

## **The Politics of the Paycheck Protection Program**

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### **Abstract**

Does political ideology shape loan allocation through the Paycheck Protection Program (PPP)? We hand-collect detailed data on the contributions of both banks and bank employees to political campaigns in the 2020 presidential election to construct measures of political ideology. For identification, we exploit the staggered implementation of the PPP under both Trump and Biden administrations. Our preliminary findings show that ideological distance with the administration distorts small business lending of banks. We conjecture that those misaligned with the Biden administration (Republican-leaning banks) consider the second phase of PPP in 2021 a legacy policy and carry it out more enthusiastically potentially to make up for the loss in political capital with the current administration. Our study has important implications for the effectiveness in implementing government aid programs and for the dynamics of banks’ political capital.

**JEL classification codes:** D72, G21, G28, G32, G38, H12, H81

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## 1. Introduction

The COVID-19 outbreak triggered an unprecedented economic freeze that left millions of businesses in dire need of liquidity (Bartik et al. 2020a). The government aid response around the world was immediate and unprecedented. In the United States, as a centerpiece of the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020, the Paycheck Protection Program (PPP) aimed to provide financial assistance to businesses that were hit hardest by the freeze. The PPP provided a temporary source of liquidity for small businesses, initially authorizing \$670 billion in forgivable loans and guarantees. This first phase of PPP ran between April and August 2020. As a follow-on response to the outbreak, in January 2021, the Consolidated Appropriations Act (CAA) of 2021 included \$284 billion in additional forgivable loans for a second phase of PPP. These two large economic relief packages were both passed under the Trump administration but the disbursement of loans in the second phase happened under the Biden administration, in the wake of a controversial election. A question thus naturally arises: did banks channel the PPP funds to those that needed them the most independently of who held power in the executive branch?

In this paper, we attempt to answer this question from the lens of political economy. We use a large sample of different types of lenders to present the first systematic evidence that banks' political ideology alters the efficient allocation of PPP loans. Our results complement a few studies documenting the (mis)allocation of PPP lending across the US economy. Granja et al. (2022) show, for a large sample of small private firms, that funds flowed to areas that were hit less hard by the economic consequences of COVID-19. Bayluk et al. (2021) and Li and Strahan (2021) uncover that prior bank relationship helped smaller firms to access PPP funds. Cororaton and Rosen (2021) focus on public firms and report that PPP funds were primarily allocated to financially weaker firms, while some larger and healthier firms that had received funds eventually returned them after public backlash. Chernenko and Scharfstein (2022) document racial disparities in the PPP. None of these papers, however, examines whether *and* how ideological alignment with the administration facilitates the implementation of the PPP. Focusing on ideological alignment is especially important for PPP as this economic relief program was carried out in a context of extremely high political polarization.<sup>1</sup> The findings in this paper suggest that financial firms (here,

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<sup>1</sup> In 2019, 82 percentage points separated Republicans' (89%) and Democrats' (7%) average job approval ratings of President Trump, which is the largest degree of political polarization in any presidential year measured by Gallup until then (see <https://news.gallup.com/poll/283910/trump-third-year-sets-new-standard-party-polarization.aspx>; last

PPP lenders) could be a conduit through which the economic consequences of political polarization can materialize.<sup>2</sup>

Isolating the effect of political ideology on PPP fund allocation decisions is empirically challenging for two main reasons. First, ideological alignment between a bank and the ruling administration could correlate with other (omitted) factors of proximity between banks and the administration. Second, the need for PPP funds or the severity of the pandemic may be directly affected by changes in government policies or political uncertainty surrounding the presidential election. To address these challenges, our main empirical strategy examines the staggered implementation of PPP around the 2020 presidential election. Banks act as the disseminators of around \$800 billion PPP between 2020 and 2021 (Autor et al., 2022a). However, the ideological alignment of PPP lenders with the current administration changes at the beginning of 2021 following the controversial presidential election of 2020. We exploit the exogenous change in political alignment between the two phases of PPP to study the effect of political ideology on the efficiency of fund allocations under PPP, the largest (by any standard) economic relief package.

To examine the relation between political ideology and PPP allocation, we construct several measures of banks' political ideology based on hand-collected data on campaign contributions. Specifically, we use banks' corporate contributions to political action committees (PACs) as well as bank employees' individual contributions to PACs and candidates. We obtain data from the Small Business Administration (SBA) on the number and amount of PPP loans disbursed and combine it with our measures of ideology at the bank level. In addition, we collect data reflecting other bank characteristics as well as the economic and political characteristics of borrowers and regions. We first present descriptive results on political ideology and characteristics of PPP lenders in our sample. Overall, we have 116,840 lender-week observations, with an average loan amount of \$1.5 million. On average, about 70% of total corporate PAC contributions to leadership PACs are directed towards Republicans, while 67% of employees in a lender firm support Republicans.

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accessed: December 1, 2023). By 2021, a new record of 84 percentage points separated Republicans' (8%) and Democrats' (92%) average job approval ratings of President Biden.

<sup>2</sup> Coibion et al. (2020) show large-scale survey evidence of political polarization on economic expectations. They uncover that both Republicans and Democrats expect their preferred candidate to win with a very high probability, and they expect the economy to perform poorly when the candidate of the opposing party wins.

We then adopt a difference-in-differences methodology, using the 2020 presidential election as an exogenous shock, combined with differences in ideological leaning of financial firms. The results show that when the Biden administration came to power after the 2020 presidential election, Republican-leaning lenders engaged in greater PPP lending during the second phase of the program. The estimates are economically significant too. A Republican-leaning lender in the 75<sup>th</sup> percentile of ideology reports almost double the average weekly lending volume in the second phase compared to a bank with Republican-leaning ideology in the 25<sup>th</sup> percentile; and its average number of new loans is one and a half times as much. These main results show that ideological misalignment increases PPP lending, consistent with the idea that Republican lenders increase lending either (*i*) to make up for the loss in political capital or (*ii*) to drain the budget of an ideologically distant administration.

In ongoing work, we explore such mechanisms underlying these main results. To do so, we aim to exploit regional differences, among other things. For example, it could be that Republican-leaning banks lend more in the second phase of the program, but only in Republican counties, where voter population is more Republican. Further, it is possible that Republican-leaning banks lend more aggressively in regions that were hit more severely by the pandemic (as captured by Covid case counts and share of teleworkable jobs reflecting vulnerability to lockdowns), and in areas with more intense electoral competition (that is, in “battleground” districts). Testing such hypotheses about mechanisms may also require examining the real effects of political ideology on PPP lending. We thus plan to look at the real effects (as explained below) by notably employing county-level unemployment insurance claims to proxy for unemployment.

