

Politics and entrepreneurship in the US

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Abstract. There is a strong belief that Republicans are more pro-business than Democrats. In this paper, we investigate the causal impact of partisan allegiance of governors (Republican or Democratic) on entrepreneurial activity by exploiting random variation in close gubernatorial elections in 50 states over the last three decades in a regression discontinuity design. We find that Republican governors are no different than Democratic governors in their effects on entrepreneurship. Our findings are robust to several sensitivity checks.

Résumé. *Politique et entrepreneuriat aux États-Unis.* Il y a une croyance ferme que les Républicains sont davantage pro-monde-des-affaires que les Démocrates. Dans ce texte, nous analysons l'impact causal de l'allégeance partisane des gouverneurs (Républicaine ou Démocrate) sur l'activité entrepreneuriale en utilisant les variations aléatoires dans les élections chaudement disputées au poste de gouverneur dans 50 états sur une période de trois décennies à l'aide de la technique de régression sur discontinuité. On montre que les gouverneurs Républicains ne sont pas différents des gouverneurs Démocrates pour ce qui est des effets sur l'entrepreneuriat. Ces résultats sont robustes lorsque soumis à divers tests de sensibilité.

JEL classification: L26, J24, D72

1. Introduction

THE IMPORTANCE of entrepreneurial activity, in particular small business entrepreneurship, has been a vastly debated subject in US politics. The common viewpoint is that Republicans are more pro-business. For example, Fried (2008) reports that self-employed individuals are 50% more likely to be Republicans. In a 2014 survey conducted by the National Small Business Association, 46% of respondents chose the Republican Party as the best representative of their small business, while only 22% chose the Democratic

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Party.¹ In their platform (2012, p.2), Republicans state “[s]mall businesses are the leaders in the world’s advances in technology and innovation, and we pledge to strengthen that role and foster small business entrepreneurship.”² In addition, they criticize the high corporate tax rate now faced by American business and call for a reduction of the corporate rate to facilitate American business growth.³ Indeed, in a seminal work, Besley and Case (2003) find that Democratic governors are associated with higher state taxes and a higher minimum wage. Naturally, one wonders how substantial the impact of Republicans (relative to Democrats) has been on entrepreneurial activity in the US.

In this paper, we investigate the causal impact of party affiliation of US governors on entrepreneurial activity in the form of small business creation and destruction in the US.⁴ Using more than 300 gubernatorial elections in 50 states over the last three decades, we investigate the impact of Republican governors on entrepreneurial activity by exploiting random variation associated with *close* elections in a regression discontinuity (RD) design. To the extent that the variation in close elections is random, our estimation strategy yields causal effects of party affiliation on entrepreneurial activity.⁵

We measure entrepreneurial activity by business creation or destruction at the individual-owner level. Since the bulk of entrepreneurial activity is done individually (Fairlie 2014) and individuals also vote in elections, this

1 The remaining 37% of small business owners chose neither party. In the 2012 survey, 62% of small business owners chose the Republican Party as their best representative. The survey results are available at nsba.biz/docs/Politics-Survey-2014.pdf.

2 “We Believe in America: Republican Platform” is available at archive.nytimes.com/www.nytimes.com/interactive/2012/08/28/us/politics/20120812-gop-platform.html?_r=0&ref=politics.

3 In response to these criticisms, Democrats state on their official website, “Democrats have continued to champion issues important to small businesses and have worked to expand access to resources that will enable greater success.” (democrats.org/people/small-business-community). Some recent studies also have challenged the common viewpoint that Republicans are more pro-business (Deitrick and Godlfarb 2012).

4 There are several channels through which governors may affect entrepreneurial activity. State governments can potentially play a crucial role in entrepreneurship by amending regulations that directly affect business, including labour and permitting laws. They can create and eliminate tax incentives, divert resources to major infrastructural activities to stimulate business and even provide loans to facilitate business expansion (Kayne 1999). See section 2 for more details.

5 Lee (2008) convincingly argues that close elections may be used in a regression discontinuity design under which causal inferences can be as credible as those from a randomized experiment.

measure of entrepreneurship is more fitting in the present context. Previous studies measuring entrepreneurship at the individual level have considered all self-employed individuals as entrepreneurs (Borjas and Bronars 1989, Fairlie 2014). However, in a recent paper, Levine and Rubinstein (2017) convincingly argue that this is not a good proxy and offer a better one: incorporated, self-employed individuals (see section 3 for details). Following their lead, we also identify incorporated self-employed individuals as entrepreneurs. More specifically, using the matched data in the Current Population Survey Outgoing Rotation Group (CPS-ORG) files over the period 1979–2014, we identify each individual who becomes incorporated self-employed by starting a business as a *new* entrepreneur, and in a similar fashion, we identify each incorporated, self-employed individual who becomes a non-business owner as an *exiting* entrepreneur. The former measures (small) business creation, whereas the latter business destruction. We also investigate the impact of party affiliation on the stock of entrepreneurs in the state.

To the best of our knowledge, this is the first paper analyzing the causal impact of party affiliation on entrepreneurship. We find that Republicans are *not* different than Democrats with respect to business creation or destruction. However, we also find that the exit rate of unincorporated self-employed individuals is significantly lower under Republican governors. Consistent with recent findings (Beland and Unel 2018), the lower exit rate of unincorporated self-employed individuals suggests that this group has better wage and salary job opportunities under Democratic governors. Our findings are robust to an extensive set of sensitivity analysis.

