being found to serve corporate interests were extremely high for many Labour MPs – a lack of support from the party and likely an end to union sponsorship (Stewart 1958). Further, while Labour MPs had access to Labour ministers and therefore to civil servants, they generally came to office with much more limited connections in business than their Conservative colleagues. Not only would this make it more difficult for Labourites to access opportunities outside of Parliament, but it would make them less valuable to business, for whom the combination of government and private sector connections of many Conservative politicians was particularly valuable.

V. Conclusion

In a recent review of developments in political economy, Merlo (2006, pg. 33) raised "a fundamental question: What are the returns to an individual from a career in politics?" Surprisingly little work has been devoted to estimating this key quantity of interest. In this paper we have taken a first step in this direction by comparing the wealth at death of

successful and unsuccessful candidates running for the British House of Commons between 1950 and 1970. We find that serving in Parliament almost doubled the wealth of candidates of the Conservative Party, but had no effect for Labour candidates, and we argue that the financial benefits of office were largely due to payments from private firms to sitting legislators. Business-acquainted Conservative MPs financially benefited from directorships and consulting work that accrued to them as a result of serving in political office. Outside financial dealings were far less common among Labourites, whose working class backgrounds and close connection to the trade unions prevented them from reaping significant financial rewards from office.

Our finding calls into question the common view that money only played a limited role in post-war British politics and suggests a re-evaluation of the reach of lobbying in the House of Commons. Future work should explore further the extent to which MPs' outside financial dealings were related to policy developments.[35] In particular, more evidence is needed to determine the extent to which MPs' earnings depend on access to the levers of policy, and how MPs' policy priorities relate to their outside arrangements. Anecdotal evidence suggests that MPs with outside business dealings were significantly less likely to be present for voting in the House of Commons,[36] but more systematic analysis is necessary in order to determine to what extent outside income affects legislative productivity and priorities.

We hope that our study is merely a first step towards a broader research agenda. While our application benefits from data resources unique to the UK, our general approach is broadly applicable and could be used to measure the financial benefits of political office in other political systems. This includes an exploration of how the financial returns to political office depend on the nature of the electoral system, ethics regulation, lobbying restrictions, legislator independence, and partisan dynamics, among other political factors, as well as how these financial opportunities affect legislator career decisions, legislative

[35] As Dennis F. Thompson has written, any ethical objection we might make to the financial benefits legislators derive from office "must not be to personal gain as such, but to its effects on legislative judgment" (Thompson 1987).

[36] Anthoney Barnett, "Moonlighting MPs easily double Commons' salaries" *Observer* , December 1, 2002.

behavior, and the quality of public policy.

VI. Biographies of Some Successful Conservative MPs

To further illustrate the links between office, outside earnings, and personal wealth, we provide short biographies of a selection of Conservative MPs with extensive outside interests.

- **Sir Peter Emery** was born in 1926, the son of a small clothing manufacturer in London. After high school, where he supported himself by working as a labourer, sheet metal worker, and arc-welder, he joined the Royal Air Force during WWII and on demobilization won a scholarship to Oriel College, Oxford. He began political life as a councillor in the north London borough of Hornsey and was eventually returned from Reading in 1959. He served over 40 years as a Conservative MP, representing Reading, Honiton and Devon East until retirement in 2001. He spent most of his political career as a backbencher, but under Heath held a seat on the Opposition front bench, as spokesman for the Treasury, Economics and Trade, and also served as a junior minister in the early 1970s. Throughout his service as MP, Emery pursued a business career that was sometimes controversial. The House of Commons Public Accounts Committee censured him twice in 1980 for gross profiteering by his company, Shenley Trust Services (formerly Emery & Emery), on a Government contract to run the Underwater Training Centre at Fort William.[37] Emery also earned a storm of criticism for accepting indirect payment from the South African government for secretly representing in London the so-called Independent Homeland States, Bophuthatswana. He wrote an article for the *The Times* praising the regime without disclosing that he was in its pay.[38] Earlier controversy had arisen when he had visited Ghana as a member of an official parliamentary delegation. He admitted using the visit to negotiate privately a road-building contract for a British firm with which he had business links. Emery also accumulated several directorships during his political career – with Winglaw Group (1984-2000), Property Growth Insurance (1966-72), and Phillips Petroleum-UK (1963-72). In 1995, he opposed the proposal of the Nolan report that MPs' outside earnings be published. The Observer had reported his 500,000 GBP in bonuses for property deals in 1989-92 while chairman of the Winglaw Property group, on top of his annual salary. He died in 2004 as the 23rd richest Conservative candidate in our estimation sample with an estate value of about 2.3 million GBP.[39]

- **Sir Michael Grylls** died as the 59th richest Conservative candidate in our estimation sample with an estate value of close to $900,000$ GBP. Born in 1934 as the son of a brigadier, Grylls was educated at St. Ronan's preparatory school, Hawkhurst, and the Royal Naval College, Dartmouth, and served in the Royal Marines (1952-55). He

[37] He refuted allegations of making a 70 per cent profit, claiming it to be only seven per cent. The case was re-opened, but the charge was confirmed, and Emery was again censured.

[38] *The Times*, October 18, 1983.