Our paper contributes to several strands of the economics and finance literature. First, it is related to work on the political economy of government aid programs. Several studies examine whether electoral politics affects the spatial allocation of government funds: Fishback et al. (2003) focus on funds under the New Deal in the 1930s, Boone et al. (2014) under the American Recovery and Reinvestment Act of 2009, and Duchin and Hackney (2021) under the PPP of 2020. Unlike these papers, we instead focus on the political motivation behind banks’ lending decision in a context of high political polarization, uncovering that ideological alignment between banks and the administration affects liquidity support to small businesses. Importantly, our paper further contributes to our understanding of the mechanisms behind the partisan-alignment phenomenon.

Second, our paper belongs to the broader literature on politics and credit (see Lambert and Volpin, 2018, for an overview). Within this literature, our paper is most closely related to studies documenting the influence of banks' political connections on loan renegotiations (Agarwal et al. 2018), retail lending (Chavaz and Rose 2019), consumer credit (Akey et al., 2021), and small business loan subsidies (Raina and Xu 2020) in the United States. Our paper also documents distortionary effects of politics on corporate lending (PPP loans), while investigating unexplored mechanisms via which ideological misalignment drives lending.

Third, our paper adds to the literature on the relation between political ideology and economic behaviors, including that of loan officers (Dagostino et al., 2023), credit analysts (Kempf and Tsoutsoura, 2021), professional money managers (Cassidy and Vorsatz, 2021), judges (Chen, 2020), and central bankers (Ioannidou et al., 2023). Closer to our line of inquiries is Kempf et al. (2023) who find that ideological alignment between US banks and foreign governments is an important factor behind the allocation of cross-border corporate syndicated loans. In a similar spirit, we infer partisan leaning of banks using their political contributions to candidates running in the 2020 presidential election to identify whether political ideology shapes the allocation of PPP funds. We complement and go beyond this study by also measuring ideology using individual contributions of bank employees to candidates. Using (small) individual contributions is critical as their aggregation shapes "from the bottom" political ideology of organizations (Bouton et al., 2022; Cagé, 2023).

Last, our paper is connected to a rapidly growing literature on the determinants of PPP allocation (see papers cited at the outset) and its impacts on the US economy (Bartik et al., 2020a, 2020b; Chetty et al., 2020; Hanson et al., 2020; Humphries et al., 2020; Meier and Smith, 2020; Bartlett and Morse, 2021; Granja et al., 2021; Autor et al., 2022b; Chodorow-Reich et al., 2022; Elenev et al., 2022). We join this emerging literature by presenting novel evidence of the effect of political ideology on the allocation of PPP funds across businesses.

The proposal is constructed as follows. Section 2 derives our hypotheses and lays out the research questions. Section 3 describes the empirical strategy and the data. Section 4 documents the preliminary results. The paper ends in Section 5 with our plans for further work.

## 2. Hypotheses and Research Questions

As with any government intervention, it is essential to understand if and how distortions might have happened in a large program like the PPP. The focus of our study is thus on the potential role of differences in political ideology between those controlling the executive branch and the banks making the lending decisions on the ground.

We exploit the differences between the two phases of the PPP and consider two hypotheses.

On the one hand, Republican-leaning banks may consider the second phase of the PPP as a legacy of the Trump administration, with whom they are more closely aligned. And, they may see PPP funds as a way to make up for the loss in political capital with the executive branch. Then, they would become more enthusiastic in giving out loans. This enthusiasm may show up as larger loans being disbursed at a faster rate to borrowers that are not the most in need. This may also mean more risk taking, depending on the relative risk profiles of those in more vs less need.<sup>3</sup>

On the other hand, Republican-leaning banks may see the second phase under a new administration that they are less aligned with as a less worthwhile part of their portfolio. Then, they would become less enthusiastic about the second phase of PPP, relative to Democrat-leaning banks. We may then observe Republican-leaning banks slowing the amount and speed of lending and/or becoming more picky in to whom they lend.

These competing hypotheses raise several research questions:

- Does political ideology of lenders increase the reach of PPP, as observed in the loan amounts dispersed and the speed of origination? How do the effects, if any, vary across borrower and region characteristics?
- Does political ideology of lenders decrease the allocative efficiency of PPP funds, as observed in the channeling of loans to borrowers and regions harder-hit by the pandemic? How do the effects, if any, vary across borrower and region characteristics?

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<sup>3</sup> Another explanation consistent with this hypothesis of “more enthusiasm” in PPP lending that misaligned lenders may be incentivized to drain the budget of an ideologically distant administration by increasing lending disproportionately.

- Are there real effects associated with any distortions to the allocation of PPP loans, in terms of employment?

### 3. Empirical Strategy and Data

#### 3.1. Empirical Model

To test whether banks' political ideology affects lending under the PPP, we exploit the close presidential election of 2020 as an exogenous shock. This approach primarily relies on the timeline of PPP:

- March 27, 2020: President Trump signs the CARES Act into law.
- April 3, 2020: PPP opens to accept applications, with \$349 billion funding.
- April 16, 2020: Funding is exhausted.
- April 24, 2020: Additional \$310 billion is authorized.
- August 8, 2020: PPP stops taking new applications.
- November 3, 2020: Election Day; Biden is announced as the winner on November 7.
- December 21, 2020: Additional \$284 billion is authorized under the CAA Act.
- January 11, 2021: PPP reopens to accept applications.
- January 20, 2021: Biden is inaugurated.
- February 22, 2021: President Biden announces changes to PPP to further promote equitable access to relief.
- March 30, 2021: The deadline to apply for a PPP loan is extended to May 31.
- March 31, 2021: PPP is set to expire but gets extended.
- May 4, 2021: PPP runs out of general funds and stops accepting new applications.
- May 31, 2021: PPP ends.

We run difference-in-differences regressions at the lender-week level:

$$Y_{i,t} = \beta Post_t \times Political\ Ideology_i + \gamma X_{i,t} + \mu_i + \mu_t + \varepsilon_{i,t}. \quad (1)$$

We index lender by  $i$  and week by  $t$ .  $Y_{i,t}$  is either the natural logarithm of the total amount of loans or the natural logarithm of the total number of loans originated by lender  $i$  in week  $t$ . The data spans the two phases of the PPP: from 2020W14 to 2020W32 for the first phase and from 2021W2 to 2021W22 for the second phase. In other words, the first phase is run under the Trump

administration and the second phase under Biden administration.  $Post_t$  is a dummy variable that takes the value of 1 for the weeks that belong to the second phase of the PPP, and the value of 0 otherwise.  $Political\ Ideology_i$  is a variable measuring political ideology at the lender level during the 2020 presidential election, the details of which are discussed in the next sub-section.  $X_{i,t}$  is a vector of lender-level control variables.  $\mu_i$  and  $\mu_t$  denote lender and week fixed effects, respectively.  $\varepsilon_{i,t}$  is the error term. Standard errors are clustered at the lender level and robust to heteroskedasticity. The parameter of interest is  $\beta$ , which captures the effect of ideological alignment on PPP lending.

