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ABSTRACT

Between 1980 and 2014, the share of politicians in federal office who held a corporate executive position prior to being elected increased from 13.5% to 21.2%, while the likelihood that an executive runs for federal elective office doubled over the same period. Firms whose executives win federal elections experience significant positive stock returns around the dates of such elections and around the dates when Congress passes legislation introduced by their former executives. Relative to non-businessman politicians, we show that businessman politicians are not more effective at introducing or passing legislation but are significantly more likely to vote for legislation supported by pro-business interest groups and less likely to vote for legislation supported by labor unions or consumer advocacy groups. Businessman politicians have a 44.4% higher likelihood of winning elections, and executives with a good track record at their firms are more likely to run for political office. Our results indicate that business representatives have increased their direct involvement in the legislative process in the United States and that this involvement may have generated substantial benefits for their firms. American voters appear to value business experience in political candidates, even though, once elected, such candidates are not more effective legislators than other politicians.

JEL classification codes: G32, G38, D72, G30

Keywords: businessman politicians, executives, corporate political connections

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1. Introduction

On November 8, 2016 Donald Trump won the U.S. Presidency. While his election was unusual in many respects, Trump is just one of several recent examples of corporate executives running for political office. William Harrison Binnie, a former CEO of Carlisle Plastics, Inc., unsuccessfully ran for the U.S. Senate in 2010. In 2000, Jon Corzine, a former CEO of Goldman Sachs, was elected U.S. Senator, and in 2005 became the governor of New Jersey. These examples are far from isolated. In fact, Figure 1 shows that the share of federal office holders (i.e., U.S. Congressmen, Senators, and Presidents/Vice-Presidents) who had executive experience prior to being elected remained relatively flat at around 13-14% between 1980 and 2000 but then increased rather sharply to more than 21% in 2014. Why do so many executives make the switch from a career in business and run for political office? Further, how does the increase in executives' political participation affect their firms and the legislative agenda in the United States more generally? We investigate these and several related questions by studying the incidence of corporate executives running in U.S. federal elections between 1980 and 2014.

The increase in the number of executives serving in federal elective office appears to be largely supply-driven, i.e., this increase is due to a higher propensity of businessman candidates putting their names on the ballot rather than to a higher likelihood of them winning political office. For example, in the sample of BoardEx executives (the details of which are described below) the likelihood of running for federal office has doubled between 1980 and 2014 (with 6 executives running for office in 1980 and 13 executives running in 2014). This increase in supply coincides with a period of increased government spending, growing complexity of federal regulations and the tax code, and higher economic policy uncertainty (Ramey (2011), Baker, Bloom, and Davis (2016)). To illustrate, Figure 2 shows the number of BoardEx executives running for federal office

(depicted by the solid red line) as well as the economic policy uncertainty index over the preceding election cycle (depicted by the dashed blue line). The common trends suggest (without necessarily implying causation) that higher potential benefits from political participation for firms might have induced more executives to seek political office. In contrast, there appears to be no upward trend in the demand for businessman politicians; the average probability of winning political office by executives was 74.9% in 1980-2000 and 49.0% in 2002-2014.

What motivates corporate executives to run for political office? Given that these individuals are typically well-compensated and have a high opportunity cost of time, it is unlikely that obtaining a higher salary is the primary reason.[1] We hypothesize that executives with political power may be able to engage in rent-seeking and provide benefits to their firms (and perhaps to themselves). Indeed, we find that the expected benefits to firms from having their executives in elective office are substantial. First, we document that firms whose executives win federal elections experience significant positive abnormal stock returns around such elections. For example, our estimates suggest that the average firm adds more than $320 million in market value over the three-day period around elections won by its former executives. Second, the value of executives' own stockholdings in their firms increases on average by $283,514 over the same time period, indicating that executives also realize significant gains. These values are even higher over the seven-day period around elections ($391 million and $540,320, respectively).

If personal stock holdings affect businessman politicians' incentives and agenda in elective office, then one would expect executives who hold large equity positions in their firms to be more

[1] For example, Besley (2004) compares the average pay of CEOs and Presidents in different countries and concludes that Presidents' pay is an order of magnitude lower, suggesting that top executives have little direct monetary incentive to obtain even the highest political office. Similarly, by comparing wealth accumulation by politicians who narrowly won or lost a seat in the U.S. Congress in the 19th century, Querubin and Snyder (2011) conclude that there is no abnormal wealth accumulation during "normal times." However, Diermeier, Keane, and Merlo (2005) find that congressional experience significantly increases post-congressional individual wages because ex-politicians can successfully market their acquired political skills and connections in the private market.

likely to generate private benefits for their firms than executives who hold small equity positions. This is exactly what we find, by documenting that equity returns around elections are positively related to the amount of businessman politicians' stock holdings in their firms.

We also find that firms whose executives serve in the U.S. House or Senate experience large abnormal stock returns around the dates when Congress passes legislation introduced by these firms' executives, suggesting that passing legislation is a direct mechanism through which businessman politicians may affect firm value. Overall, it appears that the equity market expects businessman politicians to generate large private benefits for their firms.

In addition to firm-level benefits, businessman politicians, if they are systematically different from non-businessman politicians, may have aggregate effects on the legislative agenda. To examine such aggregate effects, we first analyze businessman politicians' voting records and find that such politicians are significantly more likely, relative to non-businessman politicians, to vote for legislation supported by corporate interest groups and are less likely to vote for legislation supported by pro-consumer interest groups or labor unions.[2] These results hold even after controlling for politicians' party affiliation as well as time and geographical fixed effects. We also find, however, that businessman politicians appear to be less effective, in terms of their overall legislative productivity, than non-businessman politicians: once elected, they serve fewer terms and, as a result, introduce fewer pieces of legislation. At the same time, businessman politicians are more likely to collaborate with other businessman politicians in producing legislation,

[2] Economics and finance literature generally finds that rigid labor regulation negatively affects firm performance. For example, Holmes (1998) shows that states which adopt pro-business right-to-work laws experience increases in manufacturing activity, and Besley and Burgess (2004) find that pro-worker labor regulation introduced in India results in lower state output, investment, and productivity. Similarly, Draca, Machin, and Van Reenen (2011) find that minimum wages increases in the U.K. significantly reduce firm profitability, and Lee and Mas (2012) show that close union wins have a negative effect on stock prices. Thus, there may be a trade-off between pro-labor and pro-business legislation, and politicians with executive experience appear to side with the pro-business interests in resolving this trade-off.

suggesting that they may be able to use their business ties to form coalitions that promote corporate interests.[3]

Since businessman politicians accumulate a pro-business voting record and appear to be able to work as a group in enacting legislation, the increased share of such politicians in Congress may have increased the ability of corporate interests to participate in the U.S. legislative process. If participation in the legislative process is valuable to firms (and our results suggest that it is), then corporations should be more likely to finance electoral campaigns of businessman politicians than those of non-businessman politicians. This is exactly what we find when we analyze the sources of campaign contributions (see Figure 3). We also find that businessman politicians are donating about ten times more of their own personal funds to their political campaigns compared to non-businessman politicians, perhaps because businessman politicians have a relatively larger net worth.

On the balance, it appears that over the last decade businessman politicians have increased their involvement in the legislative process, and this involvement may have generated substantial benefits for their firms and moved the balance of power toward pro-business interests. Of course, businessman politicians can increase their direct political influence only if they run for office and, perhaps more importantly, only if they win elections. To analyze factors that affect the likelihood of winning elections, we collect a wide range of individual characteristics for businessman politicians that run for political office as well as for their opponents. We find that, controlling for other characteristics, businessman politicians have a 44.4% higher likelihood of winning elections in which they participate. This result does not imply that a randomly chosen business executive

[3] Cohen and Malloy (2014) show importance of personal social networks in the U.S. Congress. In particular, they demonstrate that politicians use alumni networks as a mechanism to engage in vote trading and that such behavior affects legislative outcomes.

has a higher likelihood of winning political office than a randomly chosen non-executive: the very nature of democracy implies that candidates decide to run for office voluntarily. This result does imply, however, that, under the constraints of the democratic process, among the candidates who decide to run for office businessman politicians are substantially more likely to win—thus, the U.S. voters appear to put a premium on business experience. This is surprising, given that businessman politicians, once elected, do not appear to be more effective than their peers at introducing and passing legislation.

That businessman politicians are substantially more likely to win elections than non-businessman candidates may indicate that businessman politicians who choose to run for elective office have high inherent quality. Economic models, however, predict that it is low-quality citizens who have a comparative advantage in pursuing elective office (Caselli and Morelli (2004); Messner and Polborn (2004)). Thus, we examine which business executives are more likely to run for office and find that, among several factors, a good track record (proxied by the firm's ROA during the executive's tenure) substantially increases the executive's likelihood of running for political office. It therefore appears that better performing corporate executives are more likely to participate in politics. These results are in line with recent empirical findings by Dal Bó, Finan, Folke, Persson, and Rickne (2017), who show that Swedish citizens who run for elective office are on average smarter than the population they represent. As our prior results indicate, however, good performance in the corporate world does not necessarily translate into higher legislative productivity.[4]

[4] One possibility is that high-ability executives who get elected are more likely to divert their time and attention to earning money outside government. For example, Gagliarducci, Nannicini, and Naticchioni (2010) find that Italian citizens who enter Parliament with high pre-election income are less committed to parliamentary activity in terms of voting attendance.

Our paper contributes to the large literature in economics and finance that studies interactions between firms and politicians. This literature explores several ways in which firms may participate in politics and argues that such participation may be valuable to firms. For example, state-owned firms may receive more subsidies from government in exchange for providing excess employment and paying above market wages (Shleifer and Vishny (2004); Bertrand, Kramarz, Schoar, and Thesmar (2004)). Other firms can invest in political capital by establishing direct connections with legislators (Faccio (2006); Goldman, Rocholl, and So (2009); Duchin and Sosyura (2012)), lobbying (Bertrand, Bombardini, and Trebbi (2014); Borisov, Goldman, and Gupta (2016)), financing candidates' political campaigns (Stratmann (1992); Cooper, Gulen, and Ovtchinnikov (2010); Akey (2015)), and influencing political contributions and voting of their employees (Babenko, Fedaseyeu, and Zhang (2017)). These activities may create value for firm shareholders because of greater government subsidies, favorable antitrust reviews and trade restrictions, preferential allocation of federal contracts, less strict regulation, and lighter taxation.[5]

A smaller literature that is more closely related to our paper examines the motivations of officers and large shareholders for entering politics and the effect it has on their firms' valuations. For example, Faccio (2006) uses data on publicly traded firms in 47 countries and shows that firms whose officers or large shareholders obtain public office experience large abnormal stock returns, and that this effect is strongest in highly corrupt countries. Gehlbach, Sonin, and Zhuravskaya

[5] A number of studies document the positive effect of political activism on firm value (see, e.g., Fisman (2001); Johnson and Mitton (2003); Faccio (2006), Faccio, Masulis, and McConnell (2006); Claessens, Feijen, and Laeven (2008); Ferguson and Voth (2008); Goldman, Rocholl, and So (2009); Cooper, Gulen, and Ovtchinnikov (2010); Chaney, Faccio, and Parsley (2011); Duchin and Sosyura (2012); Amore and Bennedsen (2013); Akey (2015); Borisov, Goldman, and Gupta (2016); Brogaard, Denes, and Duchin (2016); Stratmann, and Verret (2015); Tahoun (2014); Huang and Brown (2016); Mehta, Srinivasan, and Zhao (2017); and Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016)). However, moral hazard problems at politically connected firms can also lead to excessive risk-taking (see, e.g., Khwaja and Mian (2005); Kostovetsky (2015)).

