# The Value of Political Power: Estimating Returns to Office in Post-War British Politics

Andy Eggers – Harvard University
Jens Hainmueller – Harvard University

September 2008

Many recent studies show that firms profit from connections to influential politicians, but less is known about how much politicians financially benefit from wielding political influence. We estimate the returns to serving in Parliament using original data on the estates of recently deceased British politicians. Applying both matching and a regression discontinuity design to compare MPs with parliamentary candidates who narrowly lost, we find that serving in office almost doubled the wealth of Conservative MPs but had no discernible financial benefits for Labour MPs. Conservative MPs profited from office largely through lucrative outside employment they acquired as a result of their political positions; we show that gaining a seat in Parliament increased the probability that a Conservative politician would later serve as a director of a publicly-traded firm. We suggest that Labour MPs did not profit from office largely because trade unions effectively monopolized the market for political services by controlling the party and its politicians. Our findings provide evidence relevant to a growing theoretical and empirical literature assessing the relationship between the financial rewards of political office and the quality of politicians.

Andy Eggers, PhD Candidate, Department of Government, 1737 Cambridge Street, Cambridge, MA 02138. Email: aeggers@fas.harvard.edu. Jens Hainmueller, PhD Candidate, Department of Government, 1737 Cambridge Street, Cambridge, MA 02138. E-mail: jhainm@fas.harvard.edu. Authors are listed in alphabetical order and contributed equally. Both authors are affiliated with Harvard's Institute for Quantitative Social Science (IQSS).

We thank Alberto Abadie, Jim Alt, Sebastian Bauhoff, Ryan Bubb, Jeff Frieden, Justin Grimmer, Torben Iversen, Mike Kellermann, Gary King, Roderick MacFarquhar, Clayton Nall, Riccardo Puglisi, Jim Robinson, Don Rubin, Ken Shepsle, Beth Simmons, Patrick Warren, Kevin Quinn, and seminar participants at Harvard, MIT, Penn State, and the NBER Political Economy Student Conference for helpful comments. For excellent research assistance we thank Matthew Hinds, Nami Sung, and Diana Zhang. We would especially like to thank Jim Snyder who directly inspired this project. The usual disclaimer applies.

"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

In October of 1989, Nigel Lawson resigned after six years as Chancellor of the Exchequer under Margaret Thatcher. Four months later, while still a Member of Parliament, Lawson was named a non-executive director at Barclays Bank with a salary of 100,000 GBP – roughly four times his MP pay. The afternoon the appointment was announced, Barclays' market value rose by nearly 90 million pounds (Hollingsworth 1991, pg. 150).

Anecdotes like this suggest that political connections can be of great value to private firms. In a number of recent papers, economists have begun to systematically examine this value in a variety of settings. Firms with close familial or financial connections to politicians enjoy higher stock valuations in Indonesia (Fisman 2001), the United States (Jayachandran 2006, Goldman et al. 2006, Roberts 1990), Malaysia (Johnson & Mitton 2003), and Nazi Germany (Ferguson & Voth 2008); in Pakistan, politically connected firms are able to secure more favorable loans from government banks (Khwaja & Mian 2005). Faccio (2006) shows that the benefits of political connections are larger in countries with higher corruption scores.

In this paper, we approach the market for political favors in the UK from the opposite perspective. Where others have focused on the benefits companies like Barclays obtain through connections to powerful politicians, we analyze the benefits politicians like Lawson obtain on the basis of their political power. If firms buy political favors, and if they do so in part by providing employment, gifts, or bribes to politicians, then politicians can be expected to benefit financially from office just as firms do from connections to officeholders. We attempt to measure this benefit by examining the effect of serving in Parliament on the estates of British politicians who entered the House of Commons between 1950 and 1970 and have since died.

Measuring the value of political power is difficult in part because detailed data on politicians' personal finances is generally not available. Even if we knew a given MP's income from all sources over the course of his life, however, it would still be difficult to determine what portion of those payments were a result of his political power. MPs are not randomly selected from the population (which is unfortunate for researchers but probably fortunate for citizens), so a comparison of MPs' income or wealth with that of a peer group outside of politics is likely to reflect factors that led MPs to have political power as well as the value of political power itself.

Our strategy is to compare the wealth (at death) of MPs with that of politicians who ran for Parliament unsuccessfully. Voting, not randomization, decides which candidates win elections; we address the resulting selection problem in two ways. First, we employ conventional methods of covariate adjustment (matching and regression) to control for imbalances in key candidate-level confounding factors recorded in our dataset, including age, occupation, schools and universities attended, and titles of nobility. Second, we employ a regression discontinuity design (Thistlethwaite & Campbell 1960, Lee 2008), which exploits the quasi-random assignment of office in very close races to estimate the effect of office on wealth. Our estimation strategies yield the same basic result: serving in Parliament was quite lucrative for MPs from the Conservative Party but not for MPs from the rival Labour Party. Conservative MPs died almost twice as wealthy as similar Conservatives who unsuccessfully ran for Parliament; no such difference is evident among Labour politicians.

Serving in political office could affect one's wealth at death through many channels, including official perquisites (the office could provide a salary and in-kind payment different from what one could earn in the private sector), lifestyle changes (political culture could shape one's consumption patterns or bequest motive), and health (the stress or glory of being in Parliament might affect how long one accumulates and depletes savings). Our investigations suggest that these pathways do not account for the wealth gains we observe among Conservative politicians. The official perquisites of office were modest in the period

we examine, particularly compared to salaries in occupations Conservative candidates typically carried on before standing for office. We know of no particular lifestyle changes made by Conservative MPs that would substantially affect their personal finances or bequests.[1] Our analysis also reveals no effect of winning office on longevity. We therefore interpret the wealth gains we measure as a conservative estimate of the *political power premium* enjoyed by Conservative MPs – the boost in wealth an individual obtains by acquiring political power, realized mainly through transfers from firms and labor unions in the form of employment contracts and gifts.[2]

Our finding that Conservative MPs gained more from office than did Labour MPs is consistent with evidence that Conservative MPs were much more likely to serve as paid legislative liaisons to firms (whether as directors, consultants, or lobbyists) in the period we examine. (As suggested by the anecdote with which we open the paper, it was - and remains - legal and common for British firms to hire sitting MPs.) To address the possibility that these arrangements were unrelated to the MPs' political power, we demonstrate that being elected to Parliament increased the probability that a Conservative politician (but not a Labourite) would later be appointed to the board of directors of a publicly-traded firm. We suggest that the larger political power premium enjoyed by Conservative MPs was due in part to differences in the way the parties were financed and organized. The Labour Party was funded and dominated by a handful of trade unions that used their influence to secure the exclusive loyalty of a large proportion of Labour MPs. The Conservative Party by contrast gathered its financial support from diffuse contributors and had no dominant constituency, leaving MPs relatively free to forge relationships with numerous outside firms that competed for their legislative services. MPs from both parties thus explicitly provided services to outside interests, but the trade unions shaped Labour Party institutions such that they could acquire those services without making large payments directly to the MPs.

In studying connections between firms and politicians from the perspective of politicians,

[1] A possible exception is that MPs were probably more likely to invest in London real estate.

[2] As discussed below, our estimate measures the effect of power on bequest size; some consideration is required to translate that effect into the effect on earnings.

our work is closely related to Bertrand et al. (2004), who provide evidence that French CEOs bolster employment rolls in advance of elections as part of an exchange with French politicians. Our work is also closely related to Querubin & Snyder (2008), who compare wealth data from a sample of winners and losers to examine the financial benefits of serving in the US Congress in the 19th century. Because we estimate the financial benefit of serving in office, our approach also furnishes evidence relevant to literatures in economics and political science on candidate recruitment (Schlesinger 1966, Rohde 1979, Fiorina 1994, Osborne & Slivinski 1996, Besley & Coate 1997) and candidate retirement (Groseclose & Krehbiel 1994, Hall & van Houweling 1995, Diermeier et al. 2005, Keane & Merlo 2007). The monetary benefit of officeholding appears as an important parameter in numerous recent political economy models examining the selection and behavior of politicians (e.g., Caselli & Morelli (2004), Messner & Polborn (2004), Besley (2005, 2006), Dal Bó et al. (2006), Mattozzi & Merlo (2007)), but in many settings (including British politics, according to our findings), the official wage provided to politicians gives us an incomplete picture of the true financial rewards of office. Further investigations of the relationship between politician quality and compensation are informed by evidence, like ours, that provides a more comprehensive view of the returns to office. As noted by Besley (2004), it important to consider the rewards of officeholding itself and the private-sector rewards available to officeholders, as they may have different effects on politician quality: higher politician salaries may, like an efficiency wage, serve to discipline politicians and improve the quality of policies, but the effect of greater private sector rewards depends on whether the firms compensate politicians for acting with or against voter interests. (Mattozzi & Merlo (2007) and Diermeier et al. (2005) offer evidence on post-parliamentary returns; Gagliarducci et al. (2008) and Ferraz & Finan (2008) use data from Italy and Brazil, respectively, to assess the relationship between politicians' outside opportunities, salary, and effectiveness.)

We present our evidence and argument as follows. In the next section, we discuss the regulation of MPs' outside employment and other financial arrangements in a comparative international context. In Section 3 we introduce our data on the wealth of British politi-

cians, and in Section 4 we use this data to estimate the effect of serving in Parliament on wealth. In Section 5 we consider possible channels through which MPs likely increased their wealth, focusing on opportunities for earning outside income through consultancies and directorships, and consider possible reasons why Conservatives and not Labourites benefited from these opportunities. In Section 6 we conclude.

## II. The Context: Regulation of MPs' Outside Financial Arrangements

As in many other parliaments, members of the British House of Commons are permitted to take on a variety of outside work while serving in office. Throughout the period since World War II, it has been common for MPs to serve on corporate boards, act as "parliamentary consultants" for firms or industry groups, and draw stipends from trade unions. While the practice of MPs carrying on work outside of Parliament is consistent with the concept of parliaments as citizens' assemblies, it has long been recognized that these outside arrangements might conflict with MPs' duties to serve the public interest and their constituencies. (Exposés in the UK include Stewart (1958), Noel-Baker (1961), Finer (1962), Roth (1965), Judge (1984), Doig (1984), Hollingsworth (1991); for a general model of the tradeoff between candidate quality and candidate diligence involved in allowing MPs to pursue outside employment while in officde, see Gagliarducci et al. (2008).) The Commons has addressed these potential conflicts mostly through disclosure practices (Atkinson & Mancuso 1991). Before the 1970s, custom required MPs to disclose any conflicts before speaking or voting. In 1975, the Commons formalized disclosure by introducing a Register of Members' Interests (RMI) in which members are required to list the names of outside employers and, since 1996, amounts received for certain kinds of work. Other than disclosure, the only formal constraints on members' outside activities are that ministers are not permitted to take on outside employment, MPs cannot concurrently serve in one of a number of public posts, and (since 1996) MPs cannot perform "paid advocacy," i.e. speak, vote, or lobby on any issue before Parliament for pay, but there are no limits on outside earnings.[3] There are

[3]Critics have claimed that disclosure has been incomplete and ineffective at constraining conflicts of interest (Strudwick & Cole (2005, pg. 395), Hollingsworth (1991, pg. 165)). For example, MP Enoch Powell

also no restrictions on employment MPs can pursue in the private or public sector after leaving Parliament (Whaley 1999).

The approach taken by the House of Commons may seem lax from the perspective of the present-day US Congress, whose members are prohibited from taking on almost all outside employment, face strict caps on earned income, gifts, and travel, and are prohibited from taking lobbying employment during a "cooling off period" after leaving Congress.[4] In international comparison, though, it becomes clear that the strictness of the US Congress, and not the laxity of Parliament, is what is remarkable. Faccio (2006) presents a comparison of regulations on outside employment faced by MPs in forty-seven parliaments around the world. Only eight countries (including the US, Israel, Peru, and Brazil) prohibit both MPs and ministers from occupying paid positions on corporate boards while in office; eleven others (including Japan, Italy, Mexico, and India) have no significant rules prohibiting MPs or ministers from sitting on corporate boards. The approach taken in Britain throughout the period we examine (directorships permitted for MPs but not ministers) is in fact the modal approach in Faccio's survey, and the strictness of Britain's regulations is slightly above the average according to Faccio's scale.[5] That regulations on British MPs are fairly typical is further confirmed by a 1999 report (Whaley 1999) surveying codes of conduct, disclosure rules, and employment restrictions in twenty countries of various levels of economic development.