The key identifying assumption in a difference-in-differences design is that of parallel trends. Identification relies on the assumption that the outcome would have behaved in a similar way across treated (Republican-leaning lenders) and control (Democratic-leaning lenders) groups absent treatment. In our setting, this translates into maintaining that the PPP lending would have evolved in a similar fashion across treated and control groups if Trump was announced as the winner of the presidential election of 2020. We provide evidence in support of this assumption in Section 4.

### **3.2. Data Description**

**PPP lending.** We obtain PPP data from the SBA, which provides information on business and loan characteristics. The characteristics of the businesses that received loans under the program are their name, location (city, congressional district, and state), legal status (e.g., sole proprietorship, corporation), and industry classification (six-digit NAICS). The loan characteristics consist of the loan \$-amount and the date when the loan was approved. We use loan-level data released by the SBA in January 2022.

The original PPP data set from SBA provides a unique identifier for the originating lender, as well as the lender names, and location information. To construct our sample, we start with the whole population of PPP loans and lenders and then we exclude 21 loans for which the lender identifier is missing and 2,439 loans with approval dates after the ending date of PPP. Our final sample consists of 11,467,341 loans and 5,374 lenders. To identify the lender types, we manually match the PPP lenders based on their names and locations to the banks and bank holding companies (BHCs) in Call Reports and FRY-9C between 2019 and 2021. We first check whether a PPP lender



can be matched to a bank included in Call Reports. If not, we then check whether the lender can be matched to a BHC covered in FRY-9C. We categorize lenders that have a match in this step, and therefore a valid regulatory identifier (called “RSSD”), as “Banks”. For unmatched ones, we categorize lenders whose names include “Credit Union”, “Farm Credit”, “Agricultural Credit”, “ACA”, “CU”, and “FCU”, as “Credit Unions”. All the rest, we categorize as “Others”.<sup>4</sup>

Table 1 shows the breakdown of the PPP loan sample based on the lender type. The overall PPP loan sample provides almost \$800 billion loans. As can be seen, banks serve as the major disseminators of PPP funds: they cover 79% of all PPP lenders providing 72.6% of all loans and 90.8% of total dollar amount. Institutions other than banks and credit unions (“Others”) stepped up significantly in the second phase of PPP (year 2021).

To construct our dependent variables, we use the aggregated PPP loan \$-amount originated by a lender in a given period, as well as the number of new PPP loans originated by a lender in a given period. The dependent variables constructed are respectively labeled *Value of loans (log)* and *Number of loans (log 1+)*. The baseline sample consists of lender-weekly observations.

***Political ideology.*** By way of background, individuals and corporations can make contributions toward the election of a candidate in a number of ways. They can contribute directly to a candidate, to a political party, or to a political action committee (PAC). A PAC is a committee that raises and spends money to elect or defeat candidates. Most PACs represent businesses (e.g., Bank of America PAC), associations (e.g., American Bankers Association PAC), or ideological causes (e.g., EMILY’s List PAC). An organization’s PAC solicits money from its employees or members and directs the money in the name of the PAC to candidates and political parties. Other types of PACs include “leadership PACs”, where politicians raise money apart from their own campaigns to help other politicians (e.g., Majority Cmte PAC). There are limits on the amount that can be contributed. For instance, in 2019-2020, an individual donor could contribute \$2,800 per election to a candidate and \$5,000 per year to a PAC, while a PAC could contribute up to \$5,000 per election to a candidate and up to \$35,500 per year to a political party committee.<sup>5</sup>

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<sup>4</sup> The three most active PPP lenders categorized as “Others” are Prestamos CDFI, Harvest Small Business Finance LLC, and Capital Plus Financial LLC. These three financial firms extended 45.6% of the PPP loans in this category.

<sup>5</sup> Following a 2010 US Court of Appeals decision, a new type of PAC was created, a “super PAC”. Super PACs make no contributions to candidates or parties, but they can directly spend money on actions that specifically target an

To measure lenders' political ideology, we obtain information on contributions by PACs and individual donors to presidential and congressional political campaigns during the 2020 election cycle.<sup>6</sup> We source data on campaign contributions from the Center for Responsive Politics as part of its "Open Secrets" database. We capture the political support for Republicans as the ratio of campaign contributions (either by lenders or by lender employees) to Republican PACs and Republican candidates to total campaign contributions. The time span is the 2020 election cycle (2019-2020). We use campaign contributions made by both lenders and lender employees. This means that we rely on both "top-down" (lender-level) and "bottom-up" (employee-level) approaches to capture the ideology of a lender. Most studies use only one of these approaches (e.g., Duchin et al., 2023; Kempf et al., 2023). However, there are potential concerns with each approach. On the one hand, lender-level contributions may not reflect the underlying political views of people constituting the organization (that is, its employees and leadership), but rather strategic political decisions made by the lender. On the other hand, potential data scarcity on campaign contributions made by individual employees may make their aggregation at the lender level a source of measurement error.<sup>7</sup> Therefore, we use both approaches to mitigate the concerns associated with the reliance on one measure taken in isolation.

First, regarding the "top-down" approach, we use lender contributions from its corporate PAC to Republican or Democratic party leadership PACs.<sup>8</sup> We do not include contributions to election candidates since banks generally do not contribute directly to presidential candidates (only one bank in our sample contributed to Trump, none to other presidential candidates, in 2020); also banks contribute to congressional candidates generally for their power in subcommittees or local areas rather than political ideology. We manually compare all lender names (and their BHC names if applicable) to PAC names active in the 2020 cycle. In total, we are able to identify 59 PPP

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election, such as running ads or sending mail to voters. There are no restrictions on the amount, or the sources of the funds spent.

<sup>6</sup> We include campaign committees for all party affiliated or leadership PACs, strong ideological PACs, congressional candidate PACs, and candidate PACs for three candidates involved in the presidential election (Donald Trump, Joseph Biden, and Kamala Harris; Mike Pence did not have any candidate campaign committee registered in the 2020 election cycle).

<sup>7</sup> We also rely on data on small individual donors (below \$200), which further mitigates data scarcity concerns (see below).

<sup>8</sup> Popular leadership PAC recipients for bank contributions in the 2020 election cycle include "Building Leadership & Inspiring New Enterprise" and "Democratic Congressional Campaign Cmte".

lenders contributing via their affiliated corporate PACs to 253 various party leadership PACs during the 2020 election cycle. In Table 1, we report the breakdown of contributing lenders with corporate PAC contributions in the 2020 election cycle. Although the number of matched lenders with corporate PAC contributions seems very limited (only 1.1% of all lenders), the sample covers some of the most active PPP lenders, providing over a quarter of all PPP loans and over a third of total dollar volume. 57 out of 59 contributing lenders are banks. On average, a lender contributes \$145,490 (median is \$37,100) to party PACs, out of which 70% goes to Republican PACs.<sup>9</sup> We calculate the proportion of the contribution dollars that go to Republican PACs out of the total amount going to either Republican or Democratic PACs as the first ideology measure (labelled *Lender contributions to Republicans*). If the measure takes the value 100%, the lender does not contribute to Democratic PACs at all and only to Republican PACs. Appendix Figure A1 shows the distribution of the measure. Most lenders are Republican leaning (with the measure value close to one), while a substantial number of banks contribute to both parties.