[39] Obituary Sir Peter Emery, The Guardian, December 11, 2004. Obituary Sir Peter Emery, Telegraph, December 13, 2004. Also see Hollingsworth (1991, pg. 38-43,45-46).

entered the Commons as a Conservative in 1970 served for 27 years, during 16 of which he was the chairman of the Conservative MPs' trade and industry committee. During his otherwise successful parliamentary career Grylls was often criticized for his involvement in lobbying work. Some of the campaigns he undertook were the result of his position as consultant for the pharmaceuticals industry; others were prompted by his work as a consultant to the lobbying company run by Ian Greer, notably his warnings against a GEC takeover of Plessey and his campaign against unitary taxation, which led to an amendment to the 1985 Finance Bill. In 1997, Grylls found himself among those criticized by the inquiry into the "cash-for-questions" scandal which had engulfed the Conservatives in the run-up to the general election. In a report into Mr. Greer's activities, the Parliamentary Commissioner for Standards, Sir Gordon Downey, stated that Grylls had "seriously misled" the select committee on members' interests in 1990.[40] He had done this by understating the number of payments he had received for introducing clients to ministers. Grylls accumulated four directorships before retiring from the House in 1997.[41]

- **Sir Marcus Fox** represented Shipley from 1970 to 1997. The son of a transport manager, he went to grammar school, skipped university, served in the Green Howards during the Second World War. Before gaining his seat at Westminster, he held jobs at the Midland Bank as a bank clerk, at Woolworth's, and with the Yorkshire confectionery business of Joseph Terry. During his political career he accumulated six directorships and numerous consultancies. In particular after resigning from his position as Defence and Environment minister in 1981, he and fellow MP Keith Speed created the public affairs consultancy Westminster Communications Ltd., which according to the RMI from various years served a long list of clients with political lobbying.[42] Before the Select Committee on Members Interest, he stated "We thought if we, as Members of Parliament, were actually controlling the company we could ensure we only acted for those clients who we were convinced were of good standing." He also claimed that "There is a need for a lobbying industry. That is proven by the success of the companies, their growth and the fact that people are prepared to pay for this sort of information and the amount of time that is spent in often putting a good case forward."[43] He died as the 90th richest conservative candidate in our sample, with an estate value of about 510,000 GBP.

[40]Obituary: Sir Michael Grylls, The Independent, Mar 5, 2001. Also see Hollingsworth (1991, pg. 60-62,129-31,166).

[41]RMI of January 31st, 1997.

[42]RMI of January 13th, 1986, RMI of December 14th, 1991, RMI of January 31st, 1997.

[43]Evidence to Select Committee on Members' Interest, HC 44-vii, p. 200-202. Also see Hollingsworth (1991, pg. 21,69,70-74,105-107,120-122).

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Tables

Table 1: Gross Wealth at Death (Real 2007 GBP) for Competitive Candidates Who Ran for the House of Commons Between 1950-1970 (Estimation Sample)

	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	Obs
Both Parties:							
All Candidates	4,597	186,400	264,300	708,800	539,700	31,070,000	434
Winning Candidates	12,110	236,100	332,700	1,028,000	811,800	31,070,000	186
Losing Candidates	4,597	179,200	250,300	469,500	340,900	8,339,000	248
Conservative Party:							
All Candidates	4,597	195,400	328,400	1,022,000	898,100	31,070,000	233
Winning Candidates	34,860	253,700	532,200	1,410,000	1,409,000	31,070,000	121
Losing Candidates	4,597	179,700	257,300	601,800	492,400	8,339,000	112
Labour Party:							
All Candidates	12,110	179,200	250,300	346,000	300,400	7,926,000	201
Winning Candidates	12,110	188,400	253,700	315,500	365,900	1,036,000	65
Losing Candidates	40,600	173,300	249,800	360,700	2,96,000	7,926,000	136

Table 2: Characteristics of Competitive Candidates Who Ran for the House of Commons Between 1950-1970 (Estimation Sample)

	Mean	SD	Min	Max
Year of Birth	1919	9.83	1888	1945
Year of Death	1996	6.38	1984	2005
Female	0.04	0.19	0.00	1.00
Teacher	0.12	0.32	0.00	1.00
Barrister	0.11	0.31	0.00	1.00
Solicitor	0.06	0.24	0.00	1.00
Doctor	0.02	0.15	0.00	1.00
Civil Servant	0.01	0.11	0.00	1.00
Local Politician	0.24	0.43	0.00	1.00
Business	0.14	0.35	0.00	1.00
White Collar	0.11	0.31	0.00	1.00
Union Official	0.03	0.16	0.00	1.00
Journalist	0.11	0.31	0.00	1.00
Miner	0.01	0.10	0.00	1.00
Public School	0.09	0.29	0.00	1.00
Eton	0.06	0.23	0.00	1.00
Grammar School	0.17	0.37	0.00	1.00
Elementary School	0.05	0.21	0.00	1.00
University: Not coded	0.46	0.50	0.00	1.00
University: Technical	0.04	0.19	0.00	1.00
University: Other	0.23	0.42	0.00	1.00
University: Oxbridge	0.27	0.45	0.00	1.00
Aristocrat	0.03	0.18	0.00	1.00

Note: All covariates except year of death are measured at the time of the candidates' first race between 1950-1970.