While the regulation of outside interests in the House of Commons is moderate by international standards, there is evidence that connections between British MPs and British industry are unusually close. Faccio (2006) estimates that 39% of British firms (by market capitalization) are connected to a politician in some way, making the UK the third most

simply refused to declare his interests in the RMI until he retired in 1987, but was not sanctioned. The first report of the Nolan Committee, which was convened in 1995 to address an uproar over potential conflicts of interest posed by MPs' outside activities, also highlighted the insufficiency of the RMI (Nolan 1995).

[4]Committee of Standards of Official Conduct, *House Ethics Manual*, 2008 edition.

[5]While a comparable survey of regulations in earlier periods has not been conducted, it is worth noting that there was little difference in the regulation of members' outside interests between Britain and the US until the late 1970s. Senators could serve on corporate boards until 1977, and members of the House as recently as 1990; a cap on outside earned income was first introduced in the House in 1977 and the Senate in 1990. See Susan F. Rasky, "Plan to Ban Fees Spurs Lawmakers," *The New York Times*, February 1, 1989.

connected country in her sample, behind only Russia and Thailand.[6] Faccio's estimate may overstate the extent of connections in the UK in comparison to other countries, since many of the connections she observes involve members of the House of Lords, a largely ceremonial body with no counterpart in most countries in her survey.[7] Still, even if half of the connections she records are attributed to the House of Lords and thrown out, the UK remains among the top five most connected countries in the survey.

To provide a longer view of the extent of connections between MPs and business in the UK, we recorded the outside interests listed in the RMI for 1975 (the first year it was published), 1990, and 2007. Figure 1 depicts the proportion of MPs, by party, who reported outside employment as directors, journalists, or consultants, as well the proportion of MPs who reported other employment, a union sponsorship, or significant shareholdings.[8] The plots indicate that a considerable proportion of MPs had outside engagements but, as might be expected, there were stark differences in the types of engagements undertaken by Conservative and Labour MPs. Around half of Conservative MPs sat on corporate

[6]Faccio labels a firm as politically connected if an MP or government minister is either a top officer or a large shareholder as of 2001.

[7]Many lords are former members of the House of Commons or are otherwise highly connected to the political system. A Register of Lords' Interests, comparable to the RMI, confirms that peers are highly connected to business; see e.g. Jo Dillon, "One in three peers has seat in boardroom," *The Independent*, July 28, 2002.

[8]We used RMIs published on 1 November 1975, 8 January 1990, and 26 March 2007. 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 declared as unremunerated, charitable, or obviously unrelated to commercial lobbying (eg. council work). We included consultancy work for trade union related groups. For 2007, we also included speech engagements that are clearly connected to consulting work. 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. We excluded unremunerated journalistic activities and activities where fees are reported to be transferred to charities. Union sponsorship includes campaign support as well as continual sponsorship of sitting MPs. Employment includes regular 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. We excluded work that is declared as infrequent (such as occasional work as Queen's Council). MPs are required to register shareholdings for any public or private company in which they hold more than 15 percent of the issued share capital or shares worth more than 100 percent of the official MP salary (for example 60,675 GBP in 2007).

boards at each point examined, and around half reported employment as a "parliamentary consultant." Labour MPs were much less likely to hold either kind of position but, up until the 1990s, were very likely to be sponsored by a trade union. (The Labour Party ended union sponsorships in 1996 in part to sharpen its attacks on Conservatives' outside financial dealings.[9]) Plenty of anecdotal evidence suggests that the rough pattern of outside interests revealed by the first RMI in 1975 extends back well into the 1950s and 1960s.[10] Taken together, the considerable levels of reported outside employment raise the possibility that MPs made sizable financial gains while in office; the differences across parties provide an initial indication that those gains may have varied by party.

## III. The Wealth of Candidates to the House of Commons

### A. Data and Estimation Sample

Our research design assesses the financial benefits of political office by comparing the wealth of MPs with that of unsuccessful candidates. In this section we describe the process by which we collected wealth data, along with relevant covariates, for a sample of winning and losing candidates to the British House of Commons.

As a measure of wealth, we focus on politicians' probate values, a legal record of the size of an individual's estate at the time of death.[11] Probate values are widely used as a

[9] James Blitz, "Labour poised to end trade union sponsorship of MPs," *Financial Times*, February 28, 1996.

[10] 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. A sharp increase in the MP-as-lobbyist pattern occurred after World War II (see Stewart (1958) and Beer (1956) for early studies). 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 notes 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) and Harrison (1960) for evidence on sponsored MPs in the 1950s and 1960s). 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). Similarly, Muller (1977) shows that between 1945 and 1975 over 30% of all Labour candidates and over 40% of all Labour MPs were directly sponsored by the unions.

[11] In the UK, a probate is needed in order for a deceased person's representative to administer the assets

measure of wealth by economic historians[12] and provide the basis for official statistics on the distribution of wealth even today.[13] Over 90% of UK citizens leave a probate record (the exceptions being mostly indigent people) and the probate values for residents of England and Wales since 1858 are available in a single archive in London that allows to collect the probate value for a person with a known name and date of death.

Since the biographies of MPs are typically listed in encyclopedias and official publications, the names and dates of death of successful candidates are easy to acquire. The primary difficulty is in finding the date of death of losing candidates, who for the most part leave a very scant historical trace. Fortunately, starting in the late 19th century the *Times of London* published brief biographies of every parliamentary candidate (winning and losing) standing for the House of Commons in each election. Since the candidate biographies are published at the time of the election, they do not of course provide the date of death. Still, the details provided by the biographies - in particular, the full candidate name along with the year and sometimes month of birth - are sufficient to locate many candidates in public death record archives. We used an online genealogy database[14] that indexed all death records filed since 1984 by year and month of birth, which made it quite straightforward to find the date of death for a candidate using the information in the *Times* biographies.[15] An additional benefit of the *Times* biographies is that they include information on the education, occupation, and sometimes family background of the candidates,

of the estate. A probate is normally filed for all estates containing real property and/or a single class of asset worth 5,000 GBP 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 3,000 GBP 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.

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

[13]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).

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

[15]Death records before 1984 are also available from this and other archives, but only as image files and not indexed by date of birth. This makes it much more time consuming to find earlier deaths, which led us to restrict our search to deaths since 1984.

characteristics which are likely to be correlated with the candidates' ability and wealth at the time they ran for office.

We therefore digitized the *Times Guide to the House of Commons* for each of the seven general elections between 1950 and 1970[16] and extracted key biographical and electoral information for every candidate (some 5,729 individuals). For each candidate, we record the full name, date of birth (year and, if available, month), education (both secondary and university), and occupation, as well as an indicator for whether he or she has a title of nobility. We then used the genealogy database to search for the date of death of 2,904 relatively competitive candidates, which at this stage we define as candidates 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. In order to ensure the comparability of our winning and losing samples we ignored public information about winners' death dates and searched for the date of death in the same way for both MPs and losing candidates. This results in some known Type I and Type II errors in the sample of winners, but reduces the possibility that an observed difference in wealth between the two groups could be due to measurement error.[17]

[16] 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* did not provide candidates' years of birth before its 1950 edition, which sets the lower bound on our search range. 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.

[17] To develop a protocol for finding death records given names and dates of birth, 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 searched the genealogy database for the death dates of these figures using only the last name and year/month of birth. For most names this search retrieves several possible matches, even in cases where the individual is not yet dead or died before the database's start year. We employed the random forests algorithm (Breiman 2001) to optimally identify correct matches using information about closeness of the name match and raw name frequency. Cross-validation indicated

With the 665 death records we obtained, we were then able to find probate values for 561 candidates in the probate calendar stored at First Avenue House in London.[18] We then exclude from our estimation sample 67 candidates who were from minor parties (36 Liberals and 31 from regional parties) and a further 67 candidates who were found to have served before 1950, which leaves us with 427 candidates overall. Of these, 165 candidates are "competitive winners" in the sense that they entered Parliament in a race they won by fewer than $10,000$ votes; the remaining 262 candidates are "competitive losers" in the sense that at some point they came within $10,000$ votes of winning.[19] The candidates in our estimation sample are spread quite evenly geographically across Britain (with candidates appearing in 383 out of 658 possible constituencies between 1950 and 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 provides descriptive statistics on the distribution of wealth at the time of death for 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

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%.

[18]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.

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

Youngson) to 12,133,626 GBP for the richest candidate (Conservative Jacob Astor). The median wealth at death is 257,948 GBP. As a benchmark, the median gross value of the estate for males aged 65 and above in 2002 was 113,477 GBP,[20] indicating that the median candidate died with almost twice the wealth of the median senior citizen in recent years. This result is roughly consistent with Gagliarducci et al. (2008) who find that the pre-parliament income of Italian politicians exceeds the median income in the rest of the Italian population by about 45 percent.

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. As shown in Table 1, the median wealth among Conservatives exceeded that among Labourites by 50,000 GBP. Table 1 also provides the first indication that Conservative MPs died much wealthier than unsuccessful Conservative candidates; the median Conservative MP died with 483,448 GBP while his unsuccessful counterpart passed away with a "mere" 250,699 GBP. The difference on the Labour side is less than 10,200 GBP. Figure 2 provides another look at this comparison by depicting the estimated density of log wealth for successful and unsuccessful candidates from each party. The first three wealth distributions (for winning and losing Labour candidates and losing Conservatives) look quite similar, but the wealth distribution for Conservative MPs appears to be shifted quite markedly to the right. Clearly, this difference must reflect either a substantial effect of office on wealth for Conservatives or a strong electoral bias toward wealthier candidates among Conservatives (or both). In the next section we attempt to disentangle these possibilities.

## IV. Estimating the effect of office on wealth

Since political office is not randomly assigned among candidates, MPs and losing candidates may differ in ways that are correlated with both wealth and the probability of gaining

[20] 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.

office.[21] As noted in the previous section, our first line of defense against these confounding factors is to restrict our sample to relatively competitive candidates. In this section we describe statistical approaches we use to address remaining confounders.

## A. Matching Estimates

Our dataset includes an unusually rich set of covariates for each candidate, which makes it possible to condition on many potential differences between winners and losers. In particular, for every candidate we record the year of birth, gender, party, schooling, university education, detailed occupation, titles of nobility, [22] 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.[23]

To clarify the assumptions for the estimation 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

[21]The most obvious reason why winners and losers might systematically differ is that voters choose winners in a democracy, and voters might have preferences over candidate characteristics that are correlated with wealth. A more subtle, but probably more powerful, reason is that higher-quality candidates are likely to run in more favorable districts. Because the opportunity cost of running for office is presumably higher for wealthier and abler individuals, higher-quality candidates are likely to run in districts where the probability of winning is higher. If that is the case, winning candidates might die richer than losing ones even if voters ignore candidate characteristics *and* office has no effect on wealth. This more subtle selection effect may have been present in Britain in the period we examine because, with no residency requirement for being staged in a particular constituency, would-be candidates sometimes auditioned in multiple constituencies in a quest for the safest districts (Rush 1969). However, given our focus on close races this is presumably much less of a concern. In fact, we show below that in our sample there is no strong correlation between the vote share margin and wealth at death.

[22]We indicate that the candidate has a title of nobility if "Sir", "Viscount", "Lady" or "Lord" precedes the name in the *Times* biography.

[23]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.

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, only one of the potential outcomes is observed for each candidate. In the following we proceed by assuming unconfoundedness 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 unconfoundedness 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 at Oxbridge, worked as a barrister, or has a title of nobility – will be highly correlated with pre-existing wealth and therefore 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.