Second, regarding the “bottom-up” approach, we go to the detailed record of individual contribution data to identify lender employee ideology. The individual contribution record of 2020 has the advantage of including a vast number of small donors (that is, contributing less than \$200), since the major individual contribution platforms (ActBlue and WinRed) started to request all donors to disclose identities, including their employers. ActBlue was created in 2004 to help the Democrats raise money and which now dominates Democratic fundraising, while WinRed was launched in 2019 on the Republican side (Bouton et al., 2022; Cagé, 2023). We have over 80 million valid records of individual contributions in 2020 cycle.<sup>10</sup> We run fuzzy match commands to compare employer names and lender names using various methods, including “big-ram”, and “token”, and manually read through all possible matches.<sup>11</sup> We are able to identify over half a

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<sup>9</sup> The matching of the campaign contribution and the PPP data set is a tedious task that we perform manually. We start with all the lenders in the PPP data set that we first match with the campaign contribution data based on bank names. Then, we go through the unmatched banks that originated PPP loans one by one to mark any potential matches based on the scores produced by a fuzzy-string matching algorithm and confirm the accuracy of these additional matches.

<sup>10</sup> Considering these small campaign contributions is critical to mitigate measurement concerns about data scarcity when relying on ideology measures aggregating at the organization level contributions from employees. This is also an improvement as compared to most studies in the literature on politics and finance that typically overlook these small contributions.

<sup>11</sup> Many banks may share similar names. Self-reported employer names by individual donors include unstandardized company names. Therefore, an individual employee may be matched to multiple banks in the same election cycle. We only keep the match with highest similarity score for each individual donor. In follow-up work, we can further refine

million records where the donor's employer is a PPP lender. We drop invalid and duplicate records and those to independent PACs (not political ideological) or third-party candidates. In total, we can match over 25,000 employees working for 2,915 lenders, covering 54.2% of PPP lenders (Table 1). It is a lot more common for individuals to contribute directly to presidential candidates than their employer corporate PACs do. We calculate the aggregate contribution amounts to either Republican or Democratic candidates and leadership or ideological PACs,<sup>12</sup> and calculate the fraction of the contribution going to Republican candidates and PACs. Appendix Figure A2, Panel A, shows the distribution of employee ideology. Unlike the lenders, individuals demonstrate one-sided support to either Republicans or Democrats. Out of 25,500 employees, on average, one contributes \$3,032 (median \$500) to party PACs and candidates, out of which 46% goes to Republican candidates or party PACs.

Next, we aggregate the employee ideology to the lender level. As almost all individuals only support one party, we consider an employee to be Republican leaning if the fraction of her contribution amount going to Republicans is over 50%, out of the total amount going to both Republican and Democrats. We then calculate the proportion of Republican-leaning employees in the 2020 election cycle for each PPP lender (the measure is labelled *Employee contributions to Republicans (number)*). Appendix Figure A2, Panel B, shows the distribution of the fraction of Republican-leaning employees measured at the lender level. Notably, the distribution is similar to the distribution of lender PAC contributions in Figure A1 with a good proportion of lenders with diverse employee ideology. On average, a lender has 67% of Republican-leaning employees out of all politically active employees. Notably, the “bottom-up” political ideology measure allows us to cover a majority of the PPP loan sample, utilizing over 9.2 million PPP loans (80% of the overall sample) and covering more than \$702 billion volume (88% of total loan amount).

For robustness, we also aggregate employee ideology to the lender level based on their contribution dollar amounts. We calculate each employee's contribution fraction to Republicans out of total amount to both parties and then take average across all employees in the same lender. We use

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the match by cross-checking the self-reported location information of employees and bank branches from the FDIC Summary of Deposits data sets.

<sup>12</sup> Popular party PAC recipients for employee contributions in 2020 cycle include “Republican National Cmte”, “Trump Make America Great Again Cmte”, and “Democratic Congressional Campaign Cmte”.

simple average (*Employee contributions to Republicans (average value)*), or weighted average by total dollar amount of contributions (*Employee contributions to Republicans (weighted value)*). We obtain consistent values for these two political ideology measures than for *Employee contributions to Republicans (number)*.

**Bank characteristics.** To add controls for bank characteristics, we obtain balance sheet and income statement information from Call Reports, supplemented with FRY-9C, and matched to the previous calendar quarter. The control variables include *Bank size (log 1+)*, *Bank ROA (%)*, *Bank NPL (%)*, *Bank tier1 ratio (%)*, and *Bank core deposit (%)*. Naturally, the control variables are only available for “bank” PPP lenders.

**Regional and industry characteristics.** We also gather district and state-level data on political conditions and industry-level data on vulnerability to pandemic-induced lockdowns and social distancing. These data will be used in further analyses to investigate the mechanisms through which ideology affects PPP loans.

First, we may use regional variables capturing the political environment at either the state or district level. The first variable captures political control and is a dummy variable identifying whether the state legislature is controlled by Republicans, based on the number of seats held by the two parties in the state house and senate as reported by the National Conference of State Legislatures. The second variable captures the leaning of the electorate in the race between Democrat and Republican candidates in the 2020 election as of April and is the Partisan Voting Index (PVI) provided by the April 2020 edition of the Cook Political Report. The PVI measures how each congressional district is positioned in the electoral spectrum based on its record in the previous elections. The values range from 1 to 8 with 1 corresponding to solid Democrat, 2 to likely Democrat, 3 to lean Democrat, 4 to toss-up Democrat, 5 to toss-up Republican, 6 to lean Republic, 7 to likely Republican, and 8 to solid Republican.<sup>13</sup> We also construct a “battleground” dummy variable that takes the value of 1 when the PVI value for a district is 4 or 5 (toss-up cases). Finally, the last two variables in our set of regional characteristics capture *political ideology* of the citizens and local

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<sup>13</sup> The Cook Political Report provides information separately for house, senate, gubernatorial, and presidential elections. In the results reported, we use the ratings for house races but the correlation among the categories is high and the findings are robust to using the other alternatives.

government, sourced from Richard Fording’s website.<sup>14</sup> Higher (lower) values of these political ideology variables indicate more liberal (conservative) values and positions in a state.