(2010) develop a theoretical model to show that when democratic institutions are weak and campaign promises are not binding, businessmen may prefer to run for office to avoid the cost of lobbying elected officials. Using Russian gubernatorial elections, they show a negative association between government transparency and the likelihood of businessman candidacy. Bunkawanicha and Wiwattanakatang (2008) study the entrance of big business owners into politics in Thailand around the 2001 election of Thaksin Shinawatra and find that market valuations of 13 tycoon families' firms increase by more than 200% when tycoons get elected. Similar to Gehlbach, Sonin, and Zhuravskaya (2010), they argue that weak institutions in Thailand allowed businessman politicians to engage in rent-seeking activities. In contrast to this prior literature, our focus is on the role of businessman politicians in an environment characterized by high political stability and strong democratic institutions. This paper is the first to systematically study the phenomenon of businessman politicians in the United States and to analyze impact such politicians have on their firms and on the legislative process more generally.[6] Further, our results on legislative productivity of businessman politicians and their siding with corporate interest groups help to inform the public debate on the pros and cons of executives holding public office (see, e.g., Buss (2006) and Davenport (2016)).

The rest of this paper is organized as follows. Section 2 describes data and sample construction and provides evidence on the extent of business executives' participation in politics over the last 25 years. Section 3 investigates firm-specific implications of executives holding public office, while Section 4 studies the aggregate consequences of electing businessman

[6] One may expect that ethical conduct regulations in the United States which prohibit against use of one's government position for personal gain may significantly reduce or eliminate political rents and deter individuals with overt conflicts of interest from taking political office (see, for example, Standards of Ethical Conduct for Employees of the Executive Branch, 5 C.F.R. part 2635, House Ethics Manual, and Senate Ethics Manual).

politicians. Section 5 analyzes the determinants of business politicians' electoral success and the decision to run for office. Section 6 concludes.

2. Data, sample selection, and the supply of businessman politicians

We use data from a variety of sources, which we describe in detail in the online appendix. Here, we briefly summarize the main steps in the sample construction process and discuss the extent to which the recent increase in the number of businessman politicians is supply or demand-driven.

2.1. Data on businessman politicians based on official Congressional biographies

For each election year between 1980 and 2014, we obtain the official biographies of all members of the U.S. Congress (Representatives and Senators) as well as U.S. Presidents/Vice-Presidents who were elected (or re-elected) in that election cycle (1,878 office holders in total).[7] By reading each individual biography, we identify all federal office holders (i.e., members of Congress and U.S. Presidents/Vice-Presidents) who, prior to being elected, held at least one position as the CEO (i.e., chief executive officer), president, chairman/chairwoman, or founder of any private or public for-profit non-agricultural firm. We refer to such federal office holders as 'businessman politicians', of which there are 338. Panel A of Table 1 reports aggregate summary statistics on the share of businessman politicians among all federal office holders. Over the eighteen election cycles between 1980 and 2014, the share of businessman politicians was, on average, 15.1 percent and reached its maximum of 21.2 percent in 2014 (see Figure 1).

We also identify all public firms in which business politicians worked prior to being elected. Finally, for all members of Congress elected (or re-elected) between 1980 and 2014, we

[7] A member of Congress who was first elected prior to 1980 but was then re-elected at any point between 1980 and 2014 would be in our sample.

obtain their voting records, the data on their legislative productivity (i.e., the bills that they introduce and co-sponsor), as well as their campaign finance data.

2.2. Data on BoardEx executives running for political office

While the sample of businessman politicians constructed from official Congressional biographies enables us to study broad trends in executives' political participation and to understand the differences in legislative output between businessman politicians and other politicians, it cannot inform us on the differences between businessman politicians and other politicians at the electoral stage (i.e., prior to becoming members of Congress); neither can it shed light on the factors that motivate executives to run for political office or the extent to which the number of businessman politicians is supply- or demand-driven. To address these issues, we construct the sample of BoardEx executives running for federal office.[8]

The sample construction at this stage involves an algorithm than enables us to process tens of millions of search results and the details of which are provided in the online appendix. Here we briefly describe the main steps of this algorithm. We start by identifying all people in BoardEx who have held, at any point in their BoardEx employment history, at least one position as the CEO, president, chairman/chairwoman, or founder of any private or public for-profit non-agricultural firm (i.e., we choose the same types of executive positions as in construction of the sample of businessman politicians from official Congressional biographies). This leaves us with 61,502 unique individuals. We then build a web crawler to identify all instances in which any of the 61,502 executives from the previous step run for political office. In particular, we search for all mentions

[8] BoardEx is a dataset that collects detailed biographies for all people who have served as board members of S&P 1,500 firms after 2000. Importantly, BoardEx collects employment details for all firms where a given individual worked, even if those firms are not part of S&P 1,500. For example, the biographies of board members of Apple (which is an S&P 1,500 firm) will include their positions in firms other than Apple as well, even if those firms are not part of S&P 1,500.

of the executive's name in conjunction with any of the firms where he or she previously worked and a federal political office. We download the search results, which we then process for keywords and then manually analyze the web pages that contain any mentions of corporate executives from BoardEx running for federal political office. In total, we perform 11,972,754 web searches and analyze 29,908,149 individual search results. Ultimately, we identify 65 BoardEx executives who run in 152 campaigns for federal office between 1980 and 2014, of which 90 they ultimately win.[9] The aggregate summary statistics for the sample of businessman politicians based on BoardEx are reported in Panel B of Table 1.

2.3. Supply of businessman politicians

Figure 1, which depicts the share of businessman politicians among federal office holders, shows a large increase in the number of such politicians after 2002. In fact, this share has gone up in every election since 2000.[10] Is this increase supply- or demand-driven? On the demand side, it could be, for example, that American voters after 2002 increased their demand for politicians with skills that executives are more likely to possess (such as business acumen, leadership skills, or the ability to run complex organizations). On the supply side, it could be that executives are more likely to seek political office (independently of demand) because the benefits from political participation for their firms have risen. While our evidence on the aggregate trends (discussed below) is not sufficient to cleanly separate supply from demand, we believe it suggests that supply-side factors

[9] The same person may, over time, run for several political offices and/or may run multiple times for the same political office. Thus, the number of election campaigns (i.e., unique individual-office-election year combinations) is greater than the number of individuals in our sample.

[10] Note that the total number of federal office holders (including temporary vacancies) is fixed at 537: 435 U.S. Representatives, 100 U.S. Senators, one U.S. President and one Vice-President. Therefore, one explanation for the increase in the share of businessman politicians may be a lower share of politicians with other types of experience. Alternatively, since different types of experience are not mutually exclusive, the share of businessman politicians may have risen without affecting the proportion of politicians with other types of experience. In Appendix A, we show that the increase in the share of businessman politicians was accompanied by a decrease in the share of politicians with law experience and military service.

have been more important than demand-side factors in explaining the recent rise in the number of businessman politicians.

If supply factors are predominantly responsible for the increase in the number of businessman politicians, we would expect to see an increase in the executives' likelihood of running for political office while at the same time a decrease in their likelihood of winning political office. Since our sample of BoardEx executives from which we search for businessman politicians is fixed (at 61,502 people), a larger number of BoardEx executives running for office directly translates into a higher likelihood of running for office. While there is a considerable amount of variation across election cycles, there appears to be a significant shift between 1980-2004 and 2006-2014: the average number of BoardEx executives running for federal office between 1980 and 2004 is 7, and this number rises to 12 between 2006 and 2014. Thus, BoardEx executives are indeed more likely to run for office during the most recent decade.

To examine the effect, if any, of demand-side factors, we calculate the likelihood of BoardEx executives winning political office. If the increase in the number of business politicians is mainly driven by greater demand, we would expect their likelihood of winning to increase or remain flat between the periods in which relatively few and the periods in which relatively many executives run for political office. However, this is not what we observe. The likelihood that a BoardEx executive who runs for political office wins the election averages 76.2% between 1980 and 2004 (i.e., during the period in which relatively few BoardEx executives run for political office), but then falls dramatically to 35.2% between 2006 and 2014 (i.e., during the period in which a relatively large number of BoardEx executives run for political office). This drop in the likelihood of executives' winning political office suggests that any demand-side factors that can potentially make executives more likely to seek office are outweighed by supply-side factors.

3. Firm-value implications of having businessman politicians in federal office

What are the supply-side factors that can motivate businessman politicians to run for political office? One possibility is that holding elective office may enable businessman politicians to provide benefits to their firms. If such firm-level benefits are sufficiently large, they could provide an incentive for executives to seek political office.

To investigate firm-level benefits of having executives in elective office, we conduct two event studies. In the first event study, we examine stock returns of firms that previously employed businessman politicians around the dates on which those politicians win political office. In the second event study, we examine stock returns around the dates on which Congress passes the legislation introduced by business politicians.[11]

Panel A of Table 2 reports the cumulative abnormal returns (CARs) for firms where business politicians worked prior to running for office around the dates on which those politicians win elections. These CARs are substantial, indicating that the potential firm-level returns from having an executive in elective office are large. Within one day after a businessman politician wins an election, the firms where he/she worked gain, on average, 1.4% of equity value. After seven days, these gains cumulate to 2.8% on average. In terms of market capitalization, an average firm in our sample gains more than $320 million within one day after one of its executives wins an election, and these gains reach almost $392 million by the seventh day.

[11] Apart from bills, which upon passage become laws, Congress can also pass resolutions. Since resolutions generally represent non-binding positions of the legislature, we exclude them from the analysis. As a matter of example, House Resolution 257 introduced on April 6, 2017 is meant to "condemn hate crime and any other form of racism, religious or ethnic bias, discrimination, incitement to violence, or animus targeting a minority in the United States."

Thus, it appears that the market expects the elections of businessman politicians to generate large benefits for their firms. To the extent that businessman politicians maintain ownership stakes in their firms, some of these benefits may accrue to them directly.[12] To investigate, we collect data on stock holdings by businessman politicians from SEC filings and from Congressional financial disclosure forms. We find that businessman politicians hold substantial stakes in their firms, with an average of about $5.7 million, and the value of these stakes rises significantly when businessman politicians win elections. The value of an average businessman politician's holdings in his/her firms increases by $283,514 on the first day after the election, and this increase reaches $540,320 by the seventh day.