We chose matching as our main method of covariate adjustment in order to avoid parametric assumptions and to keep the analysis transparent.[24] Specifically, we employ Genetic Matching (with replacement) following Diamond & Sekhon (2006)[25] with post-

[24]See Imbens (2004) and Rubin (2006) for reviews. We have tried several other techniques for covariate adjustment such as propensity score matching or regular Mahalanobis distance matching, weighting on the propensity score, and subclassification. All of these techniques lead to very similar results (available upon request).

[25]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

matching regression adjustment as proposed in Abadie & Imbens (2002). For comparison we also provide results from a regular OLS regression in the un-matched data. 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 one-to-one matching (i.e. $M = 1$). For each covariate, we plot the 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 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 less likely to be in white-collar professions (engineering, accounting, or public relations), journalism, and teaching professions, and also less likely to have business backgrounds. After matching, however, we achieve a very high degree of covariate balance (filled circles). The standardized bias is now within 0.1 for all variables. The lowest p-value across paired t-tests and KS tests is 0.16, which indicates that the corresponding distributions for the matched groups 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 pre-existing differences.[26]

The upper panel in Table 3 displays our effect estimates. The first column presents the results from a simple OLS regression (with robust standard errors) of wealth on the

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.

[26]Notice that there are no union officials or miners among the Conservative candidates so these two variables are balanced in the unmatched data already.

treatment indicator including all the covariates. Columns two and three 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 71 and 155 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, Eton schooling, or business background than among the unsuccessful candidates, but a higher fraction of union officials and local politicians. 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 .30.

The lower panel in Table 3 presents the matching-based effect estimates for Labour candidates. Consistent with the distributional box-plots shown earlier, we find no effect of serving on wealth at death. The point estimates across all models are close to zero. Although this null finding is not very precisely estimated, the difference between the effect for Conservative and Labour MPs is clear: in an OLS regression pooling the two parties, the p-value on the test that the coefficient is the same for the two parties is 0.054.

## 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 unob-

served 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 the winners and losers of elections decided by razor-thin margins to systematically differ in any way. 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 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.[27]

Given this definition, gaining office is a deterministic function of the margin $W_i = 1\{Z_i \geq 0\}$.[28] 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

[27]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 similar but very imprecise given our limited sample size and the efficiency loss incurred. The fuzzy design is particularly inefficient 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.

[28]There are no ties in our data.

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 $z$.[29] This assumption is fairly weak and will fail only if candidates can 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.[30]

Figure 5 presents the graphical results from the RD design for Conservative candidates. 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) and unsuccessful candidates (to the left of the threshold). 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 defined as the difference of the two conditional expectation functions at the threshold. By (minimally) extrapolating the polynomial fit to the threshold, we estimate that marginal winning candidates died with about 546,000 GBP compared to about 298,000 GBP for losing candidates. The first column in table 4 displays the formal estimate of this jump in the conditional expectation function at the discontinuity which is about 250,000 GBP or about a 83 percent increase in wealth at death. The (non-parametric) bootstrapped

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

[30] As is well known, the RD design is likely to have a very high degree of internal validity, but we pay a price in terms of decreased external validity and also efficiency. $\tau_{RDD}$ is a local average treatment effect informative only for marginal candidates close to the threshold of winning (unless additional homogeneity assumptions are introduced). This is desirable in our context, however, because the counterfactual seems more reasonable for marginal compared to "unbeatable" candidates. Moreover, given that candidates in closer races attract more public scrutiny and face a higher risk of electoral defeat, rent seeking may be limited compared to candidates in safe districts (Barro 1973, Besley & Case 1995, Besley & Burgess 2002). Presumably our estimates of the returns to office therefore provide a conservative lower bound for the average across all MPs.

.95 percent confidence interval ranges from 8 to 212 percent. This estimate is similar to the matching results obtained earlier and suggests that narrowly successful Conservative candidates almost doubled their wealth by winning office.

Another notable feature in Figure 5 that the conditional expectation of wealth is not steeply increasing in the vote share margin over the support of the vote 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 or were otherwise strongly selected based on existing wealth (at least for our sample of competitive winners and losers). This might explain why the RD results do not differ much from the regression and 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 almost no discontinuity at the threshold, suggesting that there is no effect of winning office on wealth among Labourites. The third column in table 4 displays the estimate of the jump in the conditional expectation function at the discontinuity which is about $56,000$ GBP or about a 18 percent decrease in wealth at death. The bootstrapped .95 percent confidence interval ranges from $-52$ to 32 percent.

As expected, the results from the graphical analysis do not change when we introduce covariates into the estimation. To formally estimate the difference of the two regression functions at the discontinuity point while including our full set of covariates, we follow the proposal by Imbens & Lemieux (2007) and fit a local linear regression of the form:[31]

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

where $\tau$ identifies our treatment effect estimate. The variance of $\tau$ can simply be estimated using the standard robust variance from the OLS regression. The bandwidth around the

[31]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.

threshold of winning, $h$, is chosen by the Imbens and Lemieux (two-sided) cross-validation criterion.[32] The optimal bandwidth according to this criterion is about 15 percentage points of vote share.[33] The second and fourth columns in Table 4 present results for this regression with our full set of covariates (including schooling, university education, occupation, gender, year of birth, and year of death). Just as in a randomized experiment the inclusion of covariates has only a small effect on the estimate of $\tau$ because, in the close neighborhood of the threshold, all observed and unobserved covariates should be independent of $W$. We again reject the null at the 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.

## 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 5 percentage point increments along the range of the vote share variable, in each case limiting analysis to either the winning or losing candidates.[34] 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 out from the placebo effects. The placebo effects are generally smaller in magnitude; all of the them are highly insignificant at conventional levels. This

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

[33] As suggested by the flatness of the conditional expectation, our results are fairly insensitive to the choice of bandwidth for the rectangular kernel, 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 .82 (.59) when we use half the optimal threshold (i.e. 7.5 percentage points) and .57 (.29) when double the optimal bandwidth (i.e. 30 percentage points) is used. For completeness, the same estimates without all covariates are .71 (.45) for half and .63 (.27) for double the bandwidth.

[34] 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.

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),[35] 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. The 95% confidence interval on the estimated placebo effect includes zero for all covariates over both parties, with only one exception (an indicator for candidates whose secondary school is not reported in their bios). After correcting for multiple comparisons no differences are significant at the threshold; the degree of imbalance across groups is similar to what we would expect in a randomized experiment.

Included in Table 5 with the covariates we considered previously are two additional measures that we judged to provide a further useful indication of whether candidates might somehow be sorting around the threshold. One such measure is the vote share for the candidate's party in the same district in the prior election (indicated by "Previous VS"). Since candidates competed to be staged in favorable districts, this is likely to be a good measure of the desirability of the seat and therefore the quality of the candidate. The second measure is the number of attempts the candidate took before the decisive race (i.e. the first winning race for winners or the best losing race for losers), indicated by "Previous Attempts" in Table 5. If the winners in our dataset triumphed through persistence, we would expect this covariate to systematically differ between the two groups. The fact that we do not find a significant difference for either variable provides support for the validity of the identification strategy.

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

## V. 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. It remains to consider possible channels by which serving Parliament could have such a strong, party-specific effect 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 7). We first regressed 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 and ex-MPs died with more money (p-value = .03). The point estimate suggests that living an additional year after entering office (or, equivalently, entering office one year earlier) is correlated with about a 2.9 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. Consistent with Figure 5, a candidate's margin of winning and wealth at death are not significantly correlated, which speaks against the idea that wealthier candidates secured spots in more favorable districts or were otherwise favored by the electoral process.

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."[36] We find that an additional year in office

[36]Ideally we would separate years lived after retirement from Parliament into working and non-working years (as wealth at death is presumably decreasing in the latter, ceteris parabus), but we could conceive

is associated with a roughly 3% increase in wealth at death (p-value = .02). An additional year after retirement from office is associated with a roughly 2% increase in wealth at death but this estimate is not significant (p-value = .19). This is consistent with the interpretation that a considerable share of the financial benefit of office came while an MP was sitting in Parliament and not only after his or her retirement. It also could be consistent with the interpretation that MPs made their money after leaving Parliament, and that their post-office earnings depended on the extent of their parliamentary experience. For example, in the U.S. Diermeier et al. (2005) find that congressional experience significantly raises post-congressional wages both in the private and the public sector. (Serving in Parliament could thus be thought of as an investment in human capital, like a college education, that paid off after "graduating" from government.) To test this idea we 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 boosted wealth primarily by making post-parliamentary employment more valuable, we would expect a substantial positive coefficient on the interaction term and a much smaller coefficient on "years as MP." In fact, as indicated by column 3 of Table 7, the interaction term is essentially zero and highly insignificant while the magnitude of the "years as MP" coefficient does not diminish. We calculate that an additional year lived as a former MP is associated with a 1.8 percent (p-value= 0.21) increase in wealth at death for a person who served 10 years as an MP, compared to a 2.2 percent (p-value=.41) increase for somebody who served 30 years as MP. 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

of no satisfactory way to do this.

MPs commonly pursued before entering office,[37] Conservatives were more likely to face a pay cut after being elected, given that they tended to come from lucrative careers 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.

It is also unlikely that health effects can explain our findings. If the status boost of serving in Parliament improved health (see Redelmeier & Singh (2001), but also Sylvestre et al. (2006)), it may have extended MPs' working lives and increased the size of their estates. (On the other hand, living longer can deplete savings.) In fact we find no difference in the longevity of MPs and unsuccessful candidates. For both parties, a treatment indicator for winning office is statistically insignificant in regressions of either age at death or year of death (including all our covariates). Moreover, in our balance tests for the regression discontinuity design, we found that there is no discontinuity in year of death at the threshold of winning (see Table 7). Finally, none of our results are affected by including the year of death in the regressions.

The likely explanation for the wealth benefits of serving in Parliament is that MPs possessed political information and influence that was valuable to outside interests, and that Conservative MPs more successfully monetized these assets. In line with the extensive literature on influence-peddling at Westminster, we suspect that profitable political exchange took place largely through official employment arrangements in which outside firms hired sitting MPs as directors, consultants, and even lobbyists. As noted in Section 2 and displayed in Figure 1, these arrangements were much more common among Conservative MPs. Income from these outside arrangements may also have been augmented by gifts, investment tips, and direct payments, which are of course much more difficult to detect.

[37]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 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.

In order to demonstrate that MPs' outside employment arrangements were closely linked to their political assets (and not merely an outgrowth of other professional activities), we examined whether being elected to Parliament affected a politician's propensity to serve on corporate boards. We used the *Directory of Directors*, an annual listing of the directors serving on boards of companies traded on the London Stock Exchange, to count the number of directorships listed in 1983 for each of the candidates for whom we also collected wealth data. Consistent with our other evidence, we find that being elected to Parliament increased the number of directorships held by Conservatives but not Labourites. Twelve percent of the successful Conservatives in our sample are listed with at least one directorship in 1983, compared to seven percent of the losers; eight percent of winners held two or more directorships compared with two percent for losers.[38] (The difference in rates, estimated with a negative binomial regression, is significant at the .95 level.) No such difference exists for Labour candidates; four percent of Labour MPs had directorships listed in 1983 compared to six percent of unsuccessful candidates, although the difference is not statistically significant.

It bears asking whether MPs' politically-linked outside employment was lucrative enough to account for the large financial benefit we measure for Conservative politicians. As noted above, we estimate the average wealth benefit of serving in Parliament for our sample at about 250,000 in 2007 GBP. Only a fraction of earnings ultimately is bequeathed; using US probates from the 1960's and 1970's Menchik & David (1983) estimate the marginal propensity to bequeath from earnings at about .25 for the top quintile of his sample. If this data is an appropriate rough guide in our context, MPs would have had to earn roughly 1 million pounds more (at 2007 prices) on average over the course of their lifetimes compared to unsuccessful candidates in order to boost their estates by the estimated amount. Since the median Conservative MP served 18 years and lived 17 more, that requires earning

[38]Considering the RMI evidence on directorships presented above, the rate of directorships among Conservative MPs may seem incongruously low here. There are two reasons for this: first, the *Directory of Directors* includes only the 2000 or so companies listed on the London Stock Exchange, while the RMI reports directorships of private companies and companies listed on other exchanges; second, while no one in our sample was dead by 1983, many were in retirement and no longer active in business.

around 25,000 GBP per year more than one would have earned outside of politics. Our regressions suggest that years spent in Parliament were more lucrative than those spent after leaving office, and a number of sources suggest that the official salary was somewhat lower than what was available to many Conservative MPs outside of politics; both points indicate that outside employment would have to provide somewhat more than 25,000 GBP per year while the MP was in office. Given that the average annual fee for outside directors was about 15,000 GBP plus benefits in 1990 (Hollingsworth 1991, pp. 21,157), we believe that it is quite plausible that Conservative MPs could accumulate a large proportion of the wealth benefit we observe from outside employment that is known to have taken place.