Table 3: Matching Estimates: The Effect of Serving in the House of Commons on (Log) Wealth at Death

	Conservative Party		
	OLS ATE	Matching ATE	Matching ATT
Effect of Serving	0.65	0.75	0.91
Standard Error	0.20	0.25	0.36
Obs	232	232	232
Covariates	x	x	x
Percent Wealth Increase	92	112	148
95 % Lower Bound	29	30	23
95 % Upper Bound	183	246	403

	Labour Party		
	OLS ATE	Matching ATE	Matching ATT
Effect of Serving	0.14	0.08	0.01
Standard Error	0.13	0.17	0.18
Obs	199	199	199
Covariates	x	x	x
Percent Wealth Increase	15	8	1
95 % Lower Bound	-11	-22	-29
95 % Upper Bound	48	51	44

Note: Covariates include all covariates listed in table 2. ATT=Average Treatment Effect for the Treated, ATE=Average Treatment Effect, OLS=Ordinary Least Squares. Matching results are from 1 : 1 Genetic Matching with post-matching regression adjustment. Robust/Abadie-Imbens standard errors in parentheses.

Table 4: Regression Discontinuity Design Results: The Effect of Serving in the House of Commons on (Log) Wealth at Death

	Conservative Party		Labour Party	
Effect of Serving	0.77	0.71	-.14	-.22
Standard Error	(0.33)	(0.38)	(0.32)	(.28)
Observations	158	158	153	152
Covariates		x		x
Percent Wealth Increase	116	103	-13	-20
95 % Lower Bound	13	-3	-54	-54
95 % Upper Bound	312	328	63	39

Note: Effect estimate at the threshold of winning $\tau_{RDD} = E[Y(1) - Y(0)|Z = 0]$ obtained from local linear regression with rectangular kernel (equation 2); bandwidth is 15 percentage point of vote share margin. Robust standard errors in parentheses.

Table 5: The Effect of Serving on Placebo Outcomes

	Conservative Party			Labour Party		
Placebo Outcome	Placebo Effect	95. LB	95 UB	Placebo Effect	95. LB	95 UB
Year of Birth	1.86	7.44	−3.72	1.42	8.20	−5.35
Year of Death	1.03	5.15	−3.08	1.65	5.95	−2.64
Female	−0.04	0.11	−0.19	−0.06	0.04	−0.15
Teacher	−0.09	0.06	−0.25	−0.26	0.00	−0.52
Barrister	0.11	0.29	−0.07	−0.08	0.05	−0.21
Solicitor	−0.17	0.03	−0.38	0.04	0.19	−0.10
Doctor	0.00	0.14	−0.14	0.03	0.16	−0.10
Civil Servant	0.04	0.10	−0.02	−0.04	0.04	−0.11
Local Politician	0.02	0.28	−0.24	0.10	0.42	−0.23
Business	−0.06	0.20	−0.31	0.03	0.16	−0.09
White Collar	−0.00	0.20	−0.20	−0.00	0.13	−0.13
Union Official	0.01	0.06	−0.04	−0.01	0.15	−0.17
Journalist	−0.11	0.02	−0.25	0.03	0.30	−0.24
Miner	0.03	0.08	−0.03	−0.03	0.03	−0.08
Public School	−0.02	0.19	−0.23	0.01	0.11	−0.09
Eton	0.06	0.22	−0.09	−0.05	0.02	−0.12
Elementary School				0.00	0.22	−0.22
Grammar School	−0.03	0.12	−0.18	−0.00	0.33	−0.33
University: Not coded	−0.05	0.26	−0.35	−0.05	0.29	−0.40
University: Technical	0.05	0.12	−0.02	0.16	0.36	−0.05
University: Other	−0.08	0.17	−0.33	−0.07	0.27	−0.40
University: Oxbridge	0.07	0.35	−0.20	−0.03	0.24	−0.31
Aristocrat	0.05	0.20	−0.10			
Vote Margin in Previous Race	0.00	0.05	−0.04	−0.04	0.02	−0.10
Number of Previous Races	0.20	0.59	−0.20	0.31	0.87	−0.26

Note: Every row shows a placebo treatment effect estimated at the threshold of winning $\tau_{RDD} = E[Y(1) - Y(0)|Z = 0]$ obtained from local linear regression with rectangular kernel (equation 2); bandwidth is 15 percentage point of vote share margin. UB and LB refer to the upper and lower bound of the .95 percent confidence interval (based on robust standard errors). Empty cells indicate variables that are constant within a particular party so that placebo effect estimates are not feasible.

Table 6: Declared Annual Outside Income of Members of Parliament in 2007

	Labour		Conservatives	
GBP Range	Count	Fraction	Count	Fraction
0	303	0.910	129	0.655
1-1,000	1	0.003	21	0.107
1,001-5,000	9	0.027	16	0.081
5,001-10,000	8	0.024	7	0.036
10,001-25,000	6	0.018	9	0.046
25,001-50,000	4	0.012	10	0.051
50,001-75,000	0	0.000	2	0.010
75,001-200,000	1	0.003	0	0.000
200,001-713,000	1	0.003	3	0.015

Note: Figures in real 2007 GBP. Information based on Registry of Members' Interests March 26, 2007. Members are expected to register the amount of their outside earnings only where they are "providing services in the capacity of a Member of Parliament." Outside income includes income obtained from journalism and consultancies only; outside income from directorships is not reported.