If businessman politicians' equity stakes affect their incentives as federal office holders, one would expect equity returns around elections to be higher for firms whose executives maintain larger stakes in their firms. To investigate, we compare the CARs around elections for firms whose executives' ownership stakes are in the top quartile of the sample distribution of ownership with firms whose executives' ownership stakes are in the bottom quartile of the sample distribution of ownership. The results, reported in Panel B of Table 2, demonstrate that, indeed, firms whose executives hold large equity stakes experience substantially larger equity returns when those executives win elections. This suggests that the market believes that executives' ownership affects the likelihood with which they will be able to generate benefits for their firms.

We also investigate a potential mechanism through which businessman politicians can generate benefits for their firms. To do so, we analyze the market's reaction to the passage of legislation introduced by businessman politicians. Panel A of Table 3 reports CARs around the dates on which Congress passes legislation that was proposed by businessman politicians. Similar

[12] Businessman politicians may also benefit indirectly: for example, firms may increase their contributions to political campaigns of their former executives.

to Table 2, we find that the firms in which businessman politicians previously worked experience positive CARs around the dates of legislation passage; these CARs range from 1.3% one day after legislation passage to 2.7% seven days after. We also split CARs by the size of the ownership stake that businessman politicians maintain. Since the likelihood that any given piece of legislation will become law is small (less than 7% on average), some of the businessman politicians who were elected during our sample period have not had any of their bills passed, and thus we have fewer observations in Table 3 than in Table 2. This limits our statistical power, and we no longer find that differences in ownership stakes generate statistically significant differences in CARs across different firms. The point estimates, however, suggest (similar to Panel B of Table 3) that firms whose executives maintain large ownership stakes when in federal office experience larger returns around legislation passage than firms whose executives maintain relatively smaller equity stakes.

Overall, it appears that the expected benefits that businessman politicians generate for their firms are substantial, and at least part of these benefits can be attributed to the favorable legislation introduced by these politicians.

4. The aggregate impact of businessman politicians on the legislative process

Our finding that legislation introduced by businessman politicians is expected to be beneficial for their firms implies that the overall impact of businessman politicians depends on how often they introduce legislation and how likely it is to pass. Therefore, in this section we study the overall legislative productivity of businessman politicians relative to other politicians.

It is likely that legislative productivity changes over a given politician's tenure, since more time spent in Congress enables a politician to become better acquainted with the institutional details of the law-making process and facilitates the formation of personal ties to other politicians.

Further, the assignments of politicians to committees are often dictated by strict seniority rules (see, e.g., Schneider (2006) for an overview of committee assignment process in the U.S. Senate). To avoid comparing businessman politicians to other politicians that may be more (or less) senior, we compare the productivity of businessman politicians and non-businessman politicians only for those politicians who were first elected to Congress at the same time. That is, among all non-businessman politicians we select only those who were first elected to Congress in the same election cycle as businessman politicians.

We measure legislative productivity across several dimensions. First, we calculate the number of terms each politician in our sample serves in Congress—since a longer tenure enables a legislator to introduce more laws and to affect the legislative agenda over a longer period of time, the total number of terms should be correlated with the overall impact of a given legislator on the law-making process. Second, for each politician in our sample, we identify all bills that this politician introduces (in which case this politician would be termed the bill's "sponsor") or supports during the bill's introduction (in which case this politician would be termed the bill's "co-sponsor").[13] Since not all bills ultimately become law, we also identify, among sponsored and co-sponsored bills of each legislator, the ones that Congress ultimately passes.

We are also interested in how likely business politicians are to collaborate with other legislators. We term all legislators who sponsor or co-sponsor the same bill as "legislative collaborators." For each politician in our sample (businessman and non-businessman), we identify all of his/her legislative collaborators and calculate the share of businessman politicians among them. This share is a measure of how likely a given politician is to collaborate with businessman

[13] A sponsor is the first member of the House of Representatives or Senate to be listed among the possibly numerous lawmakers who introduce a bill or resolution. In Senate, multiple sponsorship of a bill is allowed. A sponsor, once designated, is responsible for the handling or processing of a bill in the legislative process.

politicians as opposed to non-businessman politicians. We then average these shares separately across businessman politicians and across non-businessman politicians.

Panel A of Table 4 reports statistics pertaining to the legislative productivity of businessman and non-businessman politicians over their entire tenure. Overall, businessman politicians appear to be less productive than their non-businessman peers along almost every dimension. Businessman politicians serve, on average, almost one full term less than their peers and introduce on average 15 fewer bills (which is a 25% difference, given that a non-businessman politician introduces, on average, 59 bills over his/her entire tenure). We find similar patterns for the number of co-sponsored bills as well as for the number of legislative collaborators. One potential explanation to the lower legislative productivity of businessman politicians is that they are more motivated by perks of holding a political office (such as generating benefits to their firms) rather than by policy outcomes, and consequently they exert less effort compared to other politicians once elected (see, e.g., economic models of political selection by Callander (2008) and Gagliarducci, Nannicini, and Naticchioni (2010)).

Notably, businessman politicians are more likely than non-businessman politicians to collaborate with other businessman politicians. This finding implies that businessman politicians are likely to rely on their business ties in forming legislative coalitions. Such coalitions can, therefore, impact the aggregate legislative agenda.

In Panel B of Table 4 we report the metrics of legislative productivity on a per-term basis, rather than over the entire tenure (as in Panel A). We find that most of the differences between businessman politicians and non-businessman politicians are driven primarily by the fewer terms that businessman politicians serve. On a per-term basis, the differences in the legislative

productivity between businessman politicians and non-businessman politicians are no longer statistically significant (but the signs still indicate that businessman politicians are less productive).

Apart from introducing legislation themselves, members of Congress also vote on legislation introduced by other members of Congress or the President. Given that businessman politicians introduce less legislation during their entire tenure compared to other members of Congress, perhaps the biggest impact that they have on the legislative agenda (and thus on their firms) is through voting on bills introduced by others. A growing literature in the political science shows the importance of interpersonal ties and social networks in Congress and their effect on voting behavior (see, e.g., Caldeira and Patterson (1987); Fowler (2006); Cohen and Malloy (2014)). Our next set of tests, therefore, aims to examine broad voting patterns of businessman politicians. We collect voting scores from three lobbying organizations that represent, respectively, pro-business interests, pro-labor union interests, and pro-consumer interests.[14] We also collect the DW-Nominate scores (Poole and Rosenthal (1991)) to estimate the overall conservativeness of businessman politicians' voting records.

In Table 5, we regress each politician's score on the party indicator as well as the businessman politician dummy, separately for each Chamber of Congress.[15] All specifications include election cycle and geographic fixed effects (state for Senators and congressional districts for Representatives). We find that businessman politicians are more likely than non-businessman politicians to vote in favor of business interests and against labor union and consumer interests. Businessman politicians also accumulate a more conservative voting record than their non-businessman peers, even after controlling for party and time and geographical fixed effects. On

[14] The pro-business scores are provided by the Chamber of Commerce of the United States (CCUS), the pro-labor union scores are provided by the Committee on Political Education of the AFL-CIO (COPE), while the pro-consumer scores are from the Consumer Federation of America.
[15] Our results remain essentially unchanged if we pool Senators and Representatives together.

the balance, it appears that over the previous decade businessman politicians have shifted the legislative agenda toward corporate interests by supporting pro-business legislation at the expense of legislation supporting the interests of labor unions and consumers.

5. Businessman politicians' electoral success and the decision to run for political office

Since businessman politicians appear to promote business interests while serving in Congress, electing a businessman politician instead of a non-businessman politician shifts the balance of power toward corporate interests. A higher share of businessman politicians thus indicates, in relative terms, a greater power shift in favor of corporate interests. At the same time, the very nature of the democratic process implies that the share of businessman politicians in Congress cannot grow unless they are able to win elections. Therefore, we now turn to the analysis of the determinants of businessman politicians' electoral success and their decision to run for political office in the first place.

First, we examine campaign finance data and identify the donors of the electoral campaigns of businessman politicians and their peers. The results are reported in Table 6; because we have only 9 Presidential elections during our sample period and because candidates in Presidential elections generally raise substantially more funds than candidate in Congressional elections, we report the contributions data separately for these two types of elections (see Panel A and Panel B of Table 6). We observe similar patterns in both cases, and therefore focus our discussion on Congressional elections since they include the vast majority of politicians in our sample.

In terms of the total amount of campaign contributions received from all sources, businessman politicians raise $43,660 or approximately 5.2% more than non-businessman politicians, but this difference is not statistically significant. Furthermore, this difference is entirely

due to the fact that businessman politicians donate more of their own personal funds to their political campaigns (about $53,705 versus $6,411). Thus, in terms of campaign contributions that do not come from the candidates themselves, businessman politicians are virtually identical to their non-businessman peers. It is the composition of these contributions that differentiates these two groups. More specifically, corporate special interests donate substantially more to businessman politicians than to their non-businessman peers, while labor unions-linked special interests, on the other hand, donate more to non-businessman politicians. This is perhaps expected, since an electoral win by a businessman politician is likely to increase the power of corporate interests in Congress. Realizing the potential gains of having businessman politicians in Congress, corporate special interests are likely to be inclined to finance businessman politicians' election campaigns.

Campaign contributions are not the only (and perhaps not even the main) determinant of electoral success, and businessman politicians may possess unique skills that voters value on their own. For example, businessman politicians may be, on average, better-educated than their opponents. Further, the voters may value the ability of businessman politicians to run complex organizations and may therefore put a premium on executives with a proven track record (as indicated by the performance of their firms).

To investigate the determinants of electoral success, we collect, for all businessman politicians in our BoardEx sample (65 people running in 152 election campaigns), their personal characteristics such as age, gender, education, and any prior experience in the government, finance, army, or academia, as well as some other characteristics (listed in Table 7). We also construct a measure of businessman politicians' track record by calculating the ROA and firm size over each executive's tenure. To do this, we identify all firms in which a businessman politician worked prior to his/her first election. We then match these firms with Compustat (in the case of public firms)

and the Orbis database (in the case of private firms) to obtain the size and ROA of each firm. If an executive worked at more than one firm, we average the size and ROA over all the firms where he/she worked. Since not all firms are covered by Compustat or Orbis, the sample of executives for which we have data on firm size and ROA is smaller.

Finally, we identify all opponents who run against businessman politicians in our BoardEx sample, who we term 'the electoral opponents of businessman politicians.' The information on opponents is obtained from the election results provided by the FEC. For all such individuals we collect the same set of characteristics that we have collected for businessman politicians. Since there is no central database that contains the biographies of U.S. political candidates who did not get elected, we perform extensive web searches on each candidate.[16]

Table 7 reports summary statistics and compares the characteristics of businessman politicians and their electoral opponents.[17] We find that businessman politicians are more likely to run as Republicans, more likely to have undergraduate or graduate education and come from an Ivy League school; they are also more likely to have an MBA degree and finance experience as well as to be married and to run in their home state. Non-businessman politicians, on the other hand, are more likely to have prior government experience (before running for office) and a law degree. There appears to be no significant differences in other characteristics of businessman politicians and their opponents; in particular, there is no lower proportion of females among businessman candidates. This is notable given that males are more likely than females to hold executive positions. For example, Adams and Ferreira (2009) report that only 8.1% of directors of S&P 1,500 firms were female over 1996–2003, and this fraction is likely to be lower among senior

[16] Most of our information on the electoral opponents of businessman candidates comes from official campaign websites of losing candidates, newspaper announcements that describe the candidates, obituaries, and candidate interviews.
[17] Since not all variables are available for all candidates, the sample sizes vary slightly.

executives we consider. Thus it appears that the females who hold senior executive positions are no less likely than males to run for political office.