### C. Why Did the Benefits of Office Differ by Party?

The question remains why Labour MPs did not appear to derive as large a financial benefit from office as did their Conservative counterparts. We argue that Conservative MPs and Labour MPs operated in essentially separate markets for political influence; the difference in the structure of those markets helps to explain why MPs in one market retained a greater amount of surplus than in the other.

The Labour and Conservative parties in the period we examine were organized and financed quite differently from each other, in ways that ultimately affected how MPs for each party related to outside interests. In the Labour Party, a small number of very large unions provided the bulk of the financing and exercised a corresponding amount of direct influence over policy and political representation. Between 1945 and the 1990s, unions consistently provided 80-90% of the funding of the Labour party central office and around two-thirds of the party's funding overall (including local organizations) (Harrison 1960, Pinto-Duschinsky 1981, 1990). Trade unions also directly provided a plurality of delegates to national party conferences as well as to local constituency councils responsible for selecting parliamentary candidates. By contrast, the Conservative Party drew its funding from a larger number of smaller players and political influence was correspondingly diffuse. Company contributions provided as much as 30% of the party's income overall, but those contributions came from

several hundred different companies with fairly weak coordination among themselves.[39] The bulk of Conservative Party finance came from individual contributions, whether through party fundraisers held by local constituency organizations (which alone brought in more money than did corporate contributions) or large and undisclosed individual contributions and bequests (Pinto-Duschinsky 1981, 1990, Fisher 1994).

Because unions were intimately involved in the selection of Labour candidates and in many cases financed their election to Parliament, Labour MPs tended to enter office with well-defined obligations to specific unions. The means by which unions ensured the loyalty of MPs was clearest in the case of direct sponsorships, an arrangement that was formalized in the party's 1933 "Hastings agreement." Between 1945 and 1975 sponsorships extended to over 30% of all Labour candidates and over 40% of all Labour MPs (Muller 1977, Harrison 1960). Unions sponsored parliamentary prospects as early as the candidate-selection stage; if a union's sponsored member were selected to stand for election (a process in which the unions jointly played a large role), that union would provide campaign finance through the election (Rush 1969). Unions tended to sponsor and promote candidates from their own ranks who were likely to remain loyal representatives once in office and return to the union bureaucracy after retirement from Parliament (Muller 1977). Occasionally, a sponsored member deviated from the position advocated by the sponsoring union, with the consequence that the MP lost the sponsorship and, often, subsequently the seat (Muller (1977, pg. 153), Harrison (1960)). By contrast, the process of selecting Conservative candidates was shared between the party's national office and local constituency committees, neither of which gave a particularly privileged role to individual companies or other outside groups (Rush 1969). Conservative candidates thus generally entered office with loyalties to the party and local constituency committees but with no exclusive obligations to any particular outside interest.

We suggest that it was largely because the unions were effective in controlling politicians

[39] As a comparison of the distribution of union and corporate donations, in 1987 the political expenditures of the largest union (Transport and General Workers) to the Labour Party exceeded the combined political donations of 1,300 of Britain's largest companies to the Conservative Party Pinto-Duschinsky (1989, pg. 208).

through non-monetary means that Labour MPs captured a relatively small economic bonus from serving in Parliament. Conservative MPs operated in an open market for political services. Because client firms were numerous and poorly organized among themselves, they competed for MP loyalty and paid substantial sums to secure it, largely through consulting and lobbying contracts and directorship positions. On the Labour side, the labor unions suppressed the market for MPs' services by controlling the party and, through the party, the politicians themselves. The trade unions' solution looks something like backward vertical integration: instead of purchasing political services on the open market, the unions created a subsidiary (the Labour Party and its MPs) to supply political goods. (In fact, the early history of the Labour Party is basically consistent with this interpretation (Beer 1965).)

In sum, we surmise that it is largely because business interests were less organized than the unions, and had less power in Conservative politics than did unions in Labour politics, that Conservative MPs profited more from office than did Labour MPs. It is likely that the value of office in a variety of contexts similarly depends on the extent to which constituents can use formal means of political control and are organized enough to restrain competition for political influence.

## D. Did MPs' Outside Arrangements Affect Their Behavior?

Analyses of the role of special interests in US politics typically examine links between campaign contributions made by interest groups and votes taken by members of Congress (Peltzman 1984, Kroszner & Strahan 1999). A similar investigation is not likely to be fruitful in Britain and many other political systems, where party control of MPs is higher and legislative votes almost always follow party lines.

Anecdotal evidence suggests that what MPs provided for their clients is a form of influence more subtle than votes, exerted via personal connections to ministers and members of the civil service, as well as information about the affairs of government. MPs and the outside interests who retain them have at times been quite candid about the nature of this political exchange. A month after leaving office as Chancellor of the Exchequer in the wake of the 1964 general election (and while a sitting MP), Reginald Maudling accepted a

position as executive director of a merchant banking firm, with fees estimated at over five times his MP salary. Journalist 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). In 1968, Conservative MP Anthony Courtney explained that "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). Muller (1977) concludes that Labour MPs acted as "servants," "spokesmen," and "consultants" for the unions that supported them.

While positions taken in parliamentary votes are not very informative about the influence of MPs' clients on policymaking, the attendance of MPs for voting sessions does suggest that outside interests tend to distract members from legislative work. As a simple test, Figure 8 compares the attendance rates (the percent of eligible votes personally attended or told) for the 2005-2007 period for MPs with and without outside interests as declared in the latest RMI.[40] We find that for both parties, MPs with outside interests (directorships, consultancies, and work in journalism) attended fewer votes; attendance rates are around 4-6 percentage points lower and the differences are all significant at conventional levels. The exception are directorships for Labour MPs where we cannot reject the null of no difference. We also find no such difference between MPs who did and did not carry on regular outside employment (such as work as a barrister, medical doctor, etc.).

These findings are consistent with analysis by Muller (1977), who examines the degree of legislative participation by sponsored and non-sponsored Labour MPs. He finds that sponsored MPs were more active than other MPs on issues close to the interests of their sponsors (e.g. mining or railway issues), but that on the whole they were less active members of Parliament, participating in question time, standing committees, and debates

[40] Abstention rates are from `http://www.publicwhip.org.uk` (retrieved May 5, 2008). We deleted MPs that hold office as speaker and are thus not allowed to vote. Notice that several other factors may contribute to low attendance rates such as absence on constituency business, delegations to international organisations, illness, bereavement, or paternity/maternity leaves.

far less than non-sponsored members. The results are also consistent with Gagliarducci et al. (2008) who find that in the Italian Parliament, politicians with more outside income are less committed to parliamentary activity measured by their voting attendance and the number of proposed bills.

## VI. Conclusion

Many studies have shown that private firms gain from connections to politicians, but little is known about how politicians benefit from firms and other groups seeking political connections (Merlo 2006, pg. 33). If there is indeed a "gift exchange" (Choi & Thum 2007, pg. 22) between politicians and politically connected firms, one can expect politicians to benefit financially from office just as firms do from connections to officeholders. However, this perspective has been largely overlooked so far, presumably because estimating the financial benefits of political office (what we call the "political power premium") is challenging empirically. Data on the personal finances of politicians is hard to come by and selection into office complicates causal inferences.

In this paper we measure the value of political power in post-war British politics using data about the estates of British politicians who entered the House of Commons between 1950 and 1970 and often served well into the 1990s. We identify the effect of office on wealth at death both by explicitly controlling for a wide variety of candidate-level characteristics and by employing a regression discontinuity design that exploits the quasi-random assignment to office that takes place in close district races.

We find that serving in Parliament almost doubled the wealth of candidates of the Conservative Party, but had no appreciable effect for Labour candidates. These financial benefits of office are likely attributable to payments from private firms to sitting legislators and (albeit less so) lucrative employment opportunities provided to politicians after retirement. Conservative MPs financially benefited from directorships and consulting work that accrued to them as a result of serving in political office. Labour politicians had explicit relationships with unions that were far less lucrative; we surmise that Labour MPs were paid less for political services because the trade unions were better organized and secured

their services largely through non-monetary means.

While our application benefits from data resources unique to the UK, our general approach is broadly applicable and could be used to measure the political power premium in other political systems. Faccio (2006) shows that the strength and scope of political connections, as well as the benefits of these connections to firms, vary widely across countries. One may expect the political power premium to vary based not only on these features but also on the organization and financing of political parties, the degree of legislator independence (both according to the constitution and within party institutions), and the extent of restrictions on legislator conflict of interest.

## References


Abadie, A. & Imbens, G. (2002), 'Simple and Bias-Corrected Matching Estimators for Average Treatment Effects', *NBER Technical Working Paper 283* .

Abadie, A. & Imbens, G. (2006), 'Large Sample Properties of Matching Estimators for Average Treatment Effects', *Econometrica* **74**(1), 235–267.

Angrist, J., Imbens, G. & Rubin, D. (1996), 'Identification of Causal Effects Using Instrumental Variables.', *Journal of the American Statistical Association* **91**(434).

Atkinson, M. & Mancuso, M. (1991), 'Conflict of Interest in Britain and the United States: An Institutional Argument', *Legislative Studies Quarterly* **16**(4), 471–493.

Barro, R. (1973), 'The control of politicians: An economic model', *Public Choice* **14**(1), 19–42.

Beer, S. (1956), 'Pressure Groups and Parties in Britain', *American Political Science Review* **50**(1), 1–23.

Beer, S. (1965), *Modern British politics*, Faber and Faber London.

Bertrand, M., Kramarz, F., Schoar, A. & Thesmar, D. (2004), 'Politically Connected CEOs and Corporate Outcomes: Evidence from France'.

Besley, T. (2004), 'Joseph Schumpeter Lecture: Paying Politicians: Theory and Evidence', *Journal of the European Economic Association* **2**(2-3), 193–215.

Besley, T. (2005), 'Political Selection', *Journal of Economic Perspectives* **19**(3), 43–60.

Besley, T. (2006), *Principled Agents?: The Political Economy of Good Government*, Oxford University Press, USA.

Besley, T. & Burgess, R. (2002), 'The Political Economy of Government Responsiveness: Theory and Evidence from India*', *Quarterly Journal of Economics* **117**(4), 1415–1451.

Besley, T. & Case, A. (1995), 'Does Electoral Accountability Affect Economic Policy Choices? Evidence from Gubernatorial Term Limits', *The Quarterly Journal of Economics* **110**(3), 769–798.

Besley, T. & Coate, S. (1997), 'An Economic Model of Representative Democracy', *Quarterly Journal of Economics* **112**(1).

Breiman, L. (2001), 'Random Forests', *Machine Learning* **45**(1), 5–32.

Caselli, F. & Morelli, M. (2004), 'Bad politicians', *Journal of Public Economics* **88**(3-4), 759–782.

Choi, J. & Thum, M. (2007), 'The Economics OF Politically Connected Firms', *Presented at CESifo Area Conference on Public Sector Economics* .

Courtney, A. (1968), *Sailor in a Russian frame*, London: Johnson.

Dal Bó, E., Dal Bó, P. & Di Tella, R. (2006), 'Plata o Plomo?: Bribe and Punishment in a Theory of Political Influence', *American Political Science Review* **100**(01), 41–53.

Diamond, A. & Sekhon, J. (2006), 'Genetic Matching for Estimating Causal Effects: A General Multivariate Matching Method for Achieving Balance in Observational Studies', *See http://sekhon. berkeley. edu/papers/GenMatch. pdf* .