Table 7: Characteristics of the Political Careers of Members of Parliament (Estimation Sample)

	Mean	Min	1st. Qu	Median	3rd. Qu	Max
Conservative						
Cabinet	0.13	0	0.00	0.00	0.00	1.00
Front Bench	0.27	0	0.00	0.00	1.00	1.00
Lifepeer	0.16	0	0.00	0.00	0.00	1.00
Front Bench or Cabinet	0.40	0	0.00	0.00	1.00	1.00
Age Entered Office	41.00	27	36.00	41.00	46.00	59.00
Year Entered Office	1958	1950	1951	1958	1964	1970
Year Retired from Last Office	1977	1955	1966	1974	1987	2001
Years as MP and Former MP	38.00	14	32.00	39.00	45.00	55.00
Years as MP	19.00	2	9.00	20.00	27.00	51.00
Years as Former MP	19.00	0	10.00	18.00	28.00	45.00
Year of Birth	1916	1895	1912	1916	1921	1940
Labour						
Cabinet	0.14	0	0.00	0.00	0.00	1.00
Frontbench	0.29	0	0.00	0.00	1.00	1.00
Lifepeer	0.21	0	0.00	0.00	0.00	1.00
Front Bench or Cabinet	0.43	0	0.00	0.00	1.00	1.00
Age Entered Office	42.00	31	38.00	42.00	46.00	57.00
Year Entered Office	1963	1950	1962	1964	1966	1970
Year Retired from last Office	1982	1951	1979	1983	1987	1997
Years as MP and Former MP	34.00	18	29.00	34.00	39.00	50.00
Years served as MP	19.00	1	13.00	19.00	26.00	33.00
Years as Former MP	15.00	0	6.00	14.00	20.00	46.00
Year of Birth	1920	1901	1915	1920	1927	1935

Table 8: The Correlates of Wealth: Estimates for Conservative MPs (Estimation Sample)

Dependent Variable	Log Wealth	Log Wealth	Log Wealth
Model Number	(1)	(2)	(3)
Front Bench or Cabinet	0.31	0.30	0.30
	(0.22)	(0.23)	(0.23)
Years as MP and Former MP	0.02		
	(0.012)		
Years Served as MP		0.02	0.03
		(0.01)	(0.02)
Years as Former MP		0.02	0.02
		(0.01)	(0.02)
Years as MP · Years as Former MP			$-2e^{-4}$
			$(1e^{-3})$
Eton or other Public School	0.42	0.43	0.43
	(0.24)	(0.24)	(0.25)
Oxbridge	0.14	0.14	0.13
	(0.22)	(0.23)	(0.22)
Margin of Winning	1.79	1.78	1.79
	(0.89)	(0.89)	(0.90)
Aristocratic Background	0.53	0.53	0.54
	(0.38)	(0.38)	(0.39)
Year of Birth	0.02	0.02	0.02
	(0.01)	(0.02)	(0.01)
Intercept	-33.08	-32.33	-31.70
	(27.16)	(28.35)	(28.69)
N	118	118	118

Note: OLS coefficients with robust standard errors in parentheses.

Figure 1: Typical Entry from the *Times House of Commons*, 1966

DUDLEY

Electorate 74,964. 1964: 74,562

*Wigg, G. E. C. (Lab)	32,693
Williams, W. D. (C)	22,671
Lab Majority	10,022

Total Vote 55,364, Turnout 73·9%—Lab 59·1%, C 40·9%—Maj 18·1%.
Swing +0·10%

No Change

1964: Total Vote 57,059 (76·5%)—Lab 30,250 (53·0%), C 19,980 (35·0%), L 6,829 (12·0%)—Lab Maj 10,270 (18·0%).

Mr. George Wigg, Paymaster General from 1964, with special responsibility for co-ordination of home information services, was elected for Dudley in 1945 and was Parliamentary private secretary to Mr. Shinwell in successive Ministries. Born November, 1900; educated at Fairfields Council School and Queen Mary's School, Basingstoke. Joined the Tank Corps as a regular soldier at the age of 18 and was discharged in 1937. He rejoined the Army in 1940, serving with the Royal Army Educational Corps. Was vice-chairman of the parliamentary Labour Party defence committee. Former member of the Horserace Totalisator Board.

Mr. Donald Williams is a chartered accountant. Born October, 1919; educated at the Royal Grammar School, Worcester. Held offices with South Worcestershire and Malvern Conservative Associations.