In Table 8 we estimate a probit regression model of the determinants of electoral success and report marginal effects calculated at the mean of the independent variables along with standard errors clustered at the candidate and election cycle level. In the first two specifications (columns 1 and 2) we retain all businessman politicians from our BoardEx sample and their opponents—the specification in column 2 includes more variables at the cost of reducing the sample size. We find that businessman politicians have a significantly higher likelihood of winning political office than their opponents, even after controlling for a variety of observable characteristics. The marginal effect of being a businessman politician on winning elections is around 10 percentage points. Based on the estimates in column 1, businessman politicians have then a 44.4% greater likelihood of winning elections, given that the unconditional probability of winning office is 21.9% in this sample. In relative terms, the effect of being a businessman politician is roughly one-third of the effect of incumbency and one-half of the effect of having an undergraduate degree, both of which are strong predictors of electoral success. In terms of other characteristics, we find that having finance experience decreases the likelihood of winning political office, as does age and having a large number of children; people who run for office in their home state (i.e., the state of their birth) have a higher likelihood of success, perhaps due to closer local ties. We find that being a female does not reduce the likelihood of winning political office, suggesting that voters do not discriminate based on gender; of course, females may be less likely to run for office in the first place, which is an issue we will investigate below. In column 3 we repeat the specification from column 2, but retain only those candidates (businessman politicians and their opponents) who are

members of the two major parties (i.e., we only retain Democrats and Republicans in the sample and exclude independents and the representatives of other parties). The results remain very similar.

In the last two columns of Table 8 we restrict the sample to businessman politicians only, which enables us to include firm-level control variables. Perhaps surprisingly, it appears that electoral success is not strongly related to firm characteristics: ROA seems to have no effect on the likelihood of winning office, while firm size (log of assets) has a negative effect. Thus, at least in our sample, the voters appear to value business experience over and above businessman politicians' track record (as proxied by the performance of their firms).

One should note that the set of people who run for political office is not randomly selected (this applies both to businessman politicians and to their opponents). However, the very nature of democracy implies that people decide to become politicians (or to not become politicians) voluntarily. Therefore, the determinants of electoral success can be viewed as the factors that increase the likelihood of winning, conditional on participating in elections. The issue of who participates in those elections, however, is important in its own right since it can provide information about the inherent quality of businessman candidates. Indeed, a growing body of research in economics and political science focuses on political selection, i.e., trying to develop an understanding of which citizens choose to pursue political office and what consequences it has for the population at large (see, e.g., Besley and Coate (1997); Caselli and Morelli (2004); Callander (2008); Besley (2005)). The general conclusion from this literature is that higher-quality candidates are the ones who have more to lose from giving up private life and therefore less to gain from pursuing political office.[18] Given that businessman we study have relatively high

[18] One exception is the model by Gagliarducci, Nannicini, and Naticchioni (2010), in which high-quality citizens can keep earning income outside of political office once elected, which motivates them to run for elections.

opportunity costs of giving up their executive positions, it is therefore interesting to analyze which businessman choose to run election campaigns. This is the question we turn our attention to next.

To analyze businessman politicians' decision to run for political office, we first match businessman politicians from our BoardEx sample with other BoardEx executives who do not run for political office. Since our aim is to understand if firm performance (i.e., ROA) affects the likelihood of running for political office, we cannot match on ROA. Instead, we match on firm size and on the age of the executive (as in our prior tests, we average the size over all firms in which the executive worked). For each businessman politician in the BoardEx sample, we identify other BoardEx executives who never run for political office but whose age falls in the -5 to +5 year interval around the age of the businessman politician and then, among all such executives, pick the 5 closest executives in terms of their firm size (averaged across all of their firms) to the businessman politician's firm size (average across all of his/her firms).[19]

In Table 9 we examine the factors that determine the likelihood of running for political office. We find that army service and prior government experience are strong predictors of the likelihood that a business executive decides to run for political office. To proxy for personal political activism (or, alternatively, familiarity with the political environment and political connections), we collect from the FEC records the amount that each executive in our matched sample personally donated to any political candidates over his/her lifetime.[20] We find that people who donate more to other politicians are also more likely to run for office. These results indicate that general familiarity with the government (via army service and prior experience with

[19] To remain consistent with our prior results, the matched sample contains only those BoardEx executives who held at least one position as the CEO, president, chairman/chairwoman, or founder in a private or public for-profit non-agricultural firm. Additionally, we remove executives that come from the same firm as the businessman politicians, since their incentives not to run for office may be motivated by their desire to avoid competition against the person with whom they have worked in the past.

[20] Since the FEC campaign data are available starting 1980, these lifetime amounts include campaign contributions made from 1980 onward.

government institutions) increases the likelihood of running for office, as does the extent to which a person is personally engaged in politics (as proxied by the amount he/she is willing to contribute to political candidates). Interestingly, we find that among business executives females are no less likely to run than males. This result is surprising, given that in the general population females are found to be far less likely to run for office (Conway, Steuernagel, and Ahern (1997); Chattopadhyay and Duflo (2004); Fox and Lawless (2004)). In particular, Fox and Lawless (2004) use survey to show that one of the two main factors explaining lower political ambition of women is that women are significantly less likely than man to view themselves as qualified to run for political office. Apparently, females that manage to become corporate executives are no different from their male counterparties in terms of political ambition, which may indicate that successful track record in corporate arena helps women to see themselves as more qualified to run.

Finally, we also add firm-level explanatory variables in the second column of Table 9 and find that higher firm profitability is associated with a greater likelihood of running for political office. The effect is economically large: a one-standard deviation increase in the ROA (11.2%, from Panel A of Table 7) translates into a 26.0% increase in the likelihood of running for political office (given that the unconditional likelihood of running is 17.2%). This result implies that higher-quality executives (as proxied by their firm performance) are actually more likely to run for political office than other executives. Since the inherent quality of businessman politicians appears to be high, our prior results that they do not appear to be more effective legislators than their non-businessman colleagues cannot be fully explained by lack of quality. It may be that businessman politicians exert less effort once in office because they are distracted by earning outside income and managing assets. Alternatively, it is possible that success in business does not necessarily

translate into legislative success. It does, however, translate into electoral success as American voters seem to put a premium on business experience in political candidates.

6. Conclusion

We study the incidence of top corporate executives running for political office in the United States. Over the last two decades, there has been a substantial increase in the number of businessman politicians serving in federal elective office. This increase appears to have been largely supply-driven (i.e., driven by a greater likelihood of business executives to run for political office rather than a greater demand for businessman politicians from the voters) and has been largely financed by corporate special interests.

Electoral wins of businessman politicians are associated with large equity value increases for their firms; equity values also rise when Congress passes legislation introduced by business executives. Further, businessman politicians' voting records are generally pro-business and anti-labor union. Thus, business executives appear to be able to generate large private benefits for their firms, and some of these benefits accrue because of the pro-business legislation that such politicians support.

We also analyze the determinants of businessman politicians' electoral success and their decision to run for political office. Prior government experience, service in the army and firm performance appear to have little effect on the likelihood of businessman politicians winning electoral office—however, the mere fact of being a businessman politician increases the likelihood of electoral success by 44.4% percent (relative to non-businessman politicians). Prior government experience, service in the army and better firm performance do appear to increase the likelihood

of running for political office in the first place, suggesting that better-quality executives are more likely to become politicians.

Overall, our results indicate that during the last decade business interests have increased their direct impact on the legislative process in the United States.

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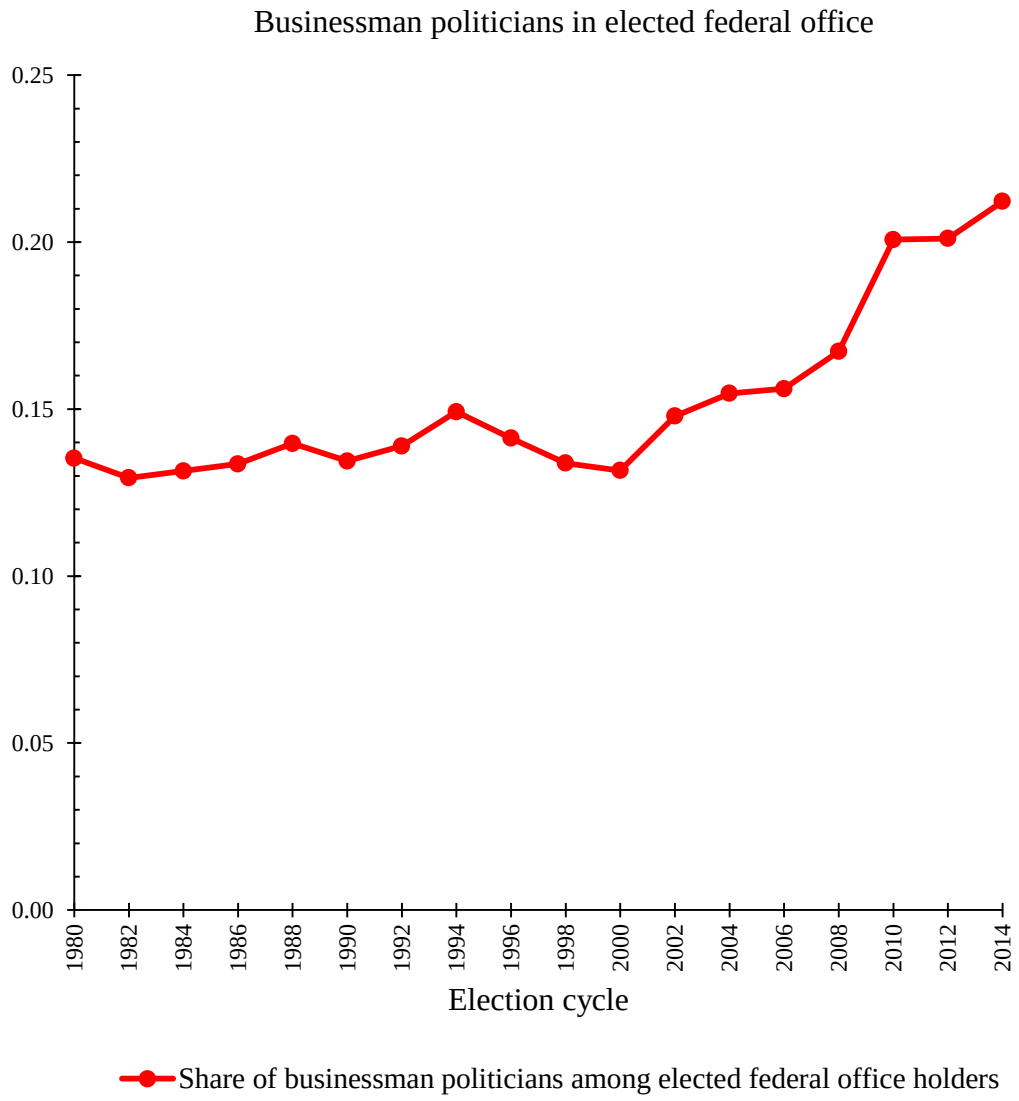

Figure 1. Share of businessman politicians in federal office

This figure depicts the share of federal office holders (U.S. Representatives, U.S. Senators, and U.S. Presidents/Vice-Presidents) who, prior to being elected, held at least one position as the CEO, president, chairman/chairwoman, or founder of any private or public for-profit non-agricultural firm.