Diermeier, D., Keane, M. & Merlo, A. (2005), 'A Political Economy Model of Congressional Careers', *American Economic Review* **95**(1), 347–373.

Doig, A. (1984), *Corruption and Misconduct in Contemporary British politics*, Penguin Books.

Faccio, M. (2006), 'Politically Connected Firms', *The American economic review* **96**(1), 369–386.

Ferguson, T. & Voth, H. (2008), 'Betting on Hitler-The Value of Political Connections in Nazi Germany*', *Quarterly Journal of Economics* **123**(1), 101–137.

Ferraz, C. & Finan, F. (2008), 'Motivating Politicians: The Impacts of Monetary Incentives on Quality and Performance', *MIMEO* .

Finer, S. (1962), *Anonymous Empire: A Study of the Lobby in Great Britain*, Pall Mall Press.

Fiorina, M. (1994), 'Divided Government in the American States: A Byproduct of Legislative Professionalism?', *The American Political Science Review* **88**(2), 304–316.

Fisher, J. (1994), 'Political Donations to the Conservative Party', *Parliamentary Affairs* **47**(1), 61–72.

Fisman, R. (2001), 'Estimating the Value of Political Connections', *American Economic Review* **91**(4), 1095–1102.

Gagliarducci, S., Nannicini, T. & Naticchioni, P. (2008), 'Outside Income and Moral Hazard: The Elusive Quest for Good Politicians'.

Goldman, E., Rocholl, J. & So, J. (2006), 'Does political connectedness affect firm value?', *University of North Carolina at Chapel Hill working paper* .

Groseclose, T. & Krehbiel, K. (1994), 'Golden Parachutes, Rubber Checks, and Strategic Retirements from the 102d House', *American Journal of Political Science* **38**(1), 75–99.

Hall, R. & van Houweling, R. (1995), 'Avarice and Ambition in Congress: Representatives' Decisions to Run or Retire from the US House', *The American Political Science Review* **89**(1), 121–136.

Harrison, M. (1960), *Trade Unions and the Labour Party Since 1945*, Allen & Unwin.

HMRC (2007), Quality Review of Personal Wealth National Statistics, Technical report, HM Revenue & Customs.
**URL:** *http://www.hmrc.gov.uk/stats/personal_wealth/qual-personal-wealth.pdf*

Hollingsworth, M. (1991), *MPs for Hire: The Secret World of Political Lobbying*, Bloomsbury.

Imbens, G. (2004), 'Nonparametric Estimation of Average Treatment Effects under Exogeneity: A Review', *Review of Economics and Statistics* **86**(1), 4–29.

Imbens, G. & Lemieux, T. (2007), 'Regression Discontinuity Designs: A Guide to Practice', *NBER Working Paper* **13039**.

Jayachandran, S. (2006), 'The Jeffords Effect*', *The Journal of Law and Economics* **49**(2), 397–425.

Johnson, S. & Mitton, T. (2003), 'Cronyism and capital controls: evidence from Malaysia', *Journal of Financial Economics* **67**(2), 351–382.

Judge, D. (1984), 'The Politics of MPs' Pay', *Parliamentary Affairs* **37**(1), 59–75.

Keane, M. & Merlo, A. (2007), 'Money, Political Ambition, and the Career Decisions of Politicians', *Mimeo University of Pennsylvania* .

Khwaja, A. & Mian, A. (2005), 'Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market*', *The Quarterly Journal of Economics* **120**(4), 1371–1411.

Kroszner, R. & Strahan, P. (1999), 'What Drives Deregulation? Economics and Politics of The Relaxation Of Bank Branching Restrictions', *Quarterly Journal of Economics* **114**(4), 1437–1467.

Lee, D., Moretti, E. & Butler, M. (2004), 'Do Voters Affect or Elect Policies? Evidence from the US House', *Quarterly Journal of Economics* **119**(3), 807–860.

Lee, D. S. (2008), 'Randomized Experiments from Non-Random Selection in U.S. House Elections', *Journal of Econometrics* **Forthcoming**. Previously: NBER Working Paper No. 8441 (2001).

Mattozzi, A. & Merlo, A. (2007), *Political Careers Or Career Politicians?*, National Bureau of Economic Research Cambridge, Mass., USA.

Menchik, P. & David, M. (1983), 'Income Distribution, Lifetime Savings, and Bequests', *The American Economic Review* **73**(4), 672–690.

Merlo, A. (2006), 'Whither Political Economy? Theories, Facts and Issues', *Advances in Economics and Econometrics, Theory and Applications: Ninth World Congress of the Econometric Society, Cambridge: Cambridge University Press, forthcoming* .

Messner, M. & Polborn, M. (2004), 'Paying Politicians', *Journal of Public Economics* **88**(12), 2423–2445.

Muller, W. (1977), *The Kept Men?: The First Century of Trade Union Representation in the British House of Commons, 1874-1975*, Harvester Press.

Noel-Baker, P. (1961), 'The Grey Zone: The Problems of Business Affiliations of Members of Parliament', *Parliamentary Affairs, v15* .

Nolan, L. (1995), First Report of the Committee on Standards in Public Life, Technical report, Her Majesty's Stationery Office.

Osborne, M. & Slivinski, A. (1996), 'A Model of Political Competition with Citizen-Candidates', *The Quarterly Journal of Economics* **111**(1), 65–96.

Owens, A., Green, D., Bailey, C. & Kay, A. (2006), 'A measure of worth: probate valuations, personal wealth and indebtedness in England, 1810-40', *Historical Research* **79**(205), 382–403.

Peltzman, S. (1984), 'Constituent Interest and Congressional Voting', *The Journal of Law and Economics* **27**(1), 181.

Pinto-Duschinsky, M. (1981), *British Political Finance, 1830-1980*, American Enterprise Institute for Public Policy Research.

Pinto-Duschinsky, M. (1989), 'Trends in British Party Funding 1983-1987', *Parliamentary Affairs* **42**(2), 197–212.

Pinto-Duschinsky, M. (1990), *UK Political Parties Since 1945*, Philip Allan: London, chapter The funding of political parties since 1945, pp. 95–109.

Querubin, P. & Snyder, J. M. (2008), The Rents to Political Office in the U.S., 1840-1870. Manuscript, Massachusetts Institute of Technology.

Redelmeier, D. & Singh, S. (2001), 'Longevity of screenwriters who win an academy award: longitudinal study'.

Roberts, B. (1990), 'A Dead Senator Tells No Lies: Seniority and the Distribution of Federal Benefits', *American Journal of Political Science* **34**(1), 31–58.

Rohde, D. (1979), 'Risk-Bearing and Progressive Ambition: The Case of Members of the United States House of Representatives', *American Journal of Political Science* **23**(1), 1–26.

Rosenbaum, P. R. & Rubin, Donald, B. R. (1983), 'The central role of the propensity score in observational studies for causal effects', *Biometrika* **70**(1), 41–55.

Roth, A. (1957), *The Business Background of MPs*, Parliamentary Profile Services.

Roth, A. (1965), *The Business Background of MPs*, Parliamentary Profile Services.

Rubin, D. (2006), *Matched Sampling for Causal Effects*, Cambridge University Press.

Rush, M. (1969), *The Selection of Parliamentary Candidates*, Nelson.

Schlesinger, J. (1966), *Ambition and Politics: Political Careers in the United States*, Rand McNally.

Sekhon, J. (2007), 'Multivariate and propensity score matching software with automated balance optimization: The matching package for r', *Journal of Statistical Software* .

Stewart, J. (1958), *British Pressure Groups: Their Role in Relation to the House of Commons*, The Clarendon Press.

Strudwick, K. & Cole, B. (2005), *Policing Corruption: International Perspectives*, Lexington Books, chapter Policing Corruption Inside the British Parliament, pp. 353–367.

Sylvestre, M., Huszti, E. & Hanley, J. (2006), 'Do Oscar Winners Live Longer than Less Successful Peers? A Reanalysis of the Evidence', *Annals of Internal Medicine* **145**(5), 361.

Thistlethwaite, D. & Campbell, D. (1960), 'Regression-discontinuity analysis: An alternative to the ex post facto experiment', *Journal of Educational Psychology* **51**, 309–317.

Whaley, J. (1999), Legislative Ethics: A Comparative Analysis, Technical report, National Democratic Institute for International Affairs.
**URL:** *http://www.accessdemocracy.org*

## 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)

| | Mean | Min. | 1st Qu. | Median | 3rd Qu. | Max. | Obs |
|---|---|---|---|---|---|---|---|
| Both Parties: | | | | | | | |
| All Candidates | 599,385 | 4,597 | 186,311 | 257,948 | 487,857 | 12,133,626 | 427 |
| Winning Candidates | 828,379 | 12,111 | 236,118 | 315,089 | 722,944 | 12,133,626 | 165 |
| Losing Candidates | 455,172 | 4,597 | 179,200 | 249,808 | 329,103 | 8,338,986 | 262 |
| Conservative Party: | | | | | | | |
| All Candidates | 836,934 | 4,597 | 192,387 | 301,386 | 743,342 | 12,133,626 | 223 |
| Winning Candidates | 1,126,307 | 34,861 | 252,825 | 483,448 | 1,150,453 | 12,133,626 | 104 |
| Losing Candidates | 584,037 | 4,597 | 179,259 | 250,699 | 485,832 | 8,338,986 | 119 |
| Labour Party: | | | | | | | |
| All Candidates | 339,712 | 12,111 | 179,288 | 250,329 | 298,817 | 7,926,246 | 204 |
| Winning Candidates | 320,437 | 12,111 | 193,421 | 254,763 | 340,313 | 1,036,062 | 61 |
| Losing Candidates | 347,934 | 40,604 | 177,203 | 243,526 | 295,953 | 7,926,246 | 143 |

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 | 9.68 | 1890 | 1945 |
| Year of Death | 1995 | 6.40 | 1984 | 2005 |
| Female | 0.05 | 0.21 | 0 | 1 |
| Teacher | 0.11 | 0.32 | 0 | 1 |
| Barrister | 0.10 | 0.30 | 0 | 1 |
| Solicitor | 0.07 | 0.25 | 0 | 1 |
| Doctor | 0.02 | 0.15 | 0 | 1 |
| Civil Servant | 0.01 | 0.11 | 0 | 1 |
| Local Politician | 0.25 | 0.43 | 0 | 1 |
| Business | 0.14 | 0.35 | 0 | 1 |
| White Collar | 0.10 | 0.30 | 0 | 1 |
| Union Official | 0.02 | 0.15 | 0 | 1 |
| Journalist | 0.10 | 0.30 | 0 | 1 |
| Miner | 0.01 | 0.08 | 0 | 1 |
| Schooling: Eton | 0.06 | 0.24 | 0 | 1 |
| Schooling: Public | 0.30 | 0.46 | 0 | 1 |
| Schooling: Regular | 0.39 | 0.49 | 0 | 1 |
| Schooling: Not reported | 0.25 | 0.43 | 0 | 1 |
| University: Oxbridge | 0.28 | 0.45 | 0 | 1 |
| University: Degree | 0.36 | 0.48 | 0 | 1 |
| University: Not reported | 0.36 | 0.48 | 0 | 1 |
| Title of nobility | 0.03 | 0.17 | 0 | 1 |

*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 | 0.54 | 0.86 | 0.95 |
| Standard Error | 0.20 | 0.26 | 0.34 |
| Covariates | x | x | x |
| | | | |
| Percent Wealth Increase | 71 | 136 | 155 |
| 95 % Lower Bound | 15 | 41 | 31 |
| 95 % Upper Bound | 153 | 293 | 398 |

| | Labour Party | | |
|---|---|---|---|
| | OLS ATE | Matching ATE | Matching ATT |
| Effect of Serving | 0.16 | 0.14 | 0.13 |
| Standard Error | 0.12 | 0.18 | 0.15 |
| Covariates | x | x | x |
| | | | |
| Percent Wealth Increase | 17 | 15 | 13 |
| 95 % Lower Bound | -6 | -19 | -15 |
| 95 % Upper Bound | 48 | 63 | 52 |

*Notes:* N=223 for the Conservative party, N=204 for the Labour party; for the ATT estimation there are 104 treated units for the Conservative party and 61 for Labour. 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. Standard errors are robust for the OLS estimation and Abadie-Imbens for matching.