Figure 2: QQ-Plots Comparing (Log) Wealth at Death for Competitive Candidates that ran for the House of Commons between 1950-1970

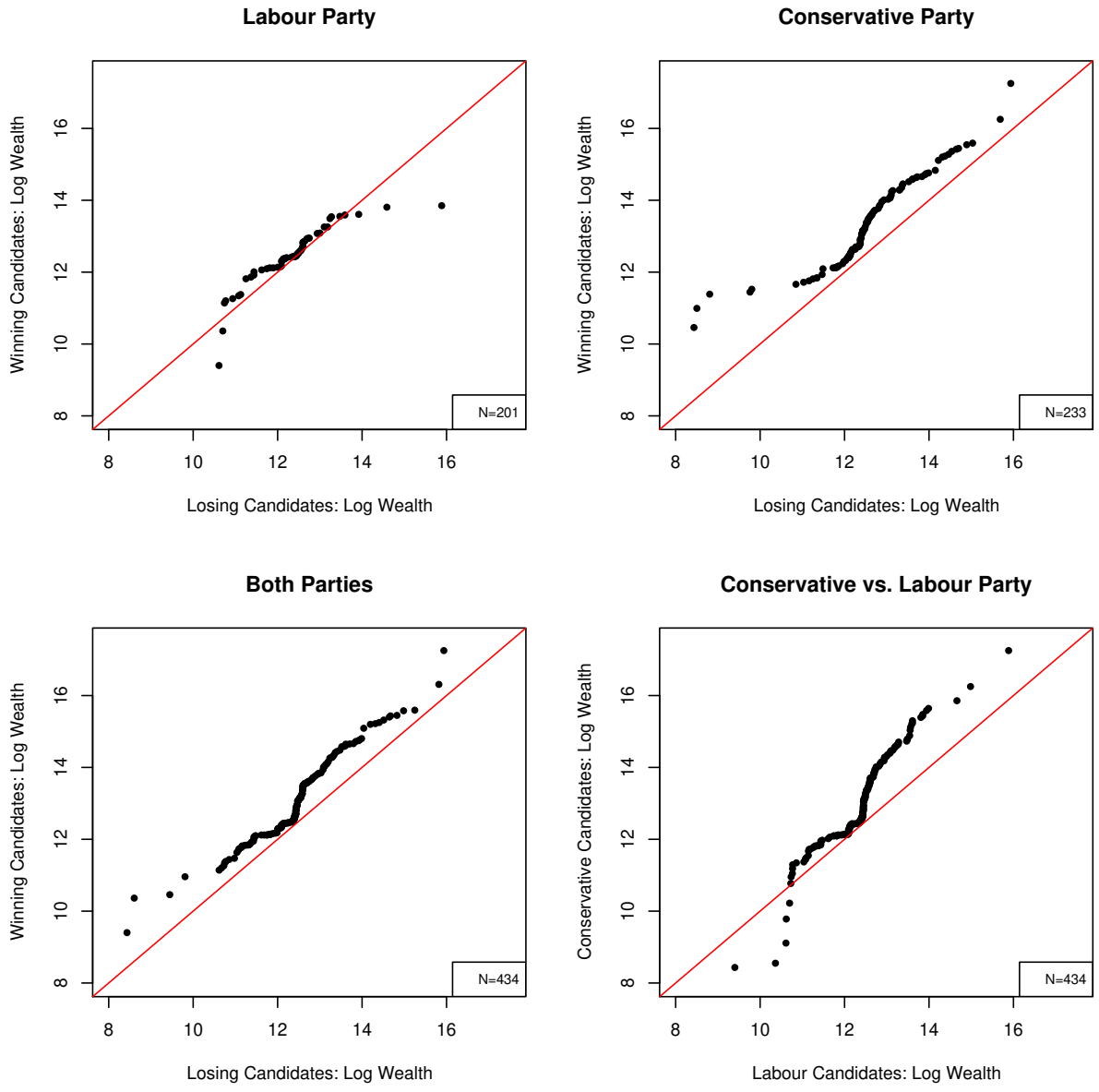

Figure 3: Covariate Balance for Conservative Candidates Before and After Matching (1:1 Genetic Matching)