The remainder of the paper is organized as follows. The next section reviews the previous studies and emphasizes our contribution to the existing literature. Section 3 describes the data and explains in detail how we measure entrepreneurial activity. Section 4 introduces the empirical strategy by describing our RD design and presents the main results. Section 5 conducts sensitivity analysis, and section 6 concludes the paper.

2. Related literature

This paper is related to a large literature on entrepreneurship. One strand of the literature, dating back to Schumpeter (1950), examines the role of entrepreneurship on economic growth and development.⁶ In endogenous growth

6 Schumpeter (1950) was one of the first economists to emphasize the necessity of entrepreneurs to the continued dynamism of market economies. In his classic work, *Capitalism, Socialism and Democracy*, he states, “the function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on.” (Schumpeter 1950, p.132)

models, for example, growth is driven by profit seeking entrepreneurs who develop new products (Romer 1990, Grossman and Helpman 1991, Aghion and Howitt 1992). Several other studies have identified different channels through which entrepreneurs affect economic development. For example, Murphy et al. (1991) show how allocation of entrepreneurial ability determines firm size and economic growth (see also Ghatak et al. 2007), whereas Hausmann and Rodrik (2003) draw attention to the positive externality created by entrepreneurs through sharing information on the profitability of new activities.⁷

Another strand of the literature focuses on the determinants of becoming an entrepreneur. These factors include financial constraints (Holtz-Eakin et al. 1994, Cagetti and De Nardi 2006, Fairlie and Krashinsky 2012), taxes (Gentry and Hubbard 2000, Cullen and Gordon 2007), family background and race (Hout and Rosen, 2000, Fairlie 2008), immigration status (Hunt 2010), entry regulations (Dajkov et al. 2002, Branstetter et al. 2014), risk attitudes (Blanchflower 1998, Skriabikova et al. 2014) and macroeconomic conditions (Fairlie 2013, Klapper et al. 2014). Our paper complements these studies by investigating whether politics has been a significant determinant of entrepreneurial activity in the US.

Relatedly, a few other studies look at measures and identification of entrepreneurial activity (Acs et al. 2008, Klapper 2015, Fairlie 2014). For example, the Kauffman Index of Entrepreneurial Activity (KIEA) constructed by Fairlie (2014) is created using matched data from the CPS to measure business creation at the individual level in the US covering 1996 to 2013, whereas the World Bank database constructed by Klapper (2015) presents the number of newly registered firms with limited liability in private and formal sectors across about 140 countries over the period 2004–2012.⁸ In measuring entrepreneurial activity at the individual-owner level, Levine and Rubinstein (2017), however, identify incorporated, self-employed individuals as entrepreneurs, and we also follow their lead.

State governments in the US have executive and legislative branches, and the executive branch is headed by a governor who is directly elected by the state's registered US citizens. Governors usually serve four-year terms (except those in New Hampshire and Vermont where tenures are two years long), and many states have limits on the number of terms a governor can serve. Governors have a significant degree of autonomy in exercising their power in

7 The literature on the impact of entrepreneurship on development and growth is vast, and its full rendering is beyond the scope of this paper. Naudeé (2013) provides a review of the recent studies in this literature.

8 The Global Entrepreneurship Monitor is another research program that has collected data on self-employment (across more than 85 countries since 1999) to measure individuals' perceptions of entrepreneurship, their involvement in entrepreneurial activity (Acs et al. 2015).

several issues such as preparing and administering the budget, setting policies, recommending legislation, signing laws, etc. They even have veto power on state bills.⁹

Besley and Case (1995 and 2003), using data from the US for the time period 1950–1998, estimate the impact of the party affiliation of governors on state taxes and expenditures. They find that Democratic governors are associated with higher state taxes, spending per capita and higher minimum wage. Beland and Oloomi (2017) find that the share of spending in education and health sectors are higher under Democratic governors (see also Reed 2006 and Leigh 2008). Ash (2015) finds that Democrats are more likely to change the tax code and use revenue-increasing language than Republicans (see also Fredriksson et al. 2013). Employing a regression discontinuity design on gubernatorial elections in the US, Beland (2015) shows that Democratic governors increase the annual hours worked by blacks relative to whites, and Beland and Unel (2018) find that immigrants are more likely to be employed, work longer hours and more weeks and have higher earnings under Democratic governors. In a recent paper, using the network of university classmates among corporate directors and politicians in the US from 1999 to 2010, Do et al. (2013) find that firms connected to elected governors in the US saw an average increase in stock market value by 1.4% surrounding the election date.¹⁰

3. Data and descriptive statistics

The data used in this paper are drawn from several sources. As mentioned in the introduction, we use incorporated self-employed individuals as our measure of entrepreneurship. The data on self-employed workers come from the Current Population Survey Outgoing Rotation Group (CPS-ORG) files from Unicon Research Corporation (2015) over the period 1979–2014. The CPS is a monthly household survey where each household is interviewed for four consecutive months in one year, followed by four consecutive months one year later (and then leaving the sample permanently). Since the first entry cohort is identified in 1980, our analysis covers the 1980–2014 period.