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 | 0.61 | 0.66 | -0.20 | -0.25 |
| Standard Error | (0.27) | (0.37) | (0.26) | (.26) |
| Covariates | | x | | x |
| Percent Wealth Increase | 83 | 94 | -18 | -23 |
| 95 % Lower Bound | 8 | -7 | -52 | -65 |
| 95 % Upper Bound | 212 | 306 | 31 | 71 |

*Note:* Effect estimates at the threshold of winning $\tau_{RDD} = E[Y(1) - Y(0)|Z = 0]$. Estimates without covariates from local polynomial regression fit to both sides of the threshold with bootstrapped standard errors. Estimates with covariates from local linear regression with rectangular kernel (equation 2); bandwidth is 15 percentage point of vote share margin with robust standard errors. For the Conservative party N=223 for the estimates without covariates and N=165 with covariates. For the Labour party N=204 for the estimates without covariates and N=164 with covariates

Table 5: The Effect of Serving on Placebo Outcomes

| | Conservative Party | | | Labour Party | | |
|---|---|---|---|---|---|---|
| Placebo Outcome | Placebo Effect | 95. UB | 95 LB | Placebo Effect | 95. UB | 95 LB |
| Year of Birth | 2.79 | 8.10 | −2.62 | 2.50 | 8.62 | −3.77 |
| Year of Death | 2.08 | 5.97 | −1.89 | 2.23 | 6.23 | −1.91 |
| Female | −0.01 | 0.14 | −0.16 | −0.03 | 0.06 | −0.12 |
| Teacher | −0.09 | 0.06 | −0.23 | −0.23 | 0.01 | −0.47 |
| Barrister | 0.09 | 0.25 | −0.09 | −0.07 | 0.05 | −0.18 |
| Solicitor | −0.13 | 0.07 | −0.33 | 0.03 | 0.15 | −0.10 |
| Doctor | −0.00 | 0.12 | −0.13 | 0.03 | 0.14 | −0.09 |
| Civil Servant | 0.04 | 0.10 | −0.02 | −0.03 | 0.03 | −0.10 |
| Local Politician | −0.01 | 0.23 | −0.25 | 0.10 | 0.40 | −0.21 |
| Business | −0.05 | 0.21 | −0.31 | 0.00 | 0.13 | −0.13 |
| White Collar | −0.00 | 0.19 | −0.19 | −0.00 | 0.15 | −0.16 |
| Union Official | 0.00 | NA | NA | −0.04 | 0.12 | −0.20 |
| Journalist | −0.08 | 0.07 | −0.22 | 0.05 | 0.29 | −0.20 |
| Miner | 0.00 | NA | NA | −0.02 | 0.02 | −0.07 |
| Schooling: Eton | 0.12 | 0.28 | −0.04 | −0.04 | 0.02 | −0.11 |
| Schooling: Public | −0.22 | 0.07 | −0.52 | 0.03 | 0.23 | −0.17 |
| Schooling: Regular | −0.15 | 0.12 | −0.42 | −0.01 | 0.32 | −0.35 |
| Schooling: Not reported | 0.25 | 0.46 | 0.03 | 0.02 | 0.33 | −0.30 |
| University: Oxbridge | 0.10 | 0.36 | −0.17 | −0.04 | 0.21 | −0.30 |
| University: Degree | −0.02 | 0.25 | −0.30 | 0.10 | 0.42 | −0.23 |
| University: Not reported | −0.08 | 0.21 | −0.37 | −0.06 | 0.25 | −0.37 |
| Aristocrat | 0.05 | 0.19 | −0.09 | 0.06 | 0.17 | −0.06 |
| Vote Margin in Previous Race | −0.00 | 0.04 | −0.05 | −0.05 | 0.01 | −0.11 |
| Previous Races | 0.22 | 0.59 | −0.16 | 0.24 | 0.76 | −0.29 |

*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.

Table 6: 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 | 0 | 0 | 1 |
| Front Bench | 0.27 | 0 | 0 | 0 | 1 | 1 |
| Year of Birth | 1916 | 1895 | 1912 | 1916 | 1921 | 1940 |
| Age Entered Office | 42 | 29 | 37 | 41 | 46 | 59 |
| Year Entered Office | 1958 | 1950 | 1951 | 1959 | 1964 | 1970 |
| Year Retired from last Office | 1977 | 1955 | 1966 | 1974 | 1987 | 2001 |
| Years as MP and Former MP | 37 | 14 | 31 | 38 | 45 | 55 |
| Years served as MP | 18 | 2 | 9 | 18 | 24 | 51 |
| Years as Former MP | 18 | 0 | 10 | 17 | 28 | 41 |
| Labour | | | | | | |
| Cabinet | 0.13 | 0 | 0 | 0 | 0 | 1 |
| Front Bench | 0.30 | 0 | 0 | 0 | 1 | 1 |
| Year of Birth | 1920 | 1901 | 1915 | 1920 | 1926 | 1935 |
| Age Entered Office | 42 | 31 | 38 | 42 | 46 | 57 |
| Year Entered Office | 1962 | 1950 | 1959 | 1964 | 1966 | 1970 |
| Year Retired from last Office | 1981 | 1951 | 1979 | 1983 | 1987 | 1997 |
| Years as MP and Former MP | 34 | 18 | 30 | 34 | 40 | 50 |
| Years served as MP | 18 | 1 | 13 | 19 | 24 | 33 |
| Years as Former MP | 15 | 0 | 6 | 14 | 21 | 46 |

Table 7: The Correlates of Wealth: Estimates for Conservative MPs (Estimation Sample)

| Dependent Variable | Log Wealth | Log Wealth | Log Wealth |
|---|---|---|---|
| Model Number | (1) | (2) | (3) |
| Years as MP and Former MP | 0.029 | | |
| | (0.013) | | |
| Years Served as MP | | 0.033 | 0.032 |
| | | (0.014) | (0.024) |
| Years as Former MP | | 0.019 | 0.017 |
| | | (0.014) | (0.023) |
| Years as MP · Years as Former MP | | | .0001 |
| | | | (.0014) |
| Front Bench or Cabinet | 0.36 | 0.27 | 0.27 |
| | (0.26) | (0.29) | (0.29) |
| University: Oxbridge | 0.17 | 0.13 | 0.14 |
| | (0.28) | (0.27) | (0.26) |
| University: Degree | 0.20 | 0.16 | 0.16 |
| | (0.27) | (0.29) | (0.30) |
| Schooling: Eton | 0.91 | 0.97 | 0.97 |
| | (0.40) | (0.40) | (0.40) |
| Schooling: Public School | 0.00 | 0.04 | 0.04 |
| | (0.28) | (0.27) | (0.28) |
| Schooling: Regular | 0.19 | 0.14 | 0.15 |
| | (0.38) | (0.37) | (0.37) |
| Aristocrat | 0.48 | 0.46 | 0.44 |
| | (0.33) | (0.34) | (0.36) |
| Margin of Winning | -1.17 | -1.43 | -1.46 |
| | (1.52) | (1.56) | (1.55) |
| Year of Birth | 0.01 | 0.01 | 0.01 |
| | (0.01) | (0.01) | (0.01) |
| Intercept | -15.94 | -3.51 | -3.97 |
| | (24.22) | (25.27) | (25.93) |

*Note:* N=104. OLS coefficients with robust standard errors in parentheses.

## Figures

Figure 1: Fraction of Members of Parliament that declared Outside Interests 1975, 1990, and 2007 (fractions by party; dashed (solid) line decodes Labour (Conservatives))

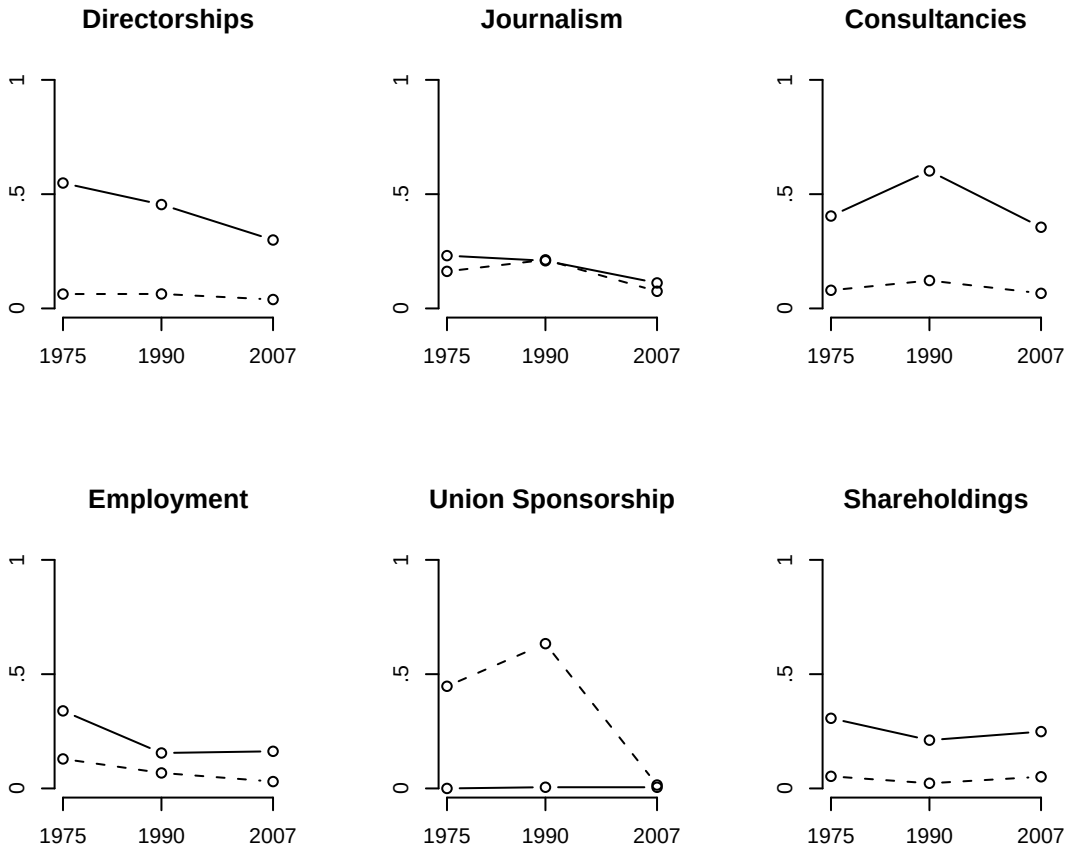
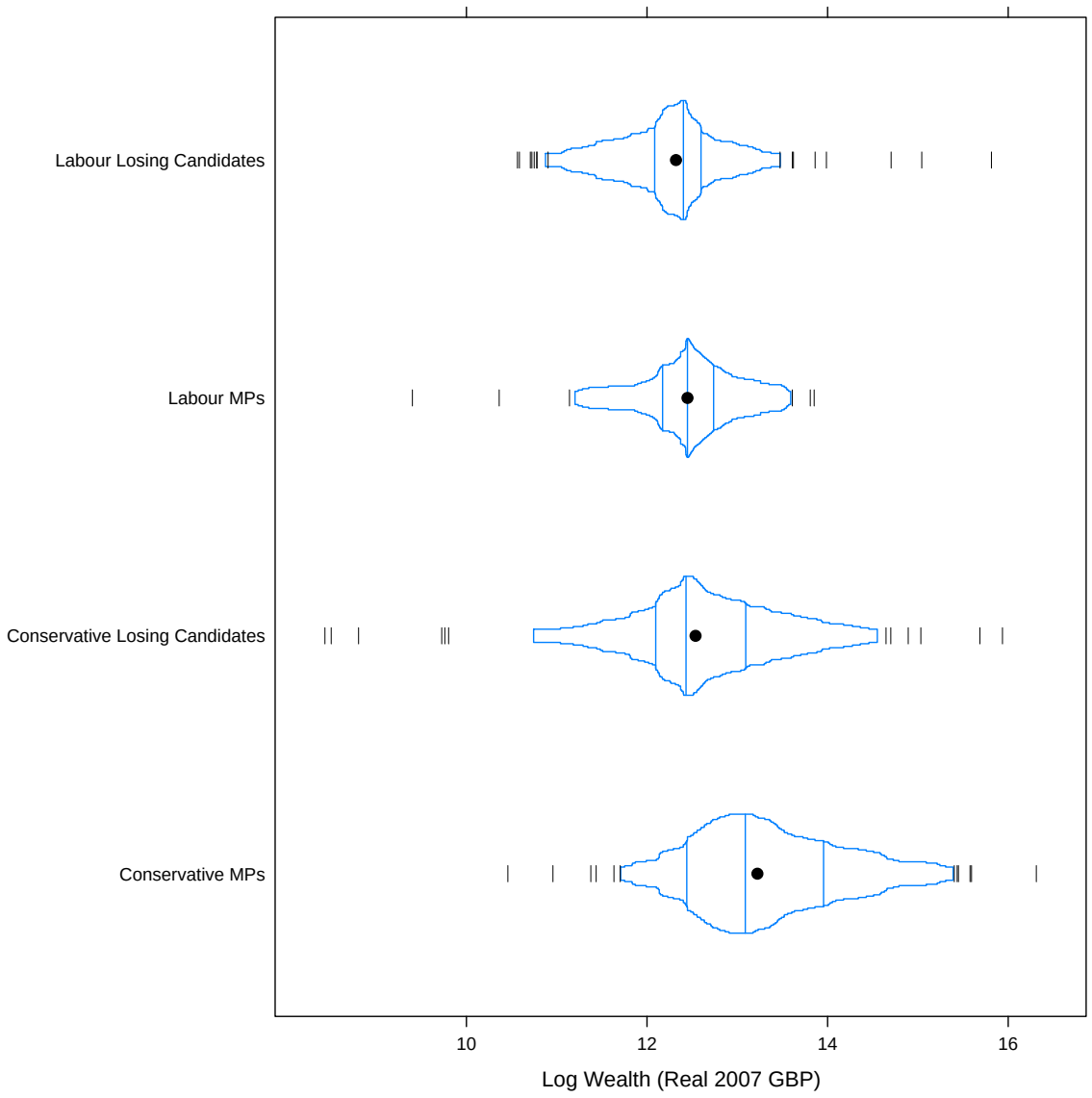