We also gather industry-level variables capturing the resilience of an industry to a pandemic. We specifically rely on measures of teleworkability, which are based on detailed survey information on occupations as classified by Dingel and Neiman (2020). Their indices capture the share of jobs of a given industry that can be done at home and is aggregated at the two-digit industry level using either the employment share or the wage share. Industries with a higher share of teleworkable jobs are likely to suffer less from a pandemic and, in particular, from social-distancing measures.

To measure the real effects of PPP loans extended, we collect the weekly unemployment insurance claims from 14 state labor department websites and supplemented by the data from the Opportunity Insights Economic Tracker.<sup>15</sup> The country-week initial unemployment insurance claims can measure the timeliest increase to local unemployment.

**Summary statistics.** Table 2 presents the summary statistics for the key variables on PPP lending, political ideology, and bank characteristics for the baseline sample. For the sake of brevity, Table 2 does not report summary statistics on the regional and industry characteristics (as we do not use them yet to produce the preliminary results presented in the next section). We construct the lender-week panel data set by aggregating PPP lenders’ lending activities to calendar weeks. In this baseline sample, we only keep the lenders with non-missing political ideology measures, using either “top-down” or “bottom-up” approach. We then fill up the sample to a balanced panel data set and replace the loan amount and the loan number with zeroes if the lender is not active during that week. As a result, the panel data set consists of 40 weeks (19 weeks in 2020 and 21 weeks in 2021) and 2,919 lenders. Eventually, we have 116,760 lender-week observations in the baseline sample, with an average loan amount of US\$ 2.4 million and 30 loans in a week (Table 2). On average, about 70% of total corporate PAC contributions to leadership PACs are directed towards Republicans. On average, 12.6 employees in a lender firm make campaign contributions, and 67% of such employees strongly support Republicans.

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<sup>14</sup> These ideology measures at the regional level are constructed using the methodology originally developed by Berry et al. (1998) and was last updated in 2018. Alternative ideology scores that we may rely on are from the Shor-McCarty database (Shor and McCarty, 2011).

<sup>15</sup> <https://tracktherecovery.org/>.

#### 4. Preliminary Results

**Main results.** Table 3 presents the difference-in-differences regression results from estimating Equation (1). The dependent variable in columns (1), (2), (5), and (6) is the total value of PPP lending originated in a week (in log), while that in columns (3), (4), (7), and (8) is the number of PPP loans originated. We use two measures of political ideology at the lender level: one in columns (1)-(4) based on “lender” contributions; the other in columns (5)-(8) based on lender employee contributions. The two measures capture the leaning of the lender towards Republican candidates relative to Democrats; higher the value of these measures, more Republican leaning the lender is likely to be. All regressions include the full set of control variables (except in columns (1) and (5)) and lender and time fixed effects.

The estimated coefficient on the interaction term of interest,  $\beta$ , is positive in sign in all the eight specifications, and statistically significant at the conventional levels in most regressions. The results suggest when the Biden administration came to power after the 2020 presidential election, it was in fact, the Republican-leaning lenders that engaged in greater PPP lending during the second phase of the program. The economic magnitude is also meaningful. A Republican-leaning lender (with the proportion of corporate PAC contribution to Republican PACs of 97.1% (75<sup>th</sup> percentile)) has average weekly lending volume in the second phase 101% ( $2.3654 \times 0.429$ ) higher than a “neutral” bank (with the proportion to Republican at 54.2% (25<sup>th</sup> percentile)). Its average number of new loans is 46% ( $0.9992 \times 0.429$ ) higher.

If we measure political ideology based on lender employees, Republican-leaning lender (with 100% (75<sup>th</sup> percentile) Republican-leaning employees) has average weekly lending volumes in the second phase 40% ( $0.757 \times 0.528$ ) higher than a neutral bank (with the fraction 47.2% (25<sup>th</sup> percentile)).

Table 4 present robustness to the use of several aggregation methods of individual employees’ ideology to the lender level. We can observe that the results are even stronger.

**Parallel trends.** Figure 1 shows the parallel trend graph, plotting the estimated coefficients for the PPP loan volume (\$-amount).<sup>16</sup> The parallel trends assumption holds as there are no visible

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<sup>16</sup> We obtain a similar conclusion about parallel trends assumption if we plot the estimated coefficients for the number of PPP loans as outcome. However, we do not report the graph for the sake of brevity.

differences between the treated group and control group prior to the presidential election. At the same time, an increase is evident in the weeks subsequent to the election. In particular, the wedge between treated (Republican-leaning lenders) and control (Democrat-leaning lenders) groups increases.

Overall, the preliminary findings in this section indicate that Republican-leaning PPP lenders increase their lending activities the more distant their ideology with the Biden administration is.

## 5. Next Steps

Initially authorized to extend \$670 billion in business loans, the PPP turned into a roughly \$800-billion program unprecedented in US history (Autor et al., 2022a). Much criticism has been directed at legislators and administrators for the allocation of funds under the program. This paper is a first attempt to systemically examine whether the political ideology of lenders affected the allocation of PPP aid. As argued at the outset, this is especially important in the political polarization context in which PPP was implemented. Indeed, ideological (mis)alignment may represent an important conduit through which the economic consequences of political polarization realize, in turn echoing survey evidence by Coibion et al. (2021) on polarization and economic expectations.

Our preliminary findings robustly establish a positive association between the share of campaign contributions lenders (or their employees) channels to Republican candidates and the amount and number of loans they extend in the second phase of the PPP.

We organize the next steps in the analysis in three categories, for which we have already collected most of the necessary data (see Sub-section 3.2).

First, we will assess the role of lender lobbying – an alternative way of establishing political connections – in influencing lending behavior under the PPP. A thriving literature has established the importance of lobbying activities in different contexts.<sup>17</sup> The analysis in the context of this proposal would involve an examination of the link between lender lobbying vs campaign contributions and PPP lending. The motivation behind lobbying arguably is less driven by

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<sup>17</sup> Including some of our own work: e.g., Facchini et al. (2011), Igan et al. (2011), Igan and Mishra (2014), Kerr et al. (2014), Ludema et al. (2018), Lambert (2019), Agca and Igan (2022), Igan et al. (2022).



ideology, hence this analysis would take a step toward isolating the effect of ideological leanings rather than special interest politics. This is potentially important as anecdotal evidence suggests a particular role for lobbyists in the PPP context: advocating for eligibility of and maximizing the slice of the pie for certain groups in the program.<sup>18</sup> If the baseline findings are robust to inclusion of lender-level lobbying activity, this would support the role of ideology and a desire to make-up for or rebuild political capital.

Second, our goal is to present evidence for the mechanisms behind our key findings that lender whose political ideology becomes misaligned with that of the administration engaged relatively more in the PPP. For this, we will (notably) exploit the regional differences in terms of economic and political characteristics. In particular, we plan to find out whether Republican-leaning lenders lend more in the second phase but only in Republican-leaning counties or, alternatively, in counties where political competition is more intense (as captured by the indicators described in Sub-section 3.2, as well as the closeness of the 2020 election). We also plan to analyze whether they lend more aggressively in counties that are hit harder by the pandemic (as captured by COVID-19 case counts and share of teleworkable jobs reflecting vulnerability to lockdowns). To the extent that Republican-leaning lenders channel more funds in the second phase of the program but more so in Republican-leaning counties even after controlling for their need for assistance, this would support the interpretation that they take the PPP to be a legacy of the previous administration.