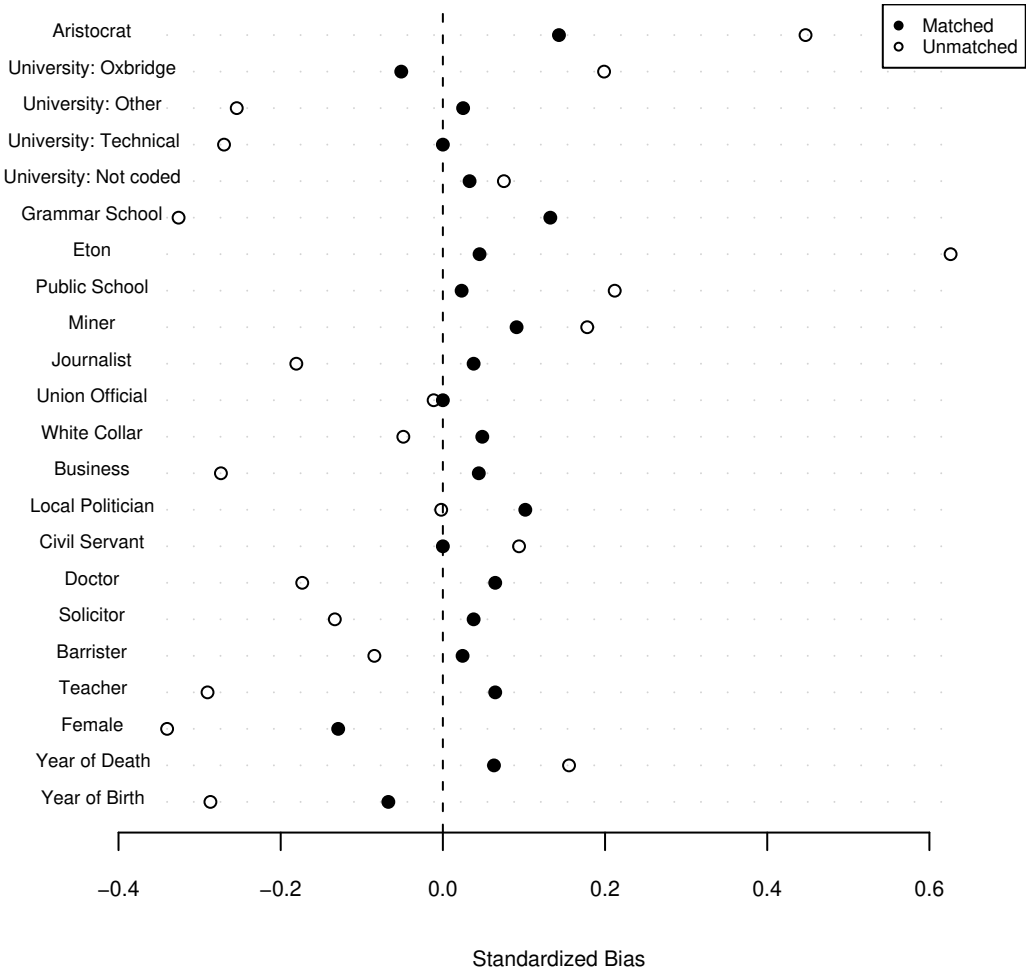

Figure 4: Covariate Balance for Labour Candidates Before and After Matching (1:1 Genetic Matching)

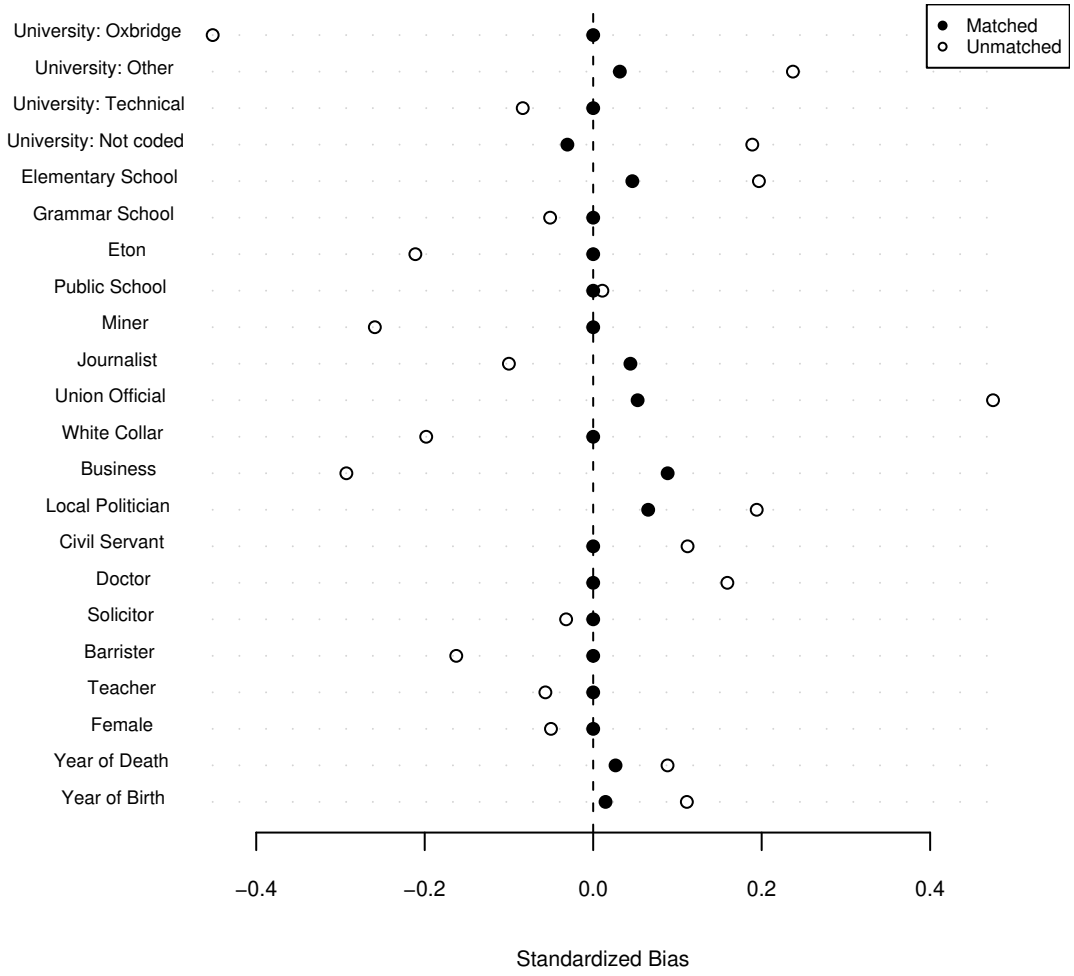

Figure 5: Regression Discontinuity Design: The Effect of Serving in the House of Commons on (Log) Wealth at Death for Conservatives Candidates