Figure 2: Distributions of (Log) Wealth at Death by Party for Winning and Losing Candidates to the House of Commons 1950-1970




Note: Box percentile plots. Box shows empirical distribution function from .05 to .95 quantile; vertical lines indicate the .25, .5, and .75 quantile respectively. Observations outside the .05 – .95 quantile range are marked by vertical whiskers. The dot decodes the mean.

Figure 3: Covariate Balance for Conservative Candidates Before and After Matching

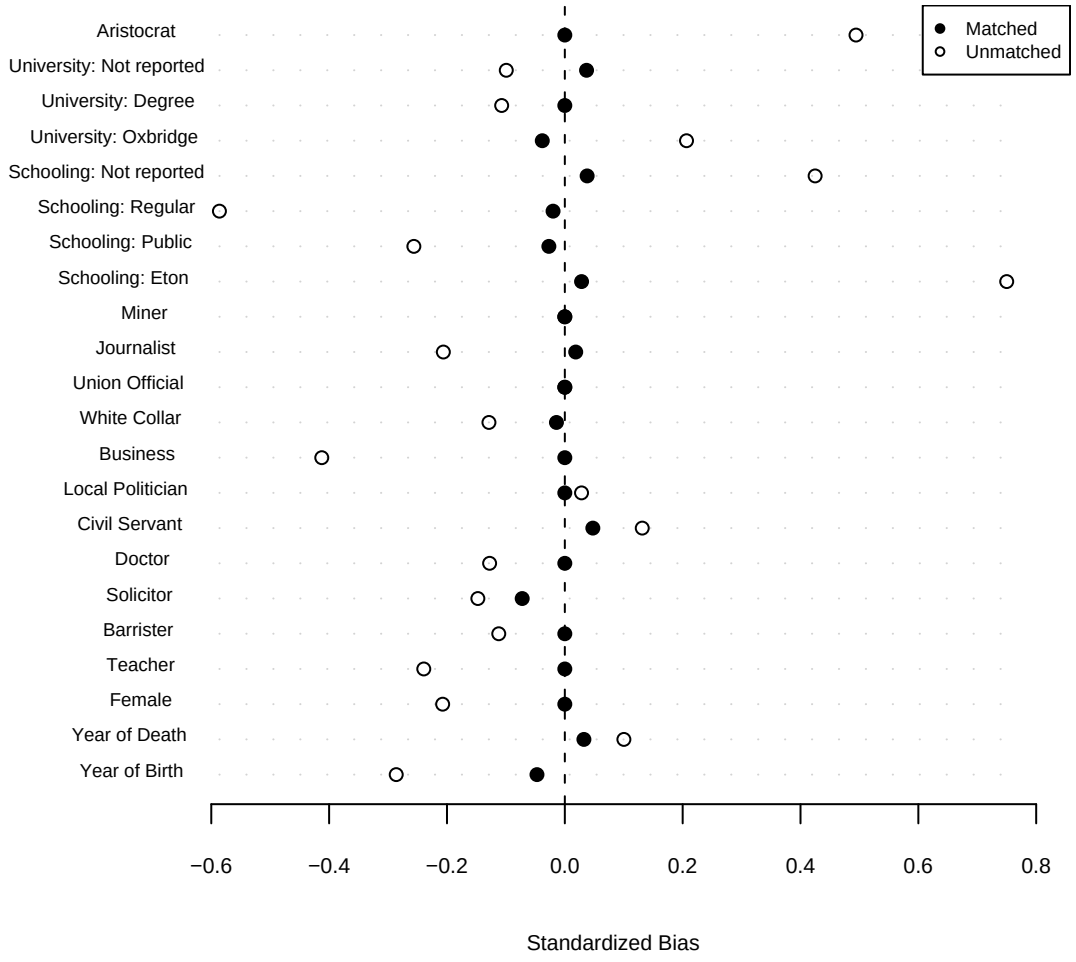


Figure 4: Covariate Balance for Labour Candidates Before and After Matching

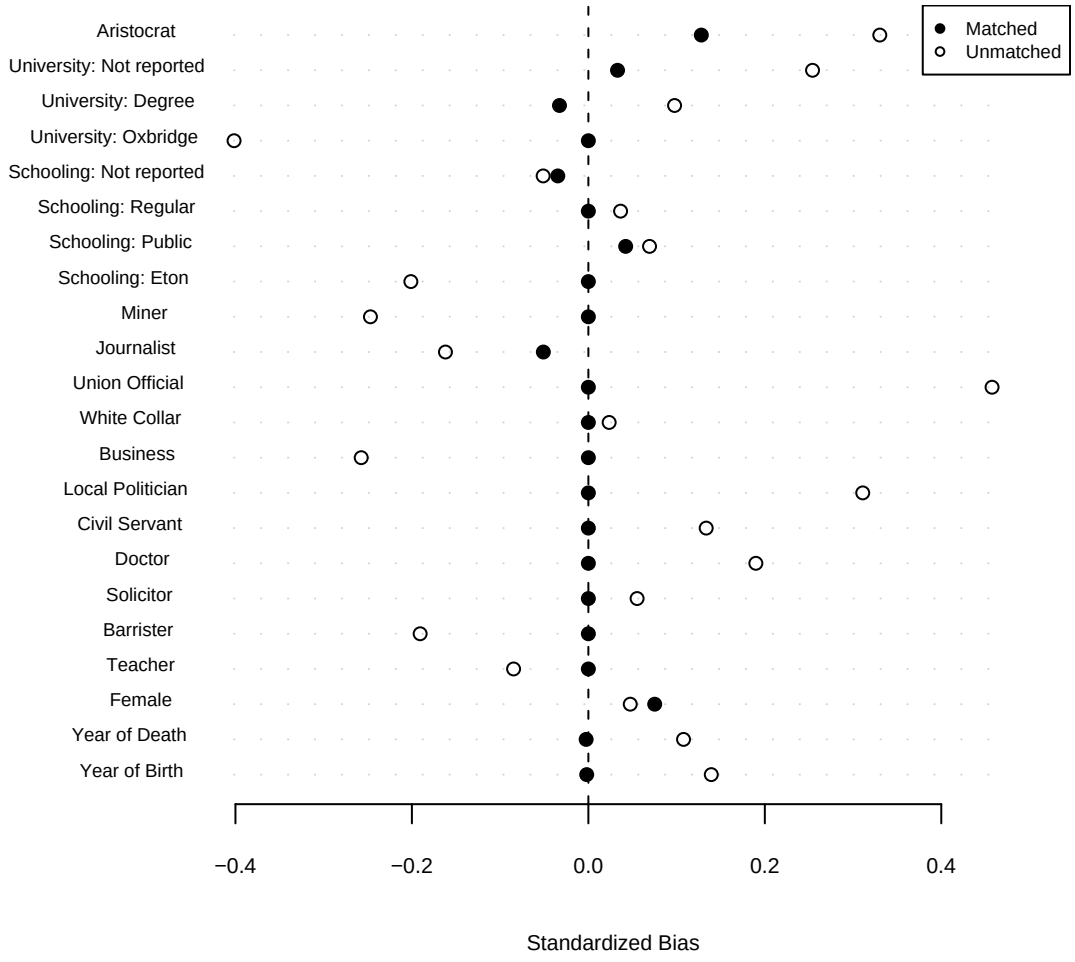


Figure 5: Regression Discontinuity Design: The Effect of Serving in the House of Commons on Wealth at Death for Conservatives Candidates

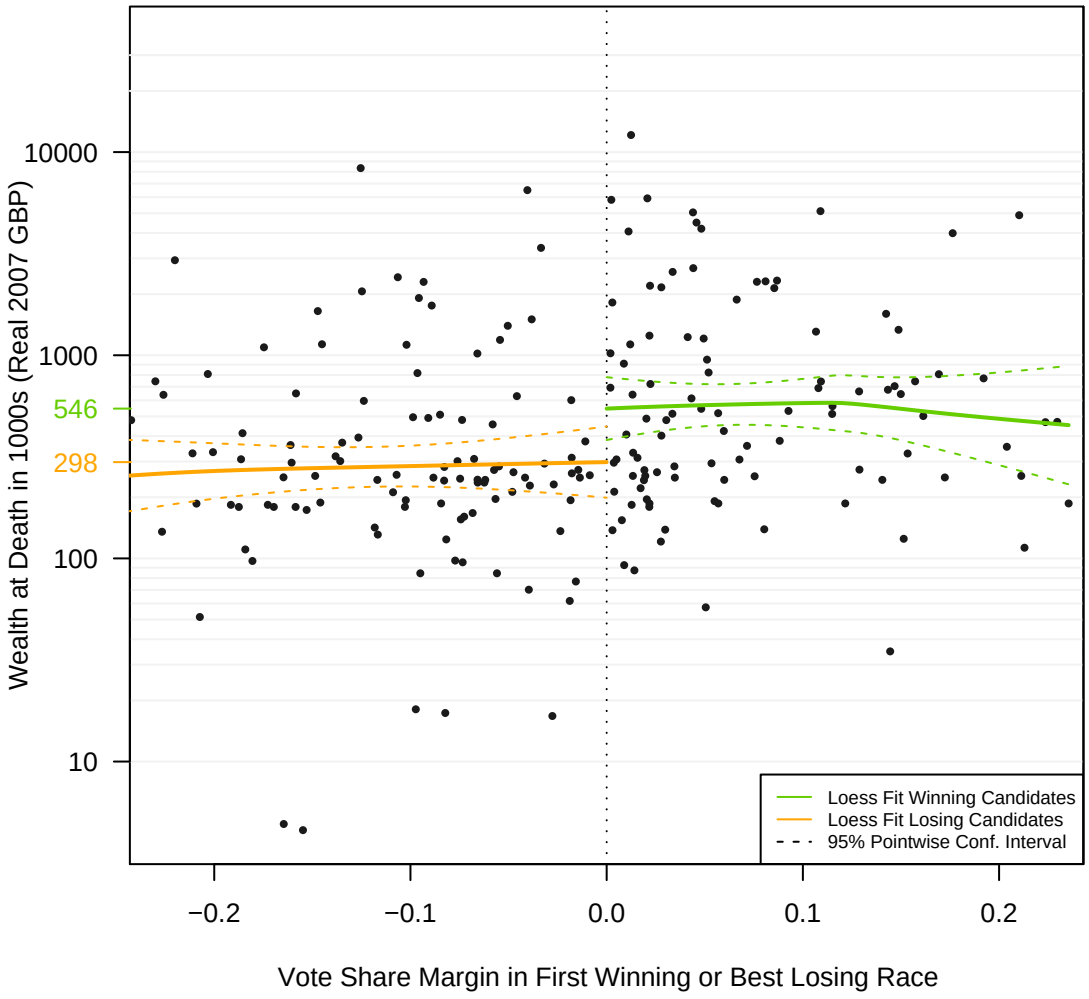


Figure 6: Regression Discontinuity Design: The Effect of Serving in the House of Commons on Wealth at Death for Labour Candidates