Third, and related, we will examine the real effects of PPP lending under the influence of political ideology. We will start by documenting the relationship between PPP lending and unemployment insurance claims and analyzing the differences across locations depending on how active Republican-leaning lenders are. We will then conduct a counterfactual analysis to understand what the real effects would have been if two counties with otherwise similar economic characteristics had more or less dominance by Republican-leaning lenders than they actually had. We can also extend the counterfactual analysis to examine whether 2022 election results were in line with what

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<sup>18</sup> In “Coronavirus Stimulus Package Spurs a Lobbying Gold Rush,” *The New York Times* (March 20, 2020), Kenneth P. Vogel, Catie Edmondson, and Jesse Drucker open their article as follows: “Some industries are in dire need of a bailout. Others see a rare chance to win special breaks at a moment when the fiscal spigots are open.” See also Brody Mullins and Ted Mann, “Lobbyists Pile On to Get Wins for Clients Into Coronavirus Stimulus Package,” *The Wall Street Journal* (March 21, 2020); Jeanna Smialek, Jim Tankersley, and Luke Broadwater, “Lobbyists, Law Firms, and Trade Groups Took Small-Business Loans,” *The New York Times* (July 6, 2020); Alex Gangitano, “Lobbying groups received millions in PPP loans,” *The Hill* (July 7, 2020).

one would have expected or the real effects of the ideological leanings of lenders swayed some votes.

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Table 1: Breakdown of the PPP lender sample

The table reports the total numbers, the total loan amounts, and the total lender counts of PPP loans covered in different samples. *All* sample is the original PPP loan sample obtained from SBA website, dropping loans with missing lender identifiers or originating dates after the PPP end date. Year *2020/2021* sample is the loans originated in the first phase of PPP (in 2020/2021). *With corporate PAC contributions* sample is the sample covered by lenders with valid campaign contributions from their affiliated corporate PACs to Republican or Democratic party PACs in the 2020 election cycle. *With employee contributions* sample includes those where the lenders' employees made individual contributions to Republican or Democratic presidential and congressional candidates, as well as party PACs in the 2020 election cycle. The coverages by these two samples, in terms of the number of loans, total loan amounts, and covered lender, relative to the *all* sample are reported in the percentage's column. The statistics for three sub samples, *Banks*, *Credit Unions*, and *Others*, are also included in the subsequent rows. These three subsamples include PPP loans where the lenders are banks, credit unions, and other financial firms, respectively.

	Year	Number of PPP loans		Total loan amount (\$m)		Number of PPP lenders	
All		11,467,340	100.0%	796,506.25	100.0%	5,374	100.0%
	2020	5,136,382		525,774.77		5,298	
	2021	6,330,958		270,731.48		5,153	
<i>With corporate PAC contributions</i>		2,903,228	25.3%	268,803.17	33.7%	59	1.1%
<i>With employee contributions</i>		9,243,010	80.6%	702,775.39	88.2%	2,915	54.2%
Banks		8,324,509	72.6%	722,935.26	90.8%	4,247	79.0%
	2020	4,762,190		504,649.67		4,214	
	2021	3,562,319		218,285.59		4,150	
<i>With corporate PAC contributions</i>		2,883,994	25.1%	268,133.38	33.7%	57	1.1%
<i>With employee contributions</i>		7,511,782	65.5%	663,228.09	83.3%	2,519	46.9%
Credit Unions		404,768	3.5%	16,582.61	2.1%	957	17.8%
	2020	212,623		10,503.15		939	
	2021	192,145		6,079.46		850	
<i>With corporate PAC contributions</i>		674	0.0%	31.74	0.0%	1	0.0%
<i>With employee contributions</i>		239,294	2.1%	9,952.51	1.2%	342	6.4%
Others		2,738,063	23.9%	56,988.38	7.2%	170	3.2%
	2020	161,569		10,621.95		145	
	2021	2,576,494		46,366.43		153	
<i>With corporate PAC contributions</i>		18,560	0.2%	638.05	0.1%	1	0.0%
<i>With employee contributions</i>		1,491,934	13.0%	29,594.79	3.7%	54	1.0%

Table 2: Summary statistics for the key variables

The table presents summary statistics for the key variables of the baseline panel sample (lender-week level). The sample only keeps PPP lenders with PAC or employee contributions in the 2020 election cycle. All variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. *Value of loans* is the aggregated loan dollar amount originated in a calendar week by a given lender. *Number of loans* is the number of new PPP loans originated in a week by a given lender. *Value of loans (log)* is the natural logarithm of *loan amount* plus one. *Number of loans (log 1+)* is the natural logarithm of number of new loans plus one. *Lender contributions to Republicans* is the fraction of total contributions made from a lender's corporate PAC to Republican leadership PACs or party PACs out of the total contributions to either party in the 2020 election cycle. *Employee contributions to Republicans (number)* is the fraction of employees contributing more than half to Republican PACs or candidates in a given lender during the 2020 election cycle. *Employee contributions to Republicans (average value)* is the simple average for a given lender of each employee's contribution fraction to Republican candidates and PACs out of to either party (fraction of total). *Employee contributions to Republicans (weighted value)* is the weighted average for a given lender of each employee's contribution fraction to Republican candidates and PACs out of to either party, weighted by individual's total contribution amount. *Number of contributing employees* is the number of contributing employees in the 2020 election cycle in a lender. *Bank size* is the natural logarithm of one plus bank's total assets in the previous quarter. *Bank ROA (%)* is quarterly net income\*4/total assets\*100, lagged one quarter. *Bank NPL (%)* is loans past due 90 days or more and nonaccruals over total loans \*100, lagged one quarter. *Bank Tier1 (%)* is tier one capital over total loans \*100, lagged one quarter. *Bank core deposits (%)* is the sum of transactions deposits and all other savings deposits that are included in total non-transaction accounts, excluding MMDAs, over total deposits \*100, lagged one quarter.