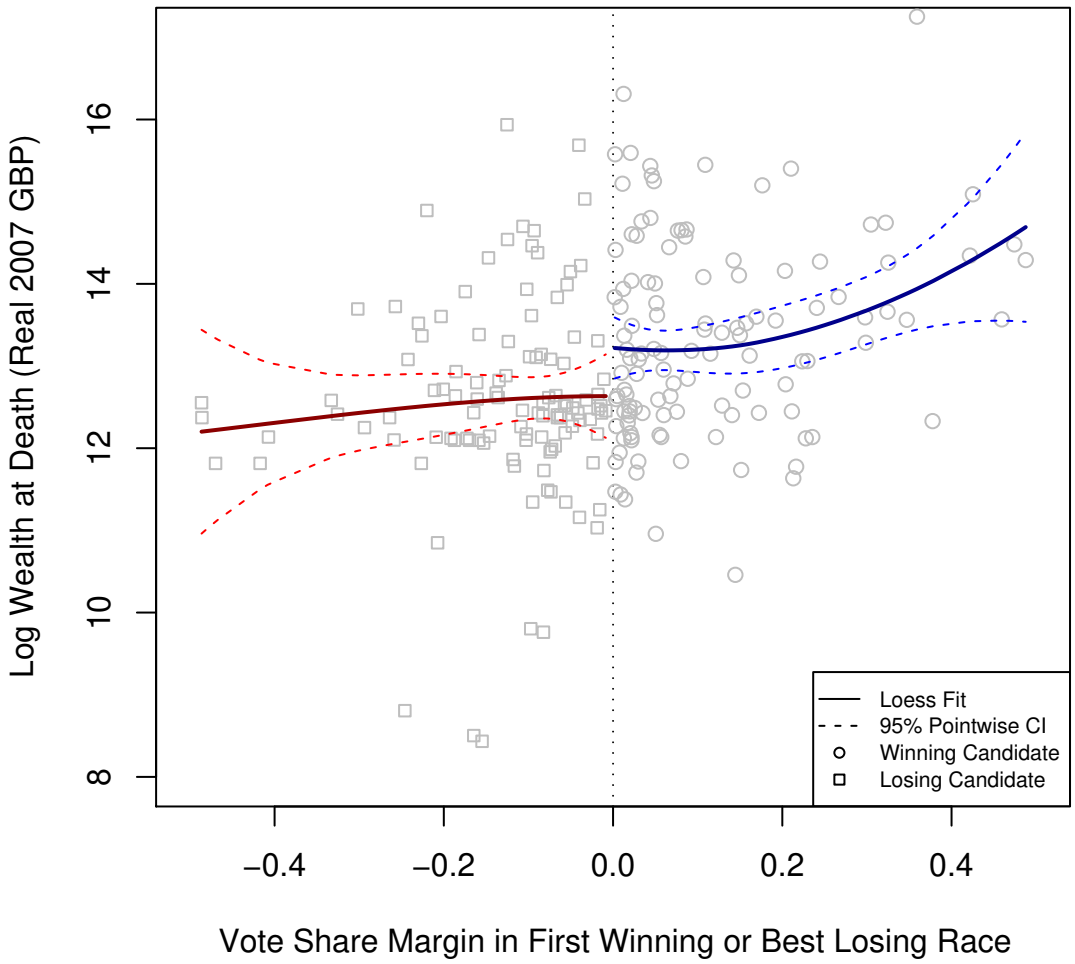

Figure 6: Regression Discontinuity Design: The Effect of Serving in the House of Commons on (Log) Wealth at Death for Labour Candidates