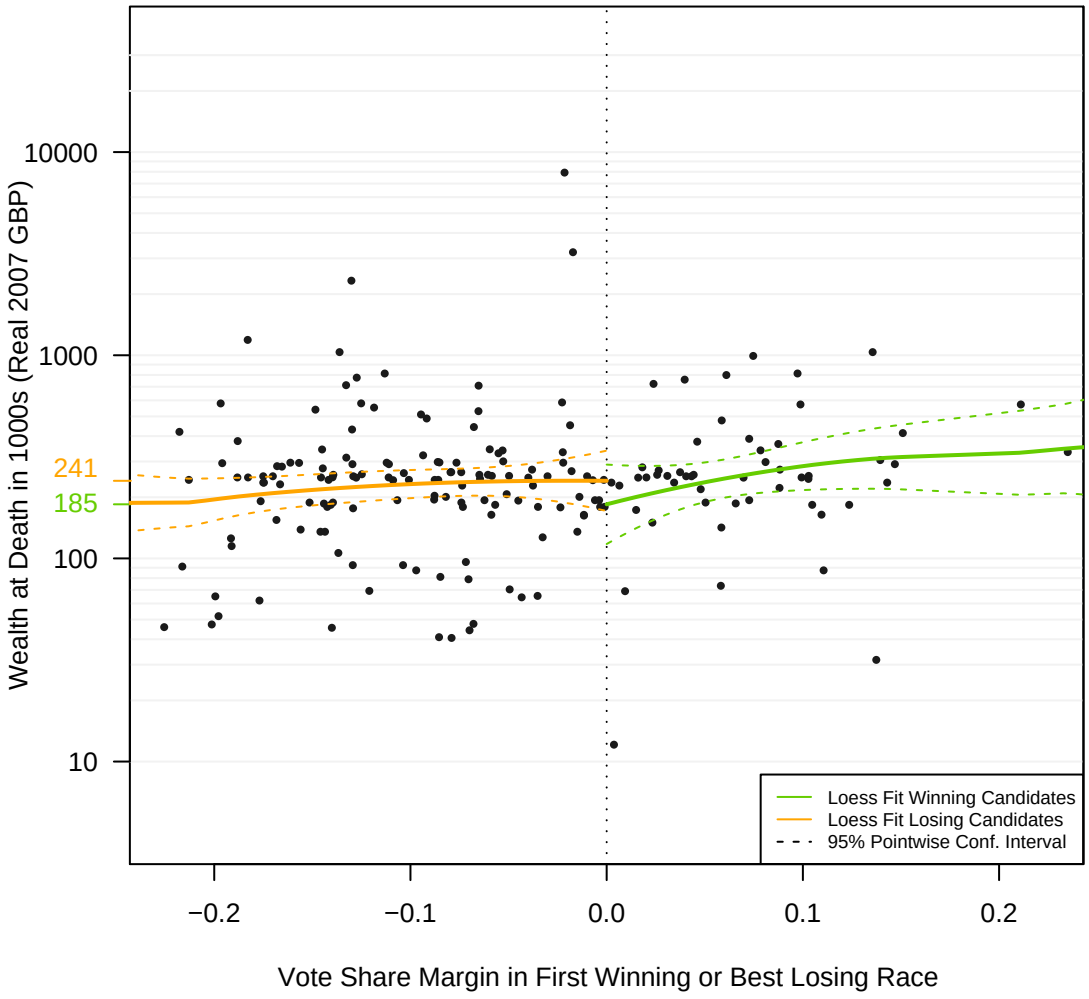


Figure 7: Testing for Jumps at Non-discontinuity Points: Estimates for Conservative Candidates

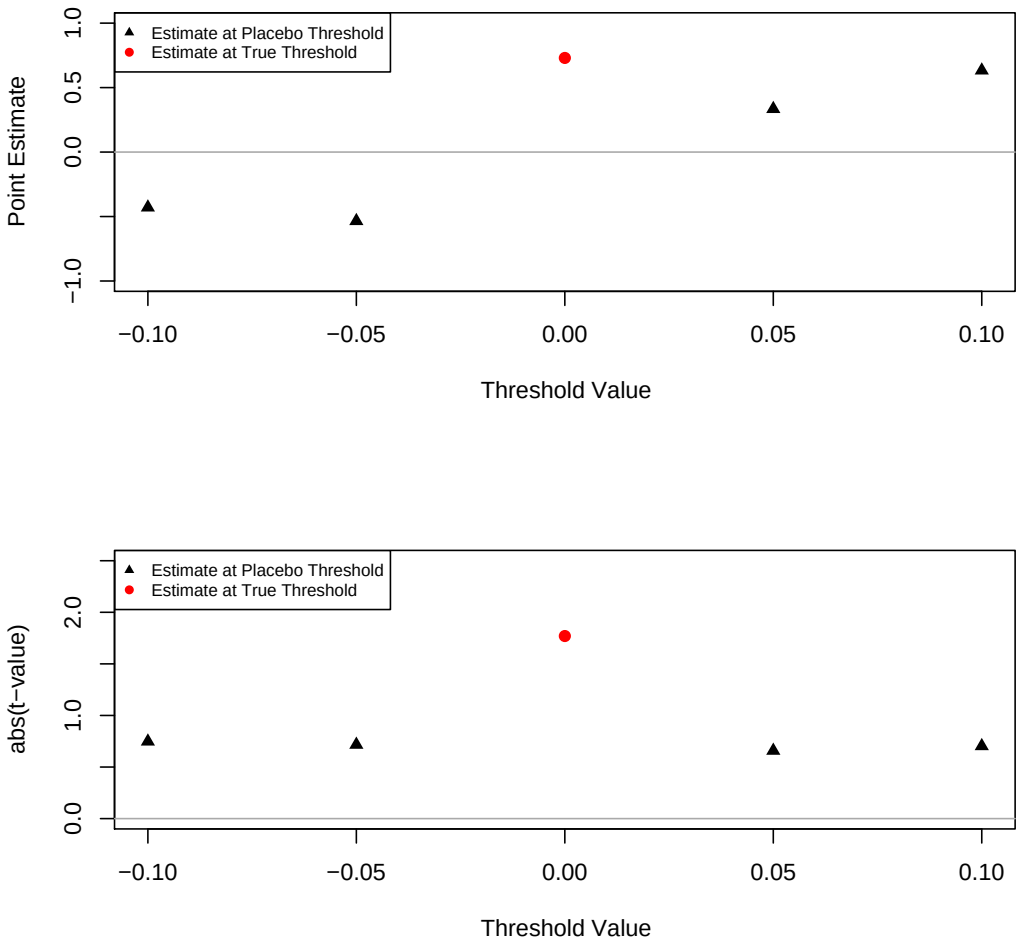
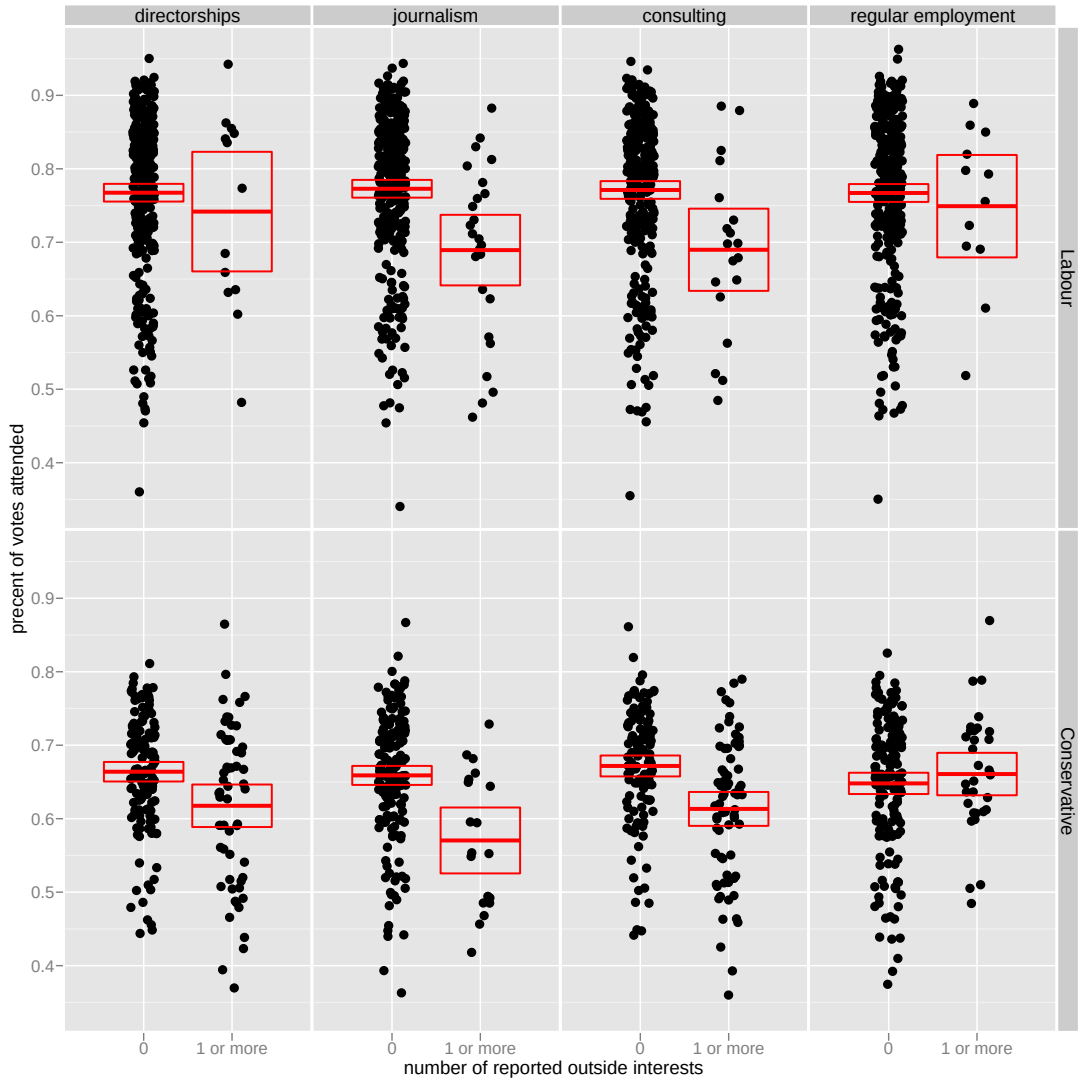


Figure 8: Outside Interests and Vote Attendance in the House of Commons 2005-2007




Note: Jittergrams that show the percent of votes attended between 2005-2007 by party and outside interests. Crossbars decode the mean and .95 percent confidence intervals. 326 Labour MPs and 192 Conservative MPs.