There are two groups of self-employed workers in the CPS: incorporated (those who work for themselves in corporate entities) and unincorporated (those who work for themselves in other entities), and the previous studies

9 More information about state governors' responsibilities can be found at nga.org/consulting/powers-and-authority.

10 Lee et al. (2004), using a regression discontinuity design, find that the party affiliation has a large impact on a legislator's voting behaviour. However, Ferreira and Gyourko (2009), using close US municipal elections between 1950 and 2000, find that whether the mayor is a Democrat or Republican has no impact on the size of local government, the composition of local public expenditure or crime rate. Our paper is methodologically closely related to these studies.

identified all self-employed individuals as entrepreneurs (Borjas and Bronars 1989, Hamilton 2000, Fairlie 2014). Since entrepreneurial activity constitutes the hallmark of innovation and growth, one expects that their cognitive and non-cognitive traits are better than that of wage and salary workers. However, some recent studies have shown that this is not the case. For example, Hamilton (2000) finds that the median self-employed individual has lower initial earnings and slower earnings growth than wage and salary workers.

Levine and Rubinstein (2017), however, convincingly suggest a better proxy: incorporated self-employed individuals. Using the CPS March data together with the NLSY79 data, they find that incorporated self-employed individuals earn much more per hour and work many more hours than salary and unincorporated workers. In addition, they find that incorporated self-employed individuals are more educated and tend to score higher on learning aptitude tests, exhibit greater self-esteem and engage in more aggressive and risky activities when young. As we document below, we also confirm some of these findings with our own data. Therefore, following their lead, we also use incorporated self-employed as a proxy for entrepreneurship.

The surveys provide detailed employment information on individuals, and we record each individual's, worker class, industry and weekly hours as well as age, gender, race, marital status and education level. Our sample includes all people between 25 and 55 years old, but excludes individuals with imputed or missing worker class as in Levine and Rubinstein (2017).¹¹

We identify *new* entrepreneurs in year t as those individuals who change their worker class to incorporated self-employed from time $t - 1$ to t . Similarly, we identify *exiting* entrepreneurs in year t as those incorporated self-employed individuals who change their worker class to non-business owners or unincorporated self-employed from time $t - 1$ to t . It is important to emphasize that the CPS is a household survey and does not have individual identifiers. However, uniquely matched pairs were identified with identical household ID, household number, record lines, survey month, sex and race (Fairlie 2014). We consider only individuals with an age and schooling difference of less than two in as many successive years. All unmatched individuals are dropped from the sample.¹² Following this

11 To ensure consistency over time, we aggregate three-digit industries under the following 11 broad industries: Agriculture & Mining, Construction, Manufacturing, Transportation/Utility/Information, Wholesale, Retail, Finance & Insurance, Professional, Repair, Personal & Entertainment, Public Administration. Following Levine and Rubinstein (2017), we exclude individuals working in Public Administration because there is virtually no entrepreneurial activity in this sector.

12 The matching rate in the above process across two *consecutive* years is usually around 60% (consistent with Ziliak et al. 2011). Household IDs assigned in 1985 and 1995 are problematic, and thus matching rates between 1984 and 1985, 1985 and 1986, 1994 and 1995 and 1995 and 1996 were around 30%. Excluding these years in the analysis does not have any significant effect on the results.

TABLE 1A

Summary statistics on entrepreneurs and non-entrepreneurs, 1980–2014

	Entrepreneurs			Non-entrs.
	Existing I	Entry II	Exit III	IV
Female	0.252 (0.434)	0.287 (0.452)	0.279 (0.449)	0.468 (0.499)
Age	42.746 (7.437)	41.828 (7.740)	42.465 (7.573)	39.993 (8.295)
White	0.916 (0.278)	0.896 (0.306)	0.893 (0.309)	0.849 (0.358)
Some college	0.719 (0.450)	0.709 (0.454)	0.706 (0.456)	0.562 (0.496)
Private sector	0.731 (0.443)	0.754 (0.431)	0.749 (0.434)	0.718 (0.450)
Sample size	57,595	19,875	19,038	1,416,508

NOTES: “Some college” represents all individuals who have at least some college education. Numbers in parentheses are standard deviations, and, in all calculations, CPS weights are used.

SOURCE: CPS-ORG Files from Unicon Corporation (2015)

cleaning and matching process, we have about 1.5 million observations about, 3.8% of them are incorporated, self-employed individuals.¹³

Table 1A reports key statistics about the main characteristics of entrepreneurs (incorporated, self-employed workers). Column I in table 1 presents the statistics related to all existing entrepreneurs, whereas columns II and III report the statistics for new and exiting entrepreneurs that we identify through our matching process. For the sake of comparison, we also report the corresponding statistics for wage and salary workers in column IV. Consistent with Levine and Rubinstein (2007), a comparison of columns I and IV reveals that the majority of entrepreneurs are white, slightly older, male and more educated. In addition, about 73% of entrepreneurs work in the private service sector, whereas the corresponding statistics for non-entrepreneurs is about 68%.¹⁴ Columns II and III report the corresponding statistics for new and exiting entrepreneurs, and these two columns show that the composition of new and exiting entrepreneurs in terms of gender, race, education and industry is very similar to that of the existing entrepreneurs. Note that the majority of entrepreneurial activity occurs in the

13 Prior to 1994, incorporated self-employed individuals are classified as wage and salary workers in the publicly available CPS files. However, the CPS-ORG files from Unicon have additional supplementary files through which we are able to identify incorporated self-employed individuals over 1979–2014.

14 Our set of non-entrepreneurs contains unincorporated self-employed workers as well. But their composition is very similar to those of wage and salary workers. We do not report statistics related to earnings, because reported earnings in the CPS are highly noisy (Acemoglu and Autor 2011). Levine and Rubinstein (2007) use earning data from the NLSY79.