	Obs.	Mean	S.D.	Perc. 25	Median	Perc. 75
<b>PPP lending</b>						
Value of loans (\$thousand)	116760	2441.357	7688.146	0.000	114.527	843.817
Number of loans	116760	30.836	74.935	0.000	5.000	23.000
Value of loans (log)	116760	9.377	5.981	0.000	11.649	13.646
Number of loans (log 1+)	116760	1.957	1.687	0.000	1.792	3.178
<b>Political ideology</b>						
Lender contributions to Republicans	2360	0.700	0.346	0.432	0.912	1.000
Employee contributions to Republicans (number)	116600	0.670	0.364	0.472	0.781	1.000
Employee contributions to Republicans (average value)	116600	0.680	0.362	0.500	0.800	1.000
Employee contributions to Republicans (weighted value)	116600	0.689	0.391	0.338	0.931	1.000
Number of contributing employees	116600	12.647	34.189	1.000	2.000	7.000
<b>Bank characteristics</b>						
Bank size (log 1+)	100445	13.207	1.469	12.216	13.024	13.969
Bank ROA (%)	100445	2.093	1.861	0.912	1.487	2.975
Bank NPL (%)	100339	0.831	1.019	0.176	0.506	1.063
Bank Tier1 ratio (%)	100445	10.320	2.526	8.695	9.749	11.261
Bank core deposits (%)	100392	63.031	18.027	53.062	66.094	75.996

Table 3: The effect of ideological alignment on PPP lending

This table documents the effects of political ideology on PPP lending. The difference-in-differences regression is specified in Equation (1). The dependent variables are *Value of loans (log)* and *Number of loans (log 1+)*. All variables are defined in the note of Table 2. *t*-statistics are in the parentheses. Robust standard errors are clustered at the lender level. Variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. The symbols \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Value of loans (log)		Number of loans (log 1+)		Value of loans (log)		Number of loans (log 1+)	
Post × Lender contributions to Republicans	2.5019	2.3654*	1.0948*	1.0648***				
	(1.2212)	(1.6689)	(1.9514)	(2.7968)				
Post × Employee contributions to Republicans (number)					0.8537***	0.7570***	0.2670***	0.2183***
					(5.0442)	(4.1439)	(5.5034)	(4.3691)
Bank size (log 1+)		-1.1889		-0.1452		-2.6641***		-0.9444***
		(-0.1587)		(-0.0726)		(-4.6898)		(-5.6239)
Bank ROA (%)		-0.4039		-0.1722*		-0.0241		0.0212***
		(-1.5407)		(-1.9785)		(-0.8631)		(3.0733)
Bank NPL (%)		3.8531**		0.9077**		-0.1265**		-0.0479***
		(2.6286)		(2.1298)		(-2.2411)		(-3.2926)
Bank tier1 ratio (%)		0.1435		0.0880		-0.1905***		-0.0577***
		(0.1181)		(0.2658)		(-3.0379)		(-3.6198)
Bank core deposits (%)		-0.0484*		-0.014***		-0.0126*		-0.0040***
		(-2.0294)		(-2.9783)		(-1.8784)		(-2.6770)
Lender FE	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y
Adj. R-sq	0.575	0.629	0.694	0.745	0.604	0.628	0.710	0.737
N	2360	2160	2360	2160	116600	100219	116600	100219



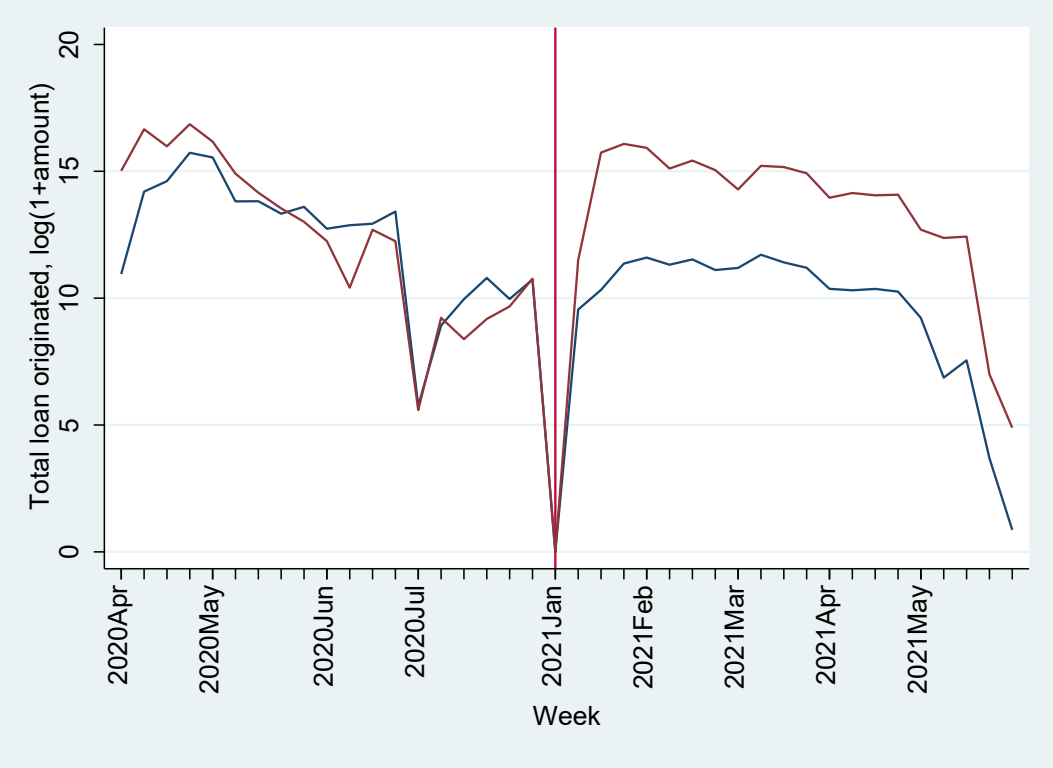
Table 4: Robustness

This table documents the effects of political ideology on PPP lending using alternative measures of political ideology based on employee contributions (that is, different aggregation of employee ideologies to the lender level). The difference-in-differences regression is specified in Equation (1). The dependent variables are *Value of loans (log)* and *Number of loans (log 1+)*. All variables are defined in the note of Table 2. *t*-statistics are in the parentheses. Robust standard errors are clustered at the lender level. Variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. The symbols \*, \*\*, and \*\*\* denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Value of loans (log)	Number of loans (log 1+)	Value of loans (log)	Number of loans (log 1+)
Post × Employee contributions to Republicans (average value)	0.7201*** (3.8674)	0.2114*** (4.2590)		
Post × Employee contributions to Republicans (weighted value)			0.6334*** (3.8810)	0.1888*** (4.3581)
Bank size (log 1+)	-2.6676*** (-4.6887)	-0.9451*** (-5.6224)	-2.6989*** (-4.7336)	-0.9542*** (-5.6462)
Bank ROA (%)	-0.0241 (-0.8608)	0.0212*** (3.0618)	-0.0248 (-0.8892)	0.0210*** (3.0315)
Bank NPL (%)	-0.1263** (-2.2267)	-0.0477*** (-3.2804)	-0.1314** (-2.3278)	-0.0492*** (-3.3772)
Bank tier1 ratio (%)	-0.1917*** (-3.0573)	-0.0580*** (-3.6450)	-0.1953*** (-3.1103)	-0.0591*** (-3.6974)
Bank core deposits (%)	-0.0126* (-1.8709)	-0.0040** (-2.6681)	-0.0127* (-1.8763)	-0.0040** (-2.6717)
Lender FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
Adj. R-sq	0.628	0.737	0.628	0.737
N	100219	100219	100219	100219

Figure 1: Parallel trends

The figure shows the parallel trends for the PPP lending volume (\$-amount, log) around the 2020 election cycle. Red line: Republican-leaning bank. Blue line: Democratic-leaning bank.