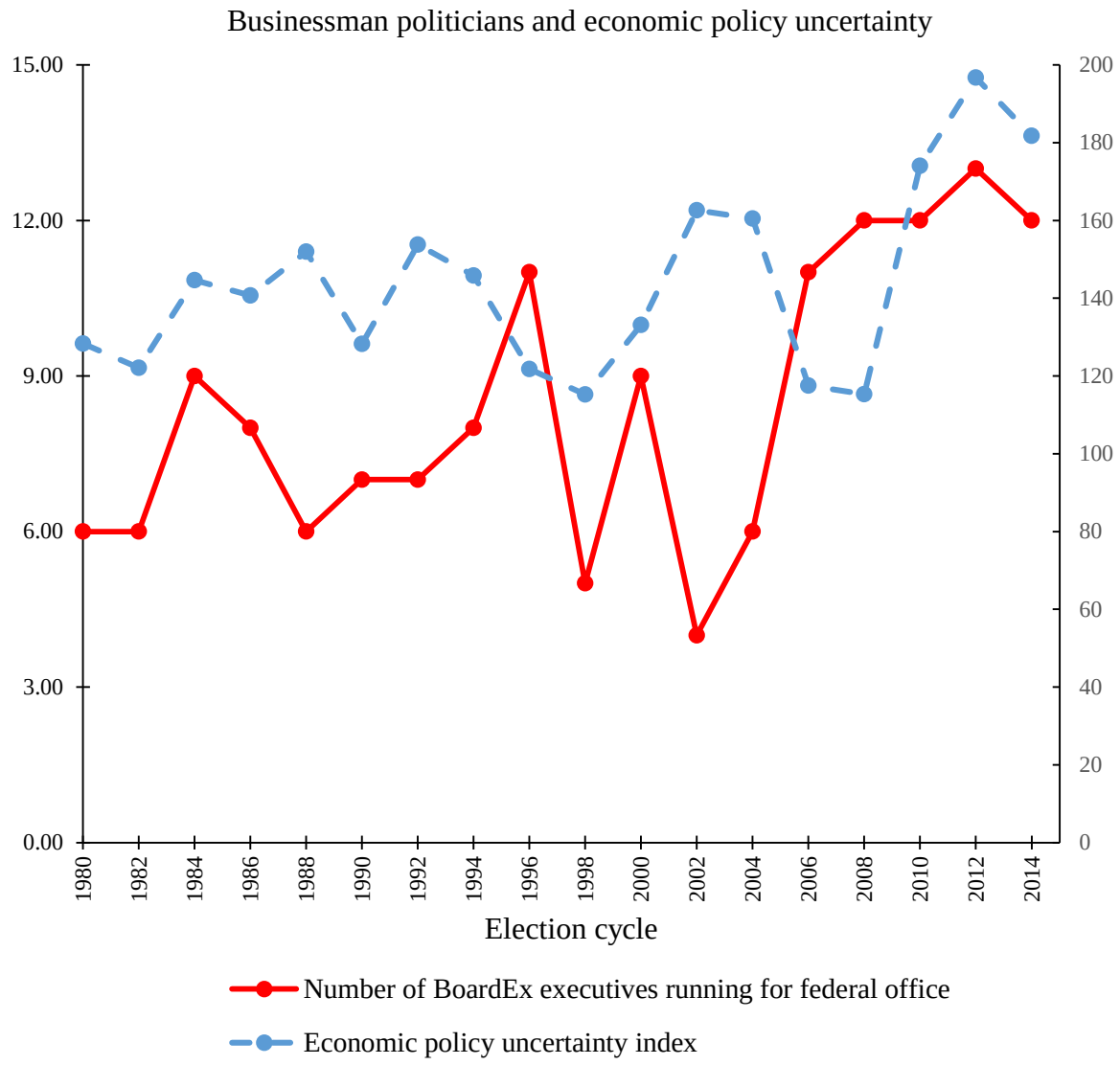

Figure 2. Economic policy uncertainty and the likelihood of running for office

In this figure, the solid red line (measured against the left scale) depicts the number of executives from the BoardEx database who run for office in any given election cycle, while the dashed blue line (measured against the right scale) depicts the value of the economic policy uncertainty index developed by Baker, Bloom, and Davis (2016).

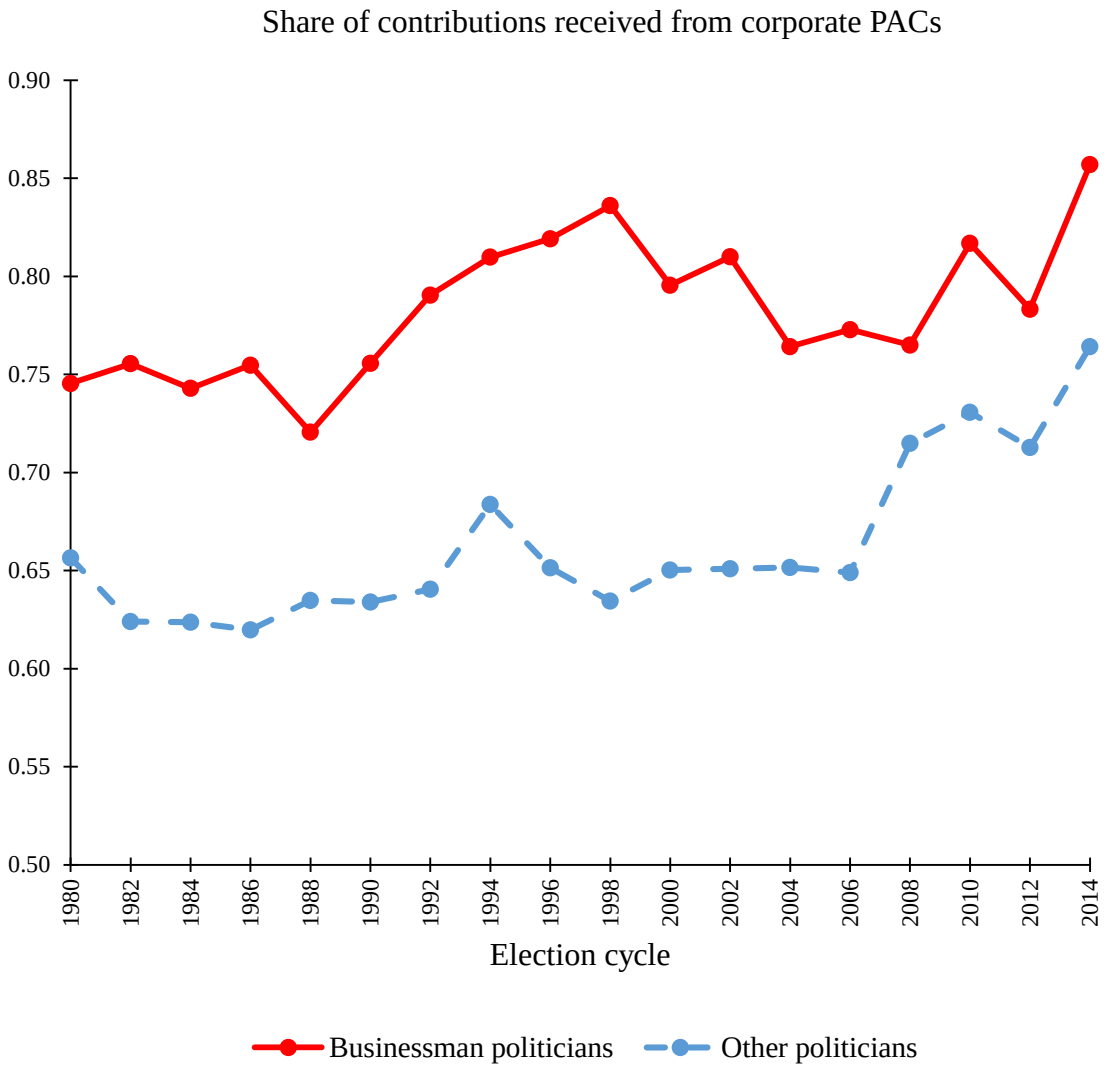

Figure 3. Campaign contributions made by corporate PACs to businessman politicians and to other politicians

In this figure, the solid red line depicts the share of contributions from corporate PACs in the total amount of special interest contributions received by businessman politicians running for the U.S. House or the U.S. Senate, while the dashed blue line depicts depicts the share of contributions from corporate PACs in the total amount of special interest contributions received by non-businessman politicians running for the U.S. House or the U.S. Senate.

Table 1. Summary statistics for the aggregate sample

This table reports aggregate summary statistics. The data are for 18 election cycles from 1980 to 2014 and includes all federal office holders (U.S. Representatives, U.S. Senators, and U.S. Presidents/Vice-Presidents). Panel A is based on official biographies of federal office holders; Panel B is based on the sample of BoardEx executives (see text for details on sample construction).

	N	Mean	25th Pctl.	Median	75th Pctl.	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Sample based on official biographies						
Number of unique federal office holders	1,878	-	-	-	-	-
of which:						
U.S. Representatives	1,559	-	-	-	-	-
U.S. Senators	310	-	-	-	-	-
U.S. Presidents/Vice-Presidents	9	-	-	-	-	-
Number of unique federal office holders (businessman politicians)	338	-	-	-	-	-
of which:		-	-	-	-	-
U.S. Representatives	288	-	-	-	-	-
U.S. Senators	47	-	-	-	-	-
U.S. Presidents/Vice-Presidents	3	-	-	-	-	-
Share of businessman politicians in federal office, per election cycle	18	0.151	0.134	0.139	0.157	0.027
Panel B: Sample based on BoardEx						
Number of unique businessman politicians	65	-	-	-	-	-
Number of businessman politicians, per cycle	18	8.444	6.000	8.000	11.000	2.791
Number of elections in which businessman politicians run, per cycle	18	8.056	6.000	8.000	10.000	2.363
Share of elections won by businessman politicians, per cycle	18	0.667	0.600	0.714	0.778	0.244

Table 2. Firm-value implications of business executives' winning political office

This table reports cumulative abnormal returns (CARs) of firms whose executives win political office around the dates of federal elections. Day 0 is the day of the election. CARs are based on the market model estimated over one trading year (255 trading days), with the estimation window ending two months (46 trading days) before the election date; the value-weighted CRSP index is used as the market return. Panel A reports the returns for all public firms in the sample whose executives win federal political office. Panel B compares the returns of firms whose executives, at the time of their election, hold a large ownership stake in the firm with the returns of firms whose executives hold a small ownership stake in the firm; a large ownership stake is defined as ownership in the top quartile of sample ownership distribution, a small ownership stake is defined as ownership in the bottom quartile of the sample ownership distribution. The data on stock holdings, when available, are obtained from the SEC filings and Congressional disclosures.