TABLE 1B

Summary statistics on entrepreneurship rate, 1980–2014

	Existing	Entry	Exit
All	0.038 (0.191)	0.014 (0.118)	0.350 (0.477)
Female	0.021 (0.143)	0.009 (0.094)	0.407 (0.491)
White	0.041 (0.198)	0.015 (0.121)	0.341 (0.474)
Some college	0.048 (0.215)	0.018 (0.133)	0.343 (0.475)
Private sector	0.039 (0.193)	0.015 (0.121)	0.361 (0.480)

NOTES: “Some college” represents all individuals who have at least some college education. Numbers in parentheses are standard deviations, and, in all calculations, CPS weights are used.

SOURCE: CPS-ORG Files from Unicon Corporation (2015)

private service sector. Entrepreneurial activity in the manufacturing sector (not shown in table 1) is less than 10%.

Table 1B complements the previous table by reporting basic statistics about the share of entrepreneurs along with their entry and exit rates among different identifying characteristics. For example, according to the second row, entrepreneurs make up about 2.1% of the female population, and entry and exit rates of female entrepreneurs are 0.9% and 40.7%, respectively. This table also indicates that entrepreneurial activity is higher among white, educated males.

Finally, we use election results recorded between 1980 and 2014. The data come from two main sources: for elections prior to 1990, we use ICPSR 7757 (1995) files; for election outcomes since 1990, we use the “Atlas of US Presidential Elections” (Leip 2015). We also use data on state legislatures from Klarner et al. (2013).¹⁵ We drop all elections where a third-party candidate won. From 1980 to 2014, there are more than 1,700 state–year observations, and over this period, Republicans were in power 49% of the time. The margin of victory (MV) is defined as the proportion of votes cast for the winner minus the proportion of votes cast for the candidate who finished second. In our analysis, a positive (negative) MV indicates a Republican (Democratic) governor won. As discussed earlier, governors usually serve four-year terms (except those in New Hampshire and Vermont where tenures are two years long). We merge election results with individual-level data, and MV_{st} denotes the margin of victory in the most recent gubernatorial election prior to time t in state s . For example, in Louisiana we used the winner of the 2007 gubernatorial election (who was a Republican) and the corresponding margin of victory for all observations in 2008, 2009, 2010 and 2011 years.

¹⁵ Data are available at dataverse.harvard.edu/dataverse.xhtml?alias=cklarner.

4. Empirical strategy and main results

4.1. Econometric specifications

The identification strategy in this paper relies on the exogenous variation generated by close gubernatorial elections. As mentioned in the previous section, an entrepreneur is identified as an incorporated, self-employed worker, and in measuring entrepreneurial activity, we record both new and exiting entrepreneurs. More specifically, let E_{ist} be an indicator variable that equals one if individual i in state s at time t is an entrepreneur, and zero otherwise. We then define

$$E_{ist}^+ = \begin{cases} 0 & \text{if } E_{ist-1} = 0, E_{ist} = 0 \\ 1 & \text{if } E_{ist-1} = 0, E_{ist} = 1 \end{cases}, \quad E_{ist}^- = \begin{cases} 0 & \text{if } E_{ist-1} = 1, E_{ist} = 1 \\ 1 & \text{if } E_{ist-1} = 1, E_{ist} = 0 \end{cases} \quad (1)$$

and thus $E^+(E^-)$ is also an indicator variable representing a new (exiting) entrepreneur. With the above specification, two points are worth emphasizing. First, an individual first interviewed in year $t-1$ will be interviewed in year t , but after that the individual will be dropped from the sample. Second, E_{ist}^+ indicates that all entrepreneurs at time $t-1$ are excluded from the sample, whereas E_{ist}^- indicates that all non-entrepreneurs at time $t-1$ are excluded from the sample.

Using (1), we estimate the following equation:

$$Y_{ist} = \beta_0 + \beta_R \text{Rep}_{st} + f(MV_{st}) + X'_{ist} \delta + \alpha_s + \tau_t + \epsilon_{ist}, \quad (2)$$

where $Y_{ist} = \{E_{ist}, E_{ist}^+, E_{ist}^-\}$ and Rep_{st} is an indicator variable that takes on the value one if a Republican governor is in power in state s at time t , zero otherwise.¹⁶ MV_{st} denotes the margin of victory in the most recent gubernatorial election prior to time t in state s and is given by the proportion of votes cast for the winner minus the proportion of votes cast for the candidate who finished second. The functional form between MV_{st} and entrepreneurial activity is described by the polynomial $f(\cdot)$. The variable X_{ist} is a vector of observed covariates including each individual's gender, race, age, marital status and education.¹⁷ The variables α_s and τ_t capture state and year fixed effects, respectively, and ϵ_{ist} is the error term.

The key identifying assumption underlying equation (2) is that the functional form $f(\cdot)$ is continuous through the election victory cutoff, i.e., unobserved state characteristics are smooth around the winning cutoff. Under this assumption, the coefficient estimate β_R can be interpreted as the causal effect of the Republican Party on entrepreneurial activity.

16 We also run regressions with longer time leads (e.g., $E_{is,t+2}$) since the decision to become or exit from being a self-employed worker may take a longer time. As shown in section 4, the results qualitatively remain the same.

17 Our regressions include dummies for sex, marital status, three race dummies (white, black, other), four education dummies (less than high school, high school, some college, college and above) and a quadratic in age.

Before proceeding further, several points are worth emphasizing. First, in estimating specification (2), we use a cubic polynomial as the functional form between the outcomes of interest and the margin of victory. Second, we exclude elections won by more than 50%, following Ferreira and Guyourko (2009) and Beland (2015). We provide several sensitivity checks using different orders of polynomials and varying bandwidths. Finally, to account for possible serial correlation, standard errors are clustered at the state level.