## Appendix A

Figure A1: Distribution of lender contributions to Republicans

This figure shows the density distribution of the proportion of lender PAC contributions to Republican PACs out of total contributions to both Republican and Democratic PACs in the 2020 election cycle. The data cover 59 PPP lenders and is based on their corporate PAC contributions to 253 various political party PACs between 2019 and 2020. 100% indicates the bank corporate PAC only contributes to Republican PACs, while 0% indicating only contributing to Democratic PACs.

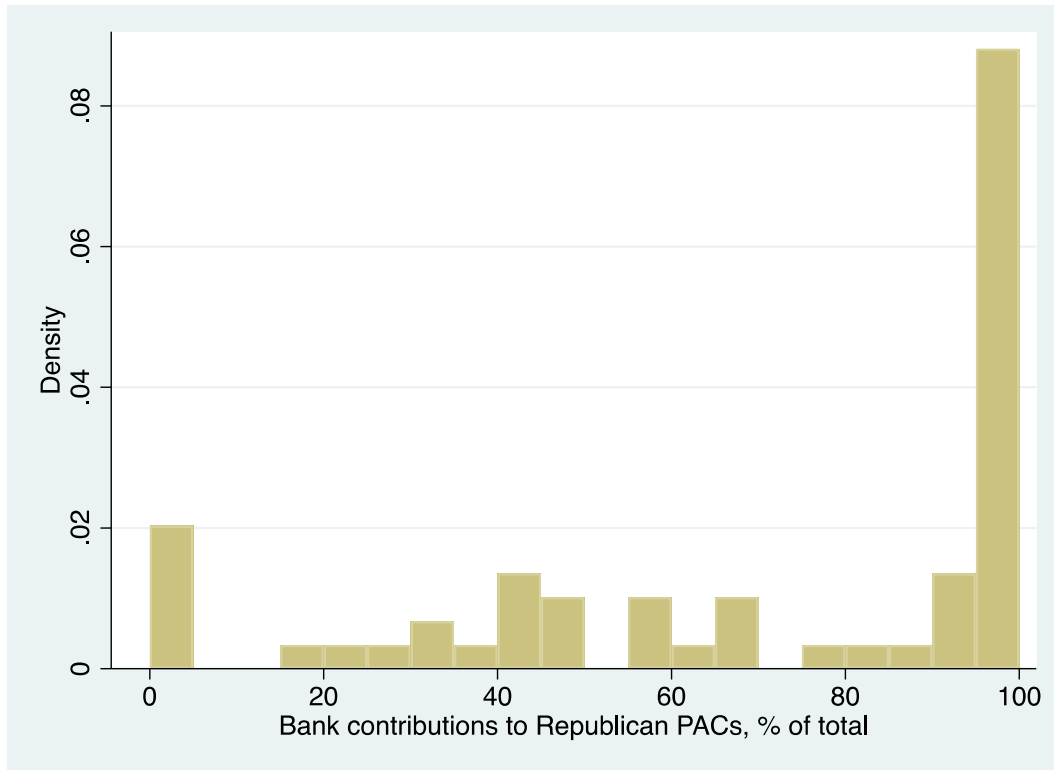
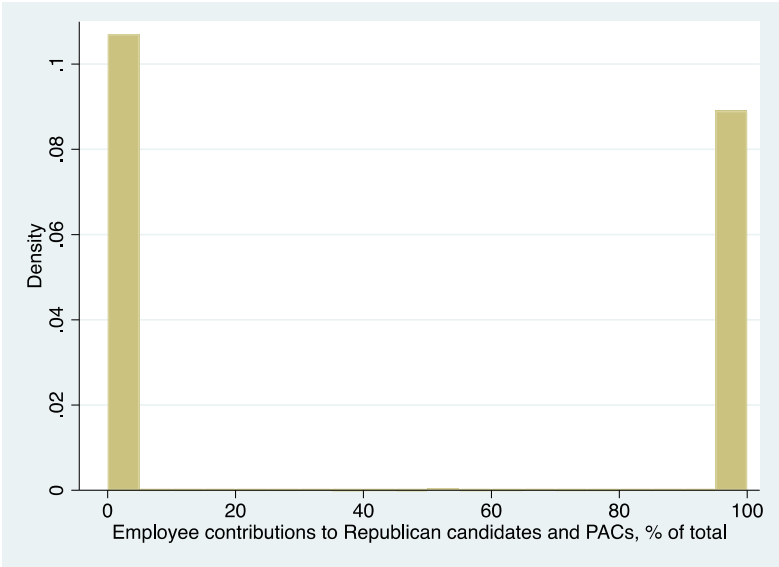
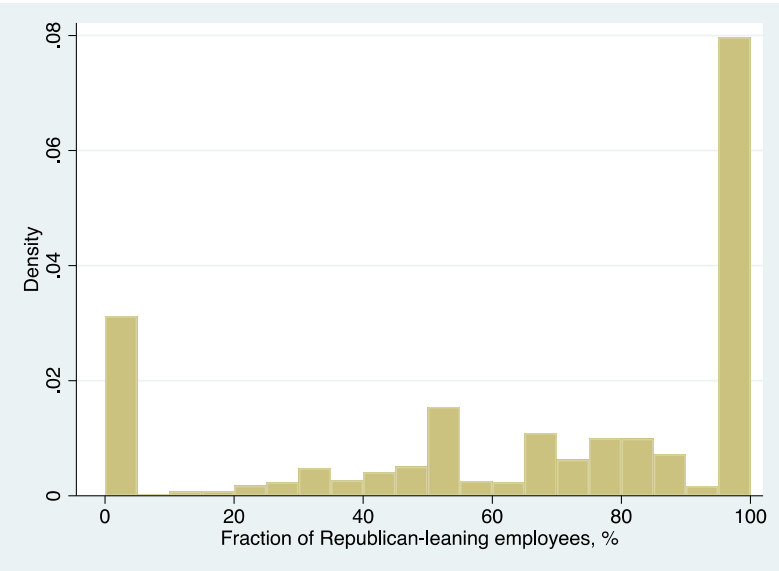


Figure A2: Distribution of lender employee contributions to Republicans



Panel A:

*Distribution of Republican contribution fractions by lender employees (individual level)*



Panel B:

*Distribution of fractions of Republican contributing employees (lender level)*