Panel A: CARs of firms whose executives win political office

	CAR	N	*t*-stat
	(1)	(2)	(3)
Event window (-1; +1)	0.014	71	2.21**
Event window (-1; +3)	0.018	71	2.15**
Event window (-1; +5)	0.019	71	2.07**
Event window (-1; +7)	0.028	71	2.34**

**p<0.1, **p<0.05, ***p<0.01*

Panel B: CARs of firms whose executives win political office, sample splits at the top and bottom quartiles

	CAR (ownership in the top quartile)	N	CAR (ownership in the bottom quartile)	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Event window (-1; +1)	0.046	13	0.008	29	1.88*
Event window (-1; +3)	0.065	13	0.005	29	2.22**
Event window (-1; +5)	0.072	13	0.011	29	2.13**
Event window (-1; +7)	0.099	13	0.013	29	2.23**

**p<0.1, **p<0.05, ***p<0.01*

Table 3. Firm-value implications of legislation introduced by business executives

This table reports cumulative abnormal returns (CARs) of firms whose executives introduce legislation to U.S. Congress around the dates of legislation passage. Day 0 is the date of legislation passage. CARs are based on the market model estimated over one trading year (255 trading days), with the estimation window ending two months (46 trading days) before the election date; the value-weighted CRSP index is used as the market return. Panel A reports the returns for all public firms in the sample whose executives introduce legislation that becomes law. Panel B compares the returns of firms whose executives, at the time of their election, hold a large ownership stake in the firm with the returns of firms whose executives hold a small ownership stake in the firm; a large ownership stake is defined as ownership in the top quartile of sample ownership distribution, a small ownership stake is defined as ownership in the bottom quartile of the sample ownership distribution. The data on stock holdings, when available, are obtained from the SEC filings and Congressional disclosures.

Panel A: CARs of firms whose executives introduce legislation

	CAR	N	*t*-stat
	(1)	(2)	(3)
Event window (-1; +1)	0.013	48	2.02**
Event window (-1; +3)	0.017	48	1.97*
Event window (-1; +5)	0.021	48	2.30**
Event window (-1; +7)	0.027	48	2.19**

**p<0.1, **p<0.05, ***p<0.01*

Panel B: CARs of firms whose executives introduce legislation, sample splits at the top and bottom quartiles

	CAR (ownership in the top quartile)	N	CAR (ownership in the bottom quartile)	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Event window (-1; +1)	0.015	11	0.018	18	0.21
Event window (-1; +3)	0.015	11	0.011	18	0.22
Event window (-1; +5)	0.029	11	0.011	18	0.87
Event window (-1; +7)	0.029	11	0.015	18	0.53

**p<0.1, **p<0.05, ***p<0.01*

Table 4. Businessman politicians' legislative productivity

This table reports the summary statistics for various measures of legislative productivity for businessman politicians and non-businessman politicians. The sample includes all U.S. Representatives and U.S. Senators elected (or re-elected) between 1980 and 2014. Panel A reports legislative outcomes over the whole tenure in political office; Panel B reports legislative outcomes legislative term. In both panels, column 5 reports *t*-statistics for the difference between legislative outcomes of businessman politicians and non-businessman politicians.

Panel A: The amount of legislative activity by businessman politicians and other politicians, over their tenure

	Businessman politicians	N	Other politicians	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Number of terms served	4.442	335	5.420	1,534	4.25***
Number of bills introduced	44.645	335	59.223	1,534	3.30***
Number of introduced bills that pass	2.272	335	2.894	1,534	2.20**
Passed bills/introduced bills	0.051	335	0.051	1,534	0.11
Number of bills co-sponsored	789.794	335	1,050.049	1,534	4.46***
Number of co-sponsored bills that pass	52.400	335	66.683	1,534	4.00***
Passed bills/co-sponsored bills	0.067	335	0.066	1,534	0.56
Number of legislative collaborators	354.648	335	386.608	1,534	2.22**
Share of business executives among legislative collaborators	0.180	335	0.161	1,534	7.11***

**p<0.1, **p<0.05, ***p<0.01*

Panel B: The amount of legislative activity by businessman politicians and other politicians, averages per term

	Businessman politicians	N	Other politicians	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Number of bills introduced, per term	9.317	335	9.851	1,534	1.19
Number of introduced bills that pass, per term	0.440	335	0.458	1,534	0.51
Number of bills co-sponsored, per term	179.133	335	186.194	1,534	1.31
Number of co-sponsored bills that pass, per term	11.538	335	11.578	1,534	0.12

**p<0.1, **p<0.05, ***p<0.01*

Table 5. Business executives' voting record

This table reports the results of regressions of interest group ratings for politicians in the U.S. Senate and House of Representatives. The sample includes all U.S. Representatives and U.S. Senators elected (or re-elected) between 1980 and 2014. Pro-business ratings are provided by the Chamber of Commerce of the United States (CCUS). Pro-labor unions' ratings are provided by the Committee on Political Education of the AFL-CIO (COPE). Pro-consumer ratings are from the Consumer Federation of America (CFA). The ratings are based on the individual voting records of politicians. A higher rating by a given interest group indicates a voting record more aligned with that group's preferences. The overall liberal/conservative scores (DW-NOMINATE) are developed by Poole and Rosenthal (1991), with a higher score indicating a more conservative voting record. Standard errors, clustered by politician and election cycle, are reported in parentheses.

Panel A: Pro-business (CCUS), pro-labor (COPE) interest group ratings

	CCUS		COPE	
	(1)	(2)	(3)	(4)
Businessman politician indicator	3.461***	1.462	-3.182***	-2.543**
	(0.835)	(1.076)	(0.828)	(1.007)
Republican indicator	38.737***	37.733***	-63.054***	-61.185***
	(0.718)	(0.784)	(0.772)	(0.847)
Observations	7,415	1,763	7,409	1,763
R-squared	0.896	0.808	0.952	0.910
Chamber	House	Senate	House	Senate
Geographical fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Panel B: Pro-consumer interest group ratings (CFA), the overall conservative/liberal score (DW-NOMINATE)

	CFA		DW-NOMINATE	
	(1)	(2)	(3)	(4)
Businessman politician indicator	-2.743**	-4.287***	-3.182***	0.059***
	(1.183)	(1.625)	(0.828)	(0.013)
Republican indicator	-40.676***	-41.839***	-63.054***	0.634***
	(0.961)	(0.981)	(0.772)	(0.008)
Observations	3,996	969	6,581	1,644
R-squared	0.897	0.845	0.972	0.924
Chamber	House	Senate	House	Senate
Geographical fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Table 6. Campaign contributions to business executives and other politicians

This table reports the sources of campaign contributions received by businessman politicians and non-businessman politicians. The sample includes all U.S. Representatives, U.S. Senators, and U.S. Presidents/Vice-Presidents elected (or re-elected) between 1980 and 2014. Panel A includes all House and Senate election campaigns; Panel B includes all Presidential campaigns. In both panels, Column 5 reports *t*-statistics for the difference between the amounts of contributions received by businessman politicians and non-businessman politicians.

Panel A: House and Senate elections

	Businessman politicians	N	Other politicians	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Total contributions from all sources	$886,585.19	1,517	$842,924.81	8,033	1.17
Contributions made by the candidate	$53,705.22	1,517	$6,410.53	8,033	7.23***
Contributions made by other individuals	$486,258.22	1,517	$483,634.78	8,033	0.09
Contributions made by corporations	$159,119.58	1,517	$147,383.94	8,033	2.04**
Contributions made by labor unions	$40,712.29	1,517	$65,638.79	8,033	11.13***
Contributions made by other special interests	$146,789.91	1,517	$139,856.77	8,033	1.65*

**p<0.1, **p<0.05, ***p<0.01*

Panel B: Presidential elections

	Businessman politicians	N	Other politicians	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Total contributions from all sources	$99,177,520.00	3	$94,310,624.00	6	0.06
Contributions made by the candidate	$666.67	3	$833.33	6	0.13
Contributions made by other individuals	$97,697,816.00	3	$94,134,440.00	6	0.04
Contributions made by corporations	$1,061,230.38	3	$111,401.34	6	5.58***
Contributions made by labor unions	$18,681.33	3	$11,235.33	6	0.78
Contributions made by other special interests	$399,130.34	3	$52,712.00	6	3.56***

**p<0.1, **p<0.05, ***p<0.01*

Table 7. Comparison of businessman politicians and their electoral opponents

This table reports individual characteristics of businessman politicians (in Panel A) and their opponents (in Panel B), i.e., other candidates who run in the same election but are not businessman politicians. The sample includes all executives from the BoardEx database who run for federal political office between 1980 and 2014. Panel C reports the differences between businessman politicians and their opponents and the corresponding *t*-statistics for the test of difference in means between the two groups.