4.2. Main results

We begin our analysis with a graphical representation of the effect of the Republican Party on entrepreneurial activity. Figures 1(a) and 1(b) display the impact of Republican governors on creation and destruction of entrepreneurs in close elections, respectively. We plot the unconditional means over a window of 5% of margin of victory.¹⁸ Fitted values are superimposed over these averages. Looking at these figures, we do not observe any visible discontinuity at the cutoff, suggesting no effect of the Republican Party on entry and exit of entrepreneurs.

We now turn to our regression analysis, and table 2 presents the results based on our RD design.¹⁹ In panel 2A, our dependent variable measures entrepreneurial status of an individual (i.e., E_{ist}). The estimated coefficient on Rep is statistically insignificant, and note that adding controls makes the point estimate more precise.²⁰ Finding no effects on the stock of entrepreneurs should not be interpreted as the party affiliation not having any effects on entrepreneurial activity. It is possible that it might increase/decrease the entry and exit rates by the same proportion, resulting in no overall effect.²¹ Therefore, we also investigate its impact on entry and exit rates separately.

18 Following Lee and Lemieux (2014), we also present the same graphs over a window of 50% of margin of victory in figure A1, in the appendix.

19 As a complementary analysis, we also estimate the impact of the party affiliation on entrepreneurship using the propensity-score matching technique, where individuals are matched based on their characteristics (such as race, age, marital status and education). Table A1 in the appendix reports the results, and they are qualitatively similar to those in table 2.

20 As a comparison with our RD design, we also run the regression using the simple OLS approach. We find that $\beta_R = -0.0005$ (0.0006) and $\hat{\beta}_R = -0.0006$, (0.0006) without and with controls, respectively. These estimates, however, are likely to suffer from biases as there are many potentially unobserved factors affecting the party affiliation and likelihood of entrepreneurial activity at the same time. OLS results for other panels in table 2 are also insignificant.

21 For example, if the entry rate is higher under the Republican governors, there will be more entrepreneurs in their states, which in turn will intensify competition and lead to a higher exit rate. If the entry and exit rates are the same, the net effect on entrepreneurship will be zero.

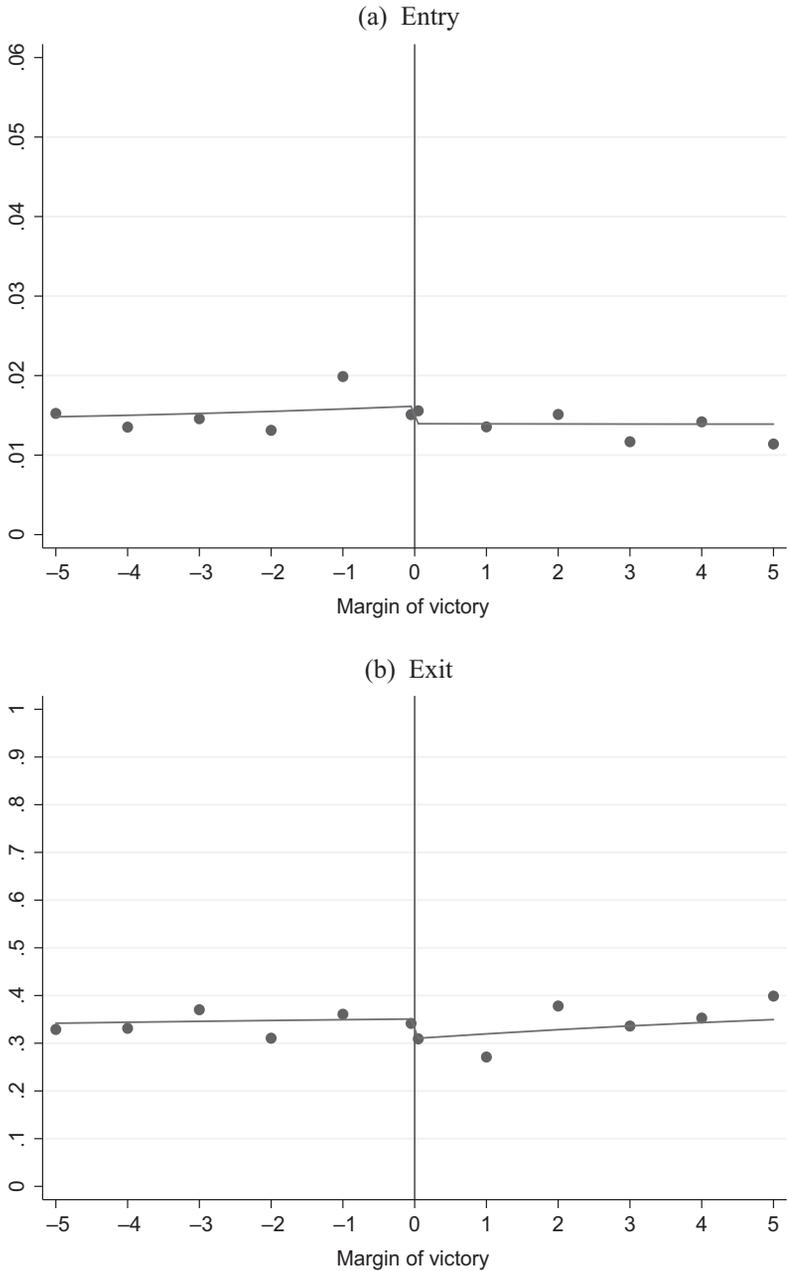


FIGURE 1 The impact of republican governors on entrepreneurial activities

Panel B of table 2 reports the impact of party affiliation on the propensity of an individual to become an entrepreneur (E_{ist}^+), and the effect is statistically insignificant. However, many of these individuals are very unlikely to become