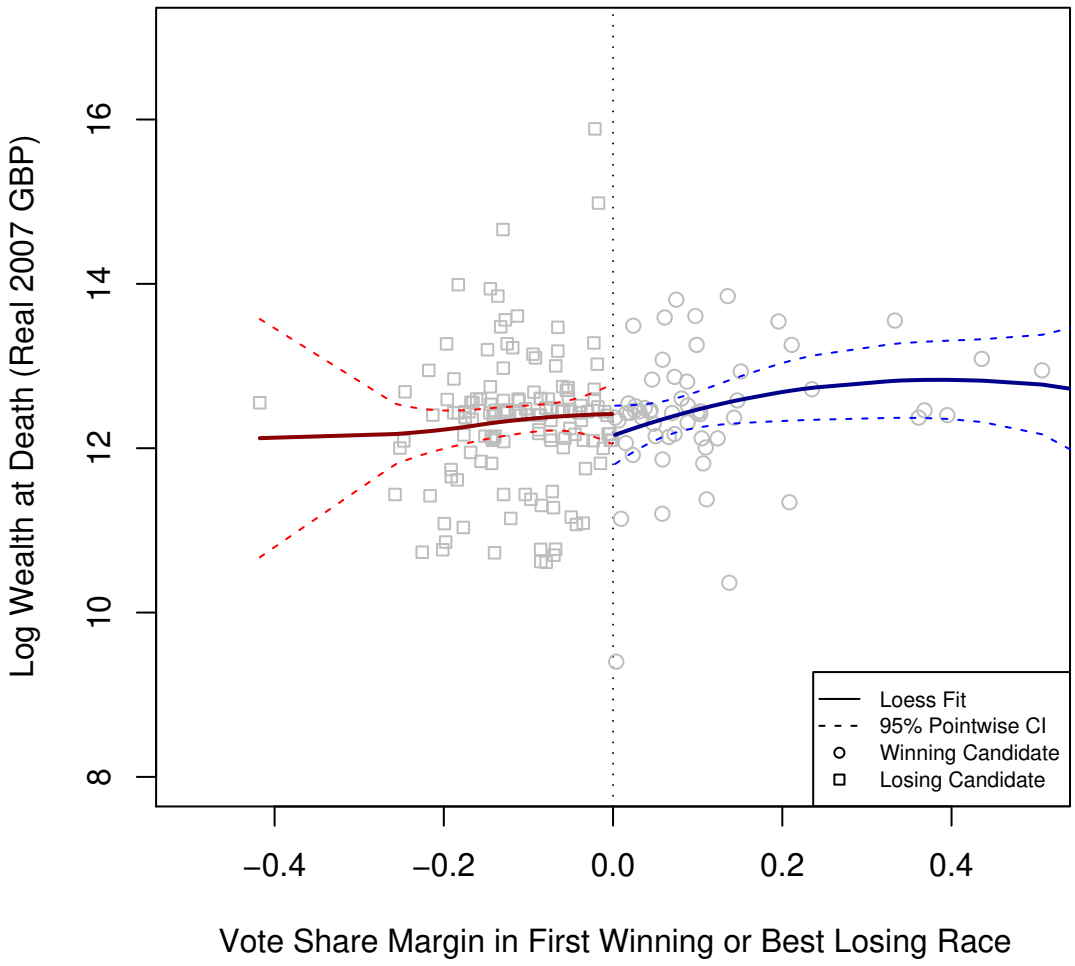

Figure 7: Testing for Jumps at Non-discontinuity Points: Estimates for Conservative Candidates

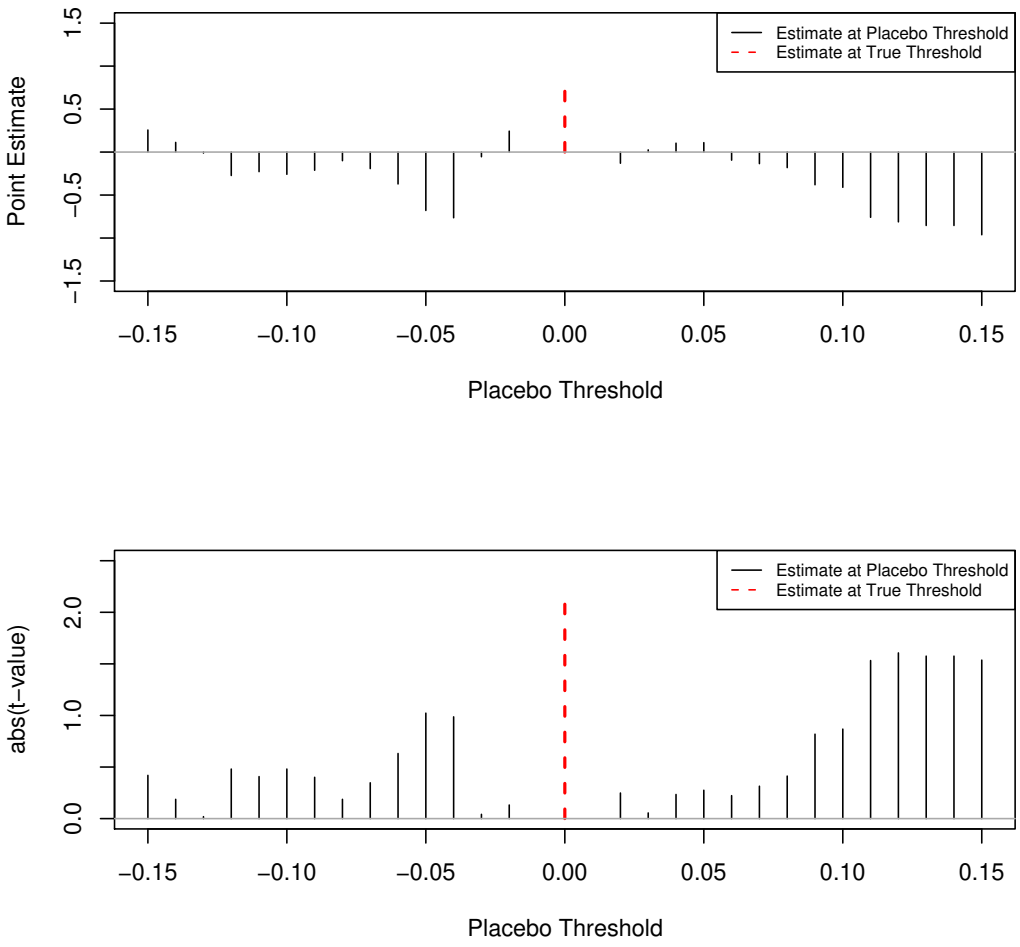

Figure 8: Fraction of Members of Parliament that declared Outside Interests 1975, 1990, and 2007 (fractions by party; dashed (solid) line decodes Labour (Conservatives))