	N	Mean	25th Pctl.	Median	75th Pctl.	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Businessman politicians						
Female	152	0.125	0.000	0.000	0.000	0.332
Republican-party candidate	152	0.671	0.000	1.000	1.000	0.471
Prior government experience	152	0.303	0.000	0.000	1.000	0.461
Army service	152	0.362	0.000	0.000	1.000	0.482
Undergraduate degree	152	0.967	1.000	1.000	1.000	0.179
Graduate degree	152	0.691	0.000	1.000	1.000	0.464
Ivy League school	152	0.263	0.000	0.000	1.000	0.442
MBA degree	152	0.204	0.000	0.000	0.000	0.404
Law degree	152	0.230	0.000	0.000	0.000	0.422
Academic experience (Ph.D. degree or professor)	152	0.125	0.000	0.000	0.000	0.332
Finance experience	152	0.224	0.000	0.000	0.000	0.418
Age	152	52.375	45.500	52.000	60.000	9.119
Married status	152	0.914	1.000	1.000	1.000	0.281
Number of children	152	2.724	1.500	2.000	3.000	1.765
Foreign-born	152	0.046	0.000	0.000	0.000	0.210
Runs in home state	152	0.493	0.000	0.000	1.000	0.502
Firm size (total assets in $ billion)	55	26.214	0.463	4.7445	27.561	61.331
ROA over executive's tenure (%)	66	0.826	0.457	2.852	5.577	11.221
Panel B: Opponents of businessman politicians						
Female	516	0.140	0.000	0.000	0.000	0.347
Republican-party candidate	516	0.403	0.000	0.000	1.000	0.491
Prior government experience	516	0.459	0.000	0.000	1.000	0.499
Army service	516	0.306	0.000	0.000	1.000	0.461
Undergraduate degree	516	0.859	1.000	1.000	1.000	0.349
Graduate degree	516	0.587	0.000	1.000	1.000	0.493
Ivy League school	513	0.164	0.000	0.000	0.000	0.370
MBA degree	516	0.081	0.000	0.000	0.000	0.274
Law degree	516	0.314	0.000	0.000	1.000	0.465
Academic experience (Ph.D. degree or professor)	516	0.120	0.000	0.000	0.000	0.325
Finance experience	516	0.056	0.000	0.000	0.000	0.231
Age	451	52.242	45.000	52.000	60.000	10.962
Married status	415	0.814	1.000	1.000	1.000	0.389
Number of children	392	2.625	2.000	2.000	4.000	1.686
Foreign-born	445	0.047	0.000	0.000	0.000	0.212
Runs in home state	443	0.388	0.000	0.000	1.000	0.488

Panel C: Differences between businessman politicians and their opponents

	Businessman politicians	N	Opponents of businessman politicians	N	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Female	0.125	152	0.140	516	0.46
Republican-party candidate	0.671	152	0.403	516	5.97***
Prior government experience	0.303	152	0.459	516	3.46***
Army service	0.362	152	0.306	516	1.29
Undergraduate degree	0.967	152	0.859	516	3.70***
Graduate degree	0.691	152	0.587	516	2.31**
Ivy League school	0.263	152	0.164	513	2.78***
MBA degree	0.204	152	0.081	516	4.31***
Law degree	0.230	152	0.314	516	1.99**
Academic experience (Ph.D. degree or professor)	0.125	152	0.120	516	0.16
Finance experience	0.224	152	0.056	516	6.39***
Age	52.375	152	52.242	451	0.14
Married status	0.914	152	0.814	415	2.90***
Number of children	2.724	152	2.625	392	0.60
Foreign-born	0.046	152	0.047	445	0.05
Runs in home state	0.493	152	0.388	443	2.28**

**p<0.1, **p<0.05, ***p<0.01*

Table 8. The determinants of business politicians' electoral success

This table reports probit regressions for the likelihood of winning the election. The sample in columns 1 and 2 includes all executives from the BoardEx database who run for federal political office between 1980 to 2014 and their opponents. Column 2 restricts the sample of BoardEx executives and their opponent to the candidates representing one of the major parties (Democrats and Republicans). The sample in columns 4 and 5 is restricted to businessman politicians only, i.e., to the executives from the BoardEx database who run for federal political office between 1980 to 2014. The dependent variable is equal to 1 if the candidate wins the general election, and 0 otherwise. The table reports marginal effects estimated at the means of the independent variables. Standard errors, clustered by politician and election cycle, are reported in parentheses.

Sample:	*Businessman politicians and their opponents*		*Businessman politicians and their opponents (major party candidates only)*	*Businessman politicians*	
	(1)	(2)	(3)	(4)	(5)
Businessman politician indicator	0.097***	0.100***	0.111***		
	[0.025]	[0.031]	[0.035]		
Female	0.028	0.038	0.058	-0.031	-0.161
	[0.024]	[0.033]	[0.038]	[0.078]	[0.117]
Incumbent	0.320***	0.376***	0.400***	0.405***	0.385***
	[0.022]	[0.024]	[0.026]	[0.022]	[0.101]
Republican-party candidate	0.018	0.022	0.006	0.032	-0.072
	[0.020]	[0.026]	[0.030]	[0.060]	[0.104]
Prior government experience	0.022	0.013	0.009	0.003	-0.022
	[0.021]	[0.026]	[0.031]	[0.064]	[0.098]
Army service	-0.029	0.002	0.015	0.032	-0.317***
	[0.023]	[0.030]	[0.033]	[0.064]	[0.120]
Undergraduate degree	0.193***	0.242***	0.268***	0.858***	0.677***
	[0.067]	[0.088]	[0.098]	[0.149]	[0.196]
MBA degree	0.014	0.024	0.033	-0.004	-0.045
	[0.030]	[0.038]	[0.043]	[0.064]	[0.094]
Law degree	-0.008	-0.018	-0.017	-0.011	-0.070
	[0.021]	[0.027]	[0.030]	[0.064]	[0.072]
Finance experience	-0.051	-0.081*	-0.093*	-0.083	-0.117
	[0.035]	[0.048]	[0.054]	[0.076]	[0.106]
Age 1st quintile		-0.010	-0.012	0.054	-1.616***
		[0.042]	[0.048]	[0.105]	[0.320]
Age 2nd quintile		0.008	0.003	-0.040	-0.142
		[0.036]	[0.040]	[0.071]	[0.167]
Age 4th quintile		-0.032	-0.035	-0.087	0.004
		[0.037]	[0.042]	[0.079]	[0.121]
Age 5th quintile		-0.088**	-0.114**	-0.171*	0.029
		[0.042]	[0.045]	[0.087]	[0.109]
Married status		0.040	0.025	-0.027	0.284**
		[0.036]	[0.045]	[0.116]	[0.144]
Number of children		-0.019**	-0.020**	-0.009	-0.027
		[0.007]	[0.008]	[0.017]	[0.023]
Foreign-born		-0.232**	-0.255**	-0.280*	-0.815***
		[0.109]	[0.116]	[0.144]	[0.247]
Runs in home state		0.048*	0.067**	0.113**	-0.022
		[0.027]	[0.031]	[0.058]	[0.087]
Firm size					-0.045***
					[0.014]
ROA over executive's tenure					0.004
					[0.003]
Observations	668	486	417	152	51
Pseudo R-squared	0.556	0.556	0.545	0.507	0.529

**p<0.1, **p<0.05, ***p<0.01*

Table 9. The determinants of business executives likelihood of running for political office

This table reports probit regressions for the likelihood of likelihood of running for political office among executives in the BoardEx database. The sample in columns 1 and 2 includes all executives from the BoardEx database who run for federal political office between 1980 to 2014 and other BoardEx executives matched on age and firm size. The dependent variable is equal to 1 if the candidate runs for any federal political office at any point between 1980 and 2014, and 0 otherwise. The table reports marginal effects estimated at the means of the independent variables. Standard errors, clustered by executive, are reported in parentheses.

	(1)	(2)
Female	0.017	0.006
	(0.080)	(0.076)
Academic experience	0.039	0.070
	(0.087)	(0.072)
MBA degree	0.046	0.070
	(0.058)	(0.055)
Army service	0.180**	0.192***
	(0.075)	(0.068)
Undergraduate degree	0.008	-0.036
	(0.057)	(0.054)
Government experience	0.225***	0.240***
	(0.054)	(0.050)
Finance experience	0.029	0.026
	(0.051)	(0.052)
Law degree	0.081	0.081
	(0.072)	(0.072)
Age	-0.005	-0.004
	(0.004)	(0.004)
Amount of lifetime personal political contributions	0.008***	0.008***
	(0.003)	(0.003)
Firm size		-0.005
		(0.010)
ROA		0.004***
		(0.001)
Top 5 most regulated industry indicator		-0.034
		(0.122)
Observations	204	198
R-squared	0.163	0.228

**p<0.1, **p<0.05, ***p<0.01*

APPENDIX A: FEDERAL OFFICE HOLDERS WITH EXPERIENCE IN THE MILITARY, LAW, AND AGRICULTURE

The total number of federal office holders (including any temporary vacancies) is fixed at 537 (435 U.S. Representatives, 100 U.S. Senators, one U.S. President and one Vice-President). Therefore, one explanation for the increase in the share of businessman politicians may be a lower share of politicians with other types of experience. Alternatively, since different types of experience are not mutually exclusive, the share of businessman politicians may have risen without affecting the proportion of politicians with other types of experience.

To investigate, we consider three types of non-business experience: service in the military, law experience, and agriculture experience (the latter should correspond to the changes in the urban and rural composition of the U.S. population). To identify these types of experience, we search the official biographies for corresponding keywords.[1] We then calculate the share of politicians with each type of experience among office holders and plot it in Figure A1.[2]

As Figure A1 shows, the share of politicians with experience in agriculture remained relatively stable between 1980 and 2014. The share of politicians with law experience and military service, however, dropped, and in the case of military experience the drop has been rather dramatic. Thus, the increase in the share of businessman politicians was accompanied by a decrease in the share of politicians with law experience and military service.

[1] The following set of keywords corresponds to military experience: "Unites States Navy", "United States Army", "United States Air Force", "United States Marine Corps", as well "National Guard", "military service", "veteran", "prisoner of war" (and any variations on the above). The following set of keywords corresponds to law experience: "law school", "school of law", "attorney", "lawyer", "legal assistant", "legal research assistant", as well as "JD", "LLM", "LLB" (and any variations on the above). The following set of keywords corresponds to agriculture experience: "farmer", "rancher", "farm owner", "farm operator", "agriculture businessman", "agriculture businesswoman" (and any variations on the above).

[2] Note that the same person may possess more than one type of experience.