TABLE 2
Impact of party affiliation on entrepreneurship, 1980–2014

Variable	I	II
<i>A. Stock</i>		
Rep	−0.0017 (0.0015)	−0.0020 (0.0015)
<i>B. Entry from all</i>		
Rep	−0.0008 (0.0008)	−0.0009 (0.0008)
<i>C. Entry from unincorporated</i>		
Rep	0.0003 (0.0062)	0.0005 (0.0060)
<i>D. Exit</i>		
Rep	−0.0062 (0.0142)	−0.0064 (0.0139)
Controls	No	Yes
Obs. (Panel A)	1,411,282	1,411,282
Obs. (Panel B)	1,325,162	1,325,162
Obs. (Panel C)	121,978	121,978
Obs. (Panel D)	53,623	53,623

NOTES: Regressions include fixed effects and all other variables specified in equation (2). CPS weights are used in all regressions. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

an entrepreneur, and their presence may mask the effect. Therefore, in panel 2C, we consider only the entry to entrepreneurship from the unincorporated self-employed, and point estimates are statistically insignificant.^{22, 23} Panel C of table 2 reports results for the exit of entrepreneurs (E_{ist}^-), and the effect is again statistically insignificant.²⁴ As shown in section 5, the signs of these estimates are not robust, although they still remain statistically insignificant.²⁵

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- 22 We would like to identify all individuals who have been a business owner at some point in their lifetime. However, as we discussed in the previous section, the CPS does not track individuals over a long time period. Therefore, we can consider only unincorporated individuals, acknowledging the fact that some wage and salary workers could also have been entrepreneurs in past.
- 23 The average entry rate among the unincorporated self-employed is about 7.7% with a standard deviation of 26.6.
- 24 Note that the sample size in panels 2C and 2D is substantially smaller than that in panels 2A and 2B. Not surprisingly, as the sample size gets smaller, the estimates become less precise.
- 25 Levine and Rubinstein (2017) consider a more restricted group: white males between 25 and 55 years old. We also restrict our sample to white males who have at least some college education. Results based on this group are qualitatively the same as those in table 2 (see table A2 in the appendix).

TABLE 3

Impact of party affiliation on entrepreneurship by gender, race and skill

Variable	Gender		Race		Skill	
	Female I	Male II	White III	Non-white IV	Skilled V	Unskilled VI
<i>A. Stock of entrepreneurs</i>						
Rep	-0.0015 (0.0012)	-0.0024 (0.0021)	-0.0022 (0.0015)	-0.0002 (0.0025)	-0.0049** (0.0022)	0.0012 (0.0013)
<i>B. Entry from all individuals</i>						
Rep	-0.0003 (0.0006)	-0.0014 (0.0012)	-0.0008 (0.0008)	-0.0015 (0.0018)	-0.0017 (0.0010)	0.0002 (0.0007)
<i>C. Entry from unincorporated</i>						
Rep	-0.0010 (0.0058)	0.0014 (0.0078)	-0.0004 (0.0061)	0.0003 (0.0241)	0.0022 (0.0073)	-0.0006 (0.0068)
<i>D. Exit of entrepreneurs</i>						
Rep	0.0048 (0.0275)	-0.0102 (0.0147)	-0.0012 (0.0148)	-0.0603 (0.0587)	-0.0032 (0.0144)	-0.0147 (0.0243)
Obs. (Panel A)	658,120	753,162	1,233,009	178,273	787,072	624,210
Obs. (Panel B)	619,422	705,740	1,156,811	168,351	733,969	591,193
Obs. (Panel C)	41,510	80,468	112,987	8,991	64,308	57,670
Obs. (Panel D)	12,973	40,650	49,856	3,767	37,874	15,749

NOTES: All regressions include state fixed and time effects and all other control variables specified in equation (2). CPS weights are used in all regressions. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

It is possible that party affiliation may affect entrepreneurial activity among different groups. Investigating heterogeneity along different dimensions is important because, for example, Beland (2015) finds that Democratic governors have a positive and significant impact on blacks' labour market outcomes. To this end, we examine any potential heterogeneity by running the RD specifications by gender, race and skill.²⁶ Those with at least some college education are considered as skilled, and the rest as unskilled. The results in table 3 are qualitatively the same as those in table 2.²⁷ In sum, the party affiliation of governors does not have any effect on the entrepreneurial activity in the US.

4.3. Impact on unincorporated self-employed

As discussed earlier, previous studies have considered all self-employed individuals as entrepreneurs. It is interesting to investigate how party affiliation

26 We also explore heterogeneity based on two age groups: younger (age ≤ 40) and older (age > 40). For either group, the impact of the party affiliation on stock, entry and exit of entrepreneurs is statistically insignificant.

27 Among the skilled workers, the entry to entrepreneurship is negative and statistically significant at the 5% level. However, the statistical significance is not robust to different polynomial degrees and bandwidths.