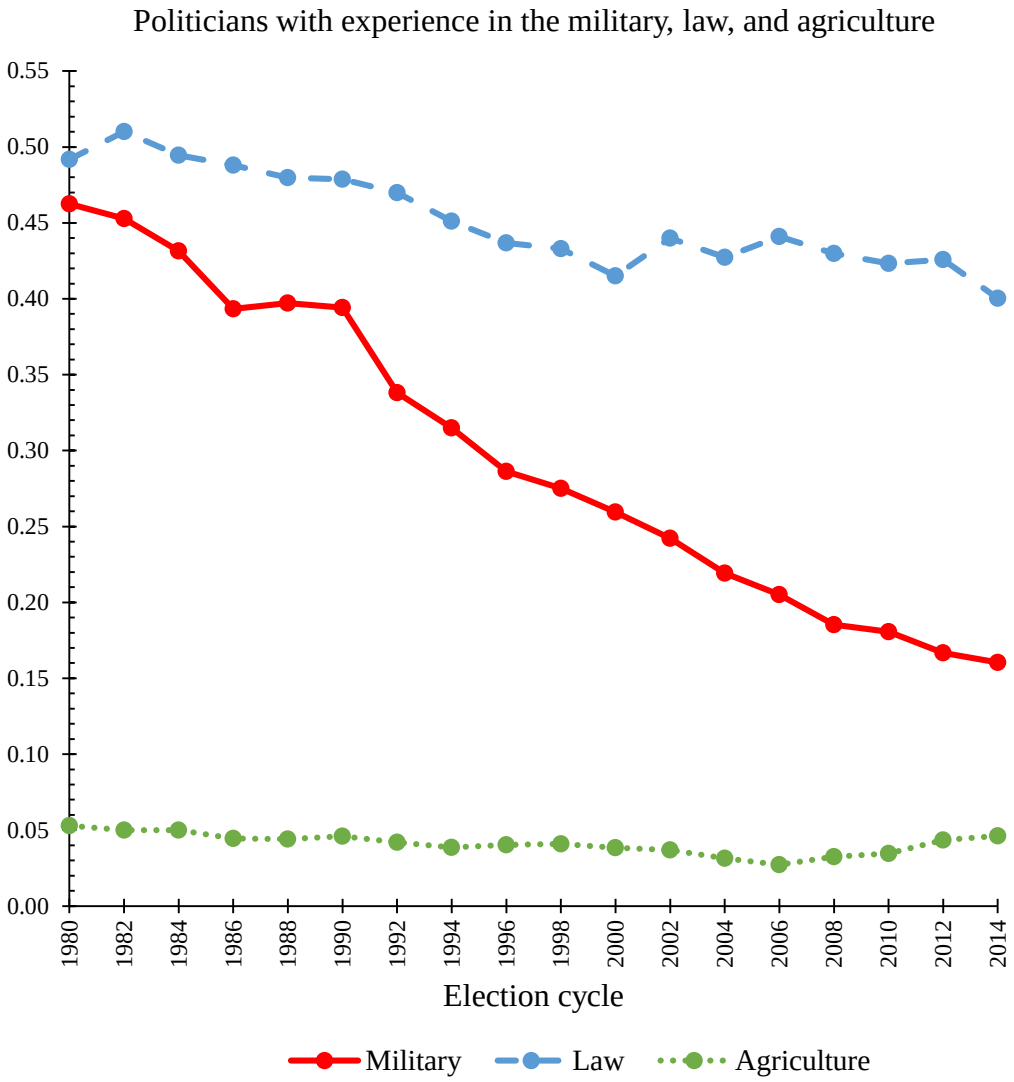

Figure A1. Share of federal office holders with experience in the military, law, and agriculture

This figure depicts the share of federal office holders (U.S. Representatives, U.S. Senators, and U.S. Presidents/Vice-Presidents) who, prior to being elected, had experience in the military (the solid red line), law (the dashed blue line), and agriculture (the dotted green line).

APPENDIX B: DETAILS OF SAMPLE CONSTRUCTION

B1. The sample of businessman politicians based on official biographies

We identify all federal office holders (i.e., U.S. Representatives, U.S. Senators, and U.S. Presidents/Vice-Presidents) who were elected (either for the first time or re-elected for a subsequent term) at any point of time between 1980 and 2014. We then obtain their official biographies, available at http://bioguide.congress.gov/biosearch/biosearch.asp and at https://www.govtrack.us. We use the latter source for our analysis, since it also contains the list of all bills sponsored and co-sponsored by each U.S. Representative and U.S. Senator. In total, we identify 1,878 federal office holders, of which 1,559 are U.S. Representatives, 310 are U.S. Senators, and 9 are U.S. Presidents/Vice-Presidents (the U.S. President and Vice-President are always elected simultaneously, with one U.S. Vice-President, George H. W. Bush, later becoming President himself).

For each federal office holder identified in the previous step, we read the official biography and find all people who, prior to being elected, held at least one position as the CEO, president, chairman/chairwoman, or founder of any private or public for-profit non-agricultural firm. We term such federal office holders 'businessman politicians', of which we identify 338. In rare cases, a person may obtain executive experience between his/her terms in federal office. For example, Dick Cheney served in the U.S. House of Representatives until 1989, at which point he became the Secretary of Defense (from 1989 to 1993) and later the CEO of Halliburton Company (from 1995 to 2000). He then became the Vice-President of the United States in 2000 and served in this capacity until 2008. In such cases, the office holder is termed a businessman politician during the terms for which he/she was elected after having obtained executive experience and is termed a

non-businessman politician during all other terms. For example, Dick Cheney is considered a non-businessman politician prior to 1995 and a businessman politician afterwards.

For all businessman politicians, we then identify all firms in which they worked prior to being elected (294 unique firms for 212 businessman politicians). Among these firms, we then identify all firms that had a publicly listed stock during federal elections in which a businessman politician participated. In total, we have 22 unique politicians and 32 unique firms. For all politicians whose firms have stock returns data available, we obtain, whenever possible, the data on their stockholdings in those firms. The first source of stockholdings data is the DEF 14A filings from the Securities and Exchange Commission (SEC). For each election, we obtain the most recent DEF 14A filing prior to election, when available.[3] The second source of stockholdings data is Congressional personal finance disclosure forms, which, after 2004, are publicly available from the Senate Office of Public Records and the Office of the Clerk of the House; these forms are also provided in machine readable format by the Center for Responsive Politics (https://www.opensecrets.org/personal-finances). It is not always possible to precisely identify the amount of stockholdings of each stock for each politician, since politicians are required to report the amount of each of their assets within one of several ranges. In such cases, we use midpoints. However, some politicians provide additional information on the exact holdings of stock in individual firms – we use these more detailed disclosures when available. The SEC electronic data are only available from 1994, and Congressional financial disclosures start in 2004, which therefore reduces the sample of office holders for which we have stockholdings data to 17 unique politicians and 27 unique firms.

[3] For example, Darell E. Issa's holdings in Directed Electronics, Inc. during the 2006 election are available at https://www.sec.gov/Archives/edgar/data/1323630/000095015306001070/p72181def14a.htm.

Further, we obtain data on legislative productivity of all U.S. Representatives and U.S. Senators serving between 1980 and 2014. In particular, for each politician in our sample, we identify all bills that this politician introduced (in which case this politician would be termed the bill's "sponsor") or supported during the bill's introduction (in which case this politician would be termed the bill's "co-sponsor").[4] In total, we analyze 207,149 individual bills. Since not all bills are signed into law, we also identify, among sponsored and co-sponsored bills of each legislator, the ones that ultimately pass (8,872 bills). We are also interested in how likely business politicians are to collaborate with other legislators. We term all legislators who sponsor or co-sponsor the same bill as "legislative collaborators." For each politician in our sample (businessman and non-businessman), we identify all of his/her legislative collaborators and calculate the share of businessman politicians among them. This share is a measure of how likely a given politician is to collaborate with businessman politicians as opposed to non-businessman politicians. We then average these shares separately across businessman politicians and across non-businessman politicians.

To measure voting patterns, we obtain data on interest group ratings for all politicians in our sample. Pro-business ratings are provided by the Chamber of Commerce of the United States (CCUS); pro-labor unions' ratings are provided by the Committee on Political Education of the AFL-CIO (COPE), and pro-consumer ratings are from the Consumer Federation of America (CFA). We also collect the overall liberal/conservative scores (DW-NOMINATE), developed by Poole and Rosenthal (1997). Not all scores are available for all politicians in all years, which generated varying sample sizes.

[4] A sponsor is the first member of the House of Representatives or Senate to be listed among the possibly numerous lawmakers who introduce a bill or resolution. In Senate, multiple sponsorship of a bill is allowed. A sponsor, once designated, is responsible for the handling or processing of a bill in the legislative process.

Finally, we obtain data on campaign contributions received by all politicians in our sample. These data are publicly available from the Federal Election Commission for all election cycles after 1980. We collect the total amount of politician contributions that a given politician receives in each election cycle and also separately identify the sources of those contributions. We distinguish between the following three types of contributions from special interest groups: corporations, labor unions, or other special interests. All contributions made by entities whose organization type in the FEC data is coded C ("Corporation") are attributed to corporations, and all contributions made by entities whose organization type in the FEC data is coded L ("Labor organization") are attributed to labor unions. Contributions that cannot be attributed to either corporations or labor unions (and are not explicitly coded as contributions from individuals) are considered contributions by other special interests. Examples of such special interests include membership organizations, trade association, and cooperatives (e.g., American Medical Association Political Action Committee and Ohio Action Committee for Rural Electrification fall under the category of other special interests).

B2. The sample of businessman politicians based on BoardEx

We start by identifying all people in the BoardEx database who held at least one position as the CEO, president, chairman/chairwoman, or founder of any private or public for-profit non-agricultural firm. In particular, we retain all people, who, according to their employment history in BoardEx, held at least one of the following titles: "CEO", "Chairman/Chairwoman", "President", and "Founder".[5] We also restrict the sample to positions in non-government firms

[5] We are careful to remove from consideration assistant positions, such as "Assistant CEO", by removing role titles containing the following keywords and their variations: "assistant", "division", "group", "emeritus", "regional", "deputy", "acting", "interim", "vice", and "designate".

located in the United States. This leaves us with 61,502 unique people who hold 152,762 unique positions (i.e., unique person-firm combinations).

For each person identified in the previous step, we build online search queries of the following form: “Person’s name” + “Company name” + “Political office” + “Elect”, where “Political office” denotes a federal elective office. We separately search for each combination of the following: “US/United States” + “House/Senat/Congress/President” (notice that “Senat” represents “Senator”, “Senate”, “Senatorial”, etc.). Further, we perform a separate search for each unique person-firm-office combinations, for a total of 1,994,920 unique search queries.

Each of the 1,994,920 unique search queries is automatically input into a search engine. Modern search engines employ a variety of search algorithms that may depend on location and the history of prior searches. To ensure that we receive the full range of all possible search results, we perform each unique search on six independent servers. If a search query returns no output (we have 539 such cases), we repeat it again on the six different servers on a different day. In total, we run 11,972,754 search queries that return 29,908,149 unique search results (for each query, we retain top 20 search results, when available, and some search results may overlap because we build multiple searches for each individual in our sample).

Because modern search algorithms do not limit their search results to keywords verbatim, the 29,908,149 search results from the previous step contain many web sources that do not describe electoral campaigns. A common example is company filings that describe board elections, in which case the name of a BoardEx executive may appear in connection with his/her role as the President of the firm or his/her election to the board. Another common example are newspaper articles that describe executive’s wealth (in which case, for example, the word “House” may be mentioned frequently). We use a two-step procedure to eliminate extraneous search results. First,

we verify that the web pages that the search results provide contain at least one mention of the BoardEx executive as well as at least one of his/her firms and any of the federal political offices. To do this, we obtain the http source code of each web page in the list of search results and perform a within-web keyword search, where we search for all mentions of the person's name, firm(s) and office(s). We thus identify 47,783 web pages that contain at least one mention of the BoardEx executive as well as at least one of his/her firms and any of the federal political offices. In the second step, we hire human research assistants to manually read each of the 47,783 web pages and retain only those pages that contain any mention of political campaigns run by BoardEx executives. For example, research assistants exclude all articles that mention instances of executives making monetary campaign contributions to politicians (but do not mention the incidence of executives running for office themselves). This leaves us with 65 BoardEx executives who run in 152 campaigns for federal office between 1980 and 2014.

Next, we identify all electoral opponents of BoardEx executives. Using the candidate master file from the FEC, we identify all other political candidates who ran in the same elections as the BoardEx executives from our sample. We restrict the sample to the candidates who appear on the ballot (since many of the candidates that register with the FEC do not ultimately run) by limiting the list of candidates to those for which the FEC reports election results. In total, we identify 823 electoral opponents of BoardEx executives.