TABLE 4
Impact of party affiliation on all self-employed, 1980–2014

Variable	All self-employed		Unincorporated	
	I	II	III	IV
<i>A. Stock</i>				
Rep	-0.0017 (0.0024)	-0.0018 (0.0025)	-0.0002 (0.0025)	-0.0000 (0.0024)
<i>B. Entry</i>				
Rep	-0.0017 (0.0011)	-0.0017 (0.0011)	-0.0011 (0.0009)	-0.0010 (0.0009)
<i>C. Exit</i>				
Rep	-0.0116* (0.0059)	-0.0112* (0.0056)	-0.0182** (0.0076)	-0.0174** (0.0072)
Controls	No	Yes	No	Yes
Obs. (Panel A)	1,411,282	1,411,282	1,355,987	1,355,987
Obs. (Panel B)	1,203,184	1,203,184	1,192,982	1,192,982
Obs. (Panel C)	175,601	175,601	113,093	113,093

NOTES: Regressions include fixed effects and all other variables specified in equation (2). CPS weights are used in all regressions. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

affects all self-employed, and table 4 reports the results from this exercise. A comparison with table 2 reveals that the estimated coefficient on Rep for the exit rate of all self-employed individuals is negative and significant at the 5% level. Since the party affiliation has no impact on the exit rate of incorporated self-employed, it then follows that the finding is driven mainly by the exit of unincorporated self-employed individuals.

Columns III and IV investigate the impact of party affiliation on unincorporated self-employed individuals.²⁸ Note that the impact on exit is negative and statistically significant at the 5% level. The point estimate of 0.0174 implies that the exit rate among unincorporated self-employed individuals is about 8% lower in states where Republicans barely won (since the average annual exit rate among this group is 21.6%). To better understand the lower exit rate under the Republicans, we again run RD regressions based on individuals characteristics such as gender, race and skill.

Table 5 reports the results, and note that the negative effect on the exit rate is predominantly driven by minorities and unskilled workers. They generally hold low-skill intensive (and possibly temporary) jobs and most probably became self-employed out of necessity to avoid unemployment. For example, about 70% of unincorporated, unskilled self-employed individuals who exit entrepreneurship, work in construction, wholesale & retail, repair and personal entertainment sectors. Consequently, the lower exit rate of these individuals

²⁸ Our analysis excludes all individuals who become incorporated self-employed.

TABLE 5
Impact of party affiliation on entrepreneurship by gender, race and skill

Variable	Gender		Race		Skill	
	Female I	Male II	White III	Non-white IV	Skilled V	Unskilled VI
<i>A. Stock of unincorporated</i>						
Rep	-0.0002 (0.0022)	-0.0004 (0.0031)	-0.0006 (0.0027)	0.0037 (0.0039)	-0.0022 (0.0025)	0.0033 (0.0027)
<i>B. Entry to unincorporated</i>						
Rep	-0.0004 (0.0010)	-0.0015 (0.0011)	-0.0010 (0.0009)	-0.0008 (0.0018)	-0.0014 (0.0010)	-0.0005 (0.0011)
<i>C. Exit from unincorporated</i>						
Rep	-0.0203 (0.0148)	-0.0162 (0.0098)	-0.0140* (0.0076)	-0.0504** (0.0231)	-0.0089 (0.0106)	-0.0274** (0.0112)
Obs. (Panel A)	644,136	711,851	1,181,562	174,425	748,033	607,954
Obs. (Panel B)	574,529	618,453	1,034,467	158,515	662,221	530,761
Obs. (Panel C)	39,322	73,771	104,878	8,215	58,444	54,649

NOTES: All regressions include state fixed and time effects and all other control variables specified in equation (2). CPS weights are used in all regressions. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

under the Republican governors suggests that these individuals do not have good job alternatives. Or alternatively, their higher exit rate under the Democratic governors stems from the better wage and salary job opportunities in those states. Our findings complement Beland and Unel (2018), who show that blacks and immigrants are more likely to be employed, work longer hours and more weeks and have higher earnings under Democratic governors. They further argue that the impact on these groups is stronger in occupations that are more likely to be affected by Democratic governors' policies such as higher minimum wages, higher spending on infrastructure, etc.

5. Sensitivity analysis

In this section, we undertake several sensitivity checks to examine the robustness of our RD design estimates. First, we begin our analysis by investigating the validity of a key assumption that candidates should not have any influence on election outcomes. Figure 2(a) plots the distribution of the MRV in the form of histograms, and note that there are no unusual jumps around the zero cutoff point. A more formal way to test the validity of this assumption is to use McCrary's (2008) density test. Figure 2(b) plots the density of the MV based on the McCrary test, and again there are no unusual jumps around the cutoff point. These approaches suggest that candidates from either party have no influence on election outcomes.

Second, for our RD design to be valid, the states where Republicans barely won should be similar to the states where they barely lost elections.

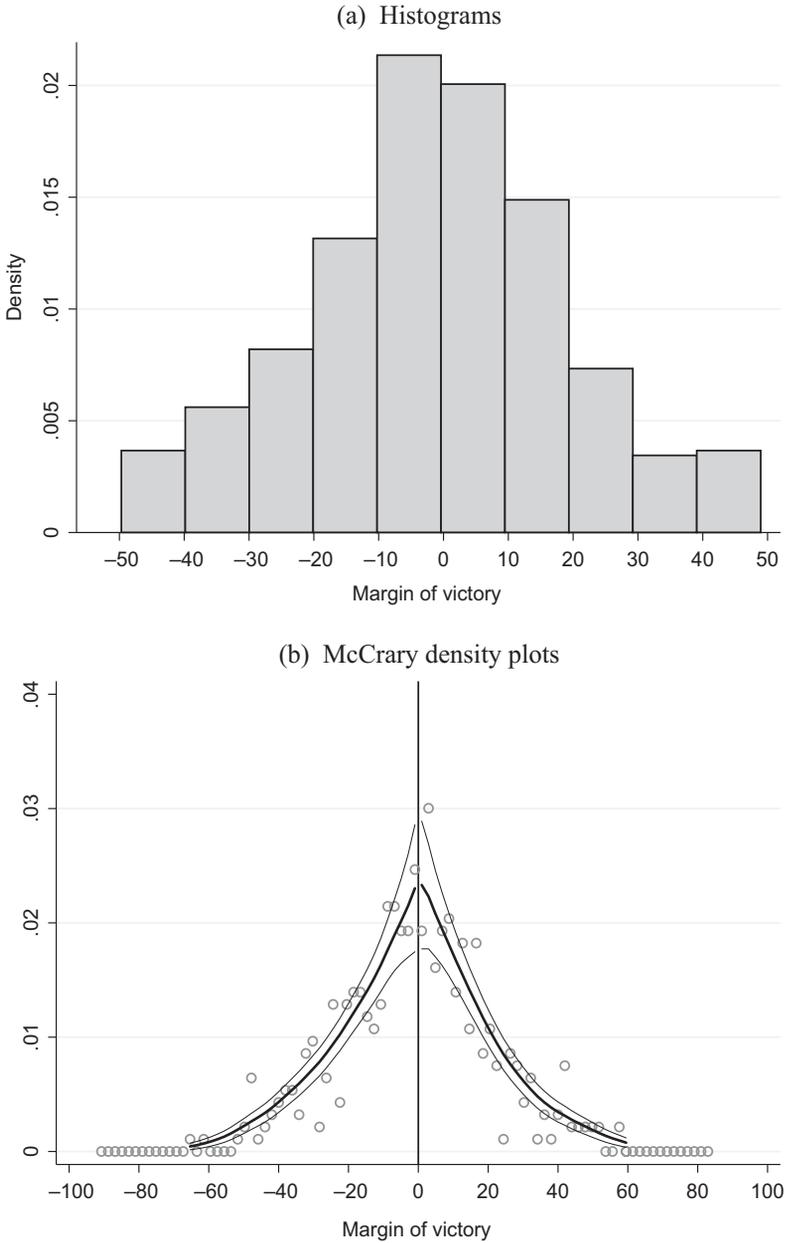


FIGURE 2 Distribution of the margin of victory

To examine this crucial assumption, we regress state characteristics (such as proportion of females, blacks, college graduates and the employment rate in the year preceding the election) on the dummy variable Rep_{st} . If states are

TABLE 6

RD validity test: Similarity of states in close elections

Variable	Proportion of females	Proportion of blacks	Proportion of col. grads	Employment rate
Rep	-0.0008 (0.0019)	-0.0006 (0.0024)	0.0002 (0.0049)	0.0005 (0.0027)
Obs.	1,684	1,684	1,684	1,614

NOTES: Regressions include all fixed effects and controls and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 7

RD validation test: Pre-election outcomes

Variable	Stock I	Entry II	Exit III
<i>A. Entrepreneurs</i>			
Rep	-0.0005 (0.0017)	-0.0002 (0.0010)	0.0123 (0.0142)
<i>B. Unincorporated self-employed</i>			
Rep	-0.0000 (0.0025)	0.0003 (0.0008)	-0.0013 (0.0079)

NOTES: Regressions include all fixed effects and controls and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

similar, the estimated coefficients on *Rep* should be statistically insignificant, and this is indeed what we find in our analysis (see table 6).²⁹

Third, we run a placebo RD design, using outcomes in the previous term to minimize concerns on the persistence of election results. Specifically, one particular concern regarding the identification strategy is that Republican governors might be more likely to be elected, even in close elections, in state-years with relatively higher or lower business creation/destruction. Entrepreneurial activity could be state-specific, and thus RD designs may yield biased results even in the presence of state fixed effects. To further explore this potential state-specific confounding effect, we use individual-level entrepreneurial activities (i.e., entry and exit) from the term prior to gubernatorial elections

²⁹ Using data on campaign spending by Republicans and Democrats from Jensen and Beyle (2003), we find that campaign spending by these parties across states with close elections is not statistically different. Finally, if close elections won by Republican candidates are more likely to be won under a Republican House or Senate, they cannot be considered random. However, the analysis using the data on House and Senate representatives shows that this is not the case either.

TABLE 8
Different polynomial orders and bandwidths, entrepreneurs

Variable	Linear MV=10 I	Linear MV=20 II	Quadratic MV=20 III	Cubic MV=40 IV
1. Entrepreneurs				
<i>A. Stock</i>				
Rep	-0.0011 (0.0030)	-0.0012 (0.0010)	-0.0019 (0.0019)	-0.0019 (0.0017)
<i>B. Entry from all</i>				
Rep	-0.0016 (0.0010)	-0.0007 (0.0007)	-0.0011 (0.0008)	-0.0010 (0.0008)
<i>C. Entry from unincorporated</i>				
Rep	-0.0067 (0.0072)	-0.0015 (0.0061)	-0.0007 (0.0060)	-0.0001 (0.0061)
<i>D. Exit</i>				
Rep	-0.0001 (0.0168)	0.0067 (0.0136)	-0.0012 (0.0152)	-0.0020 (0.0133)
2. Unincorporated self-employed				
<i>A. Stock</i>				
Rep	0.0042 (0.0027)	0.0011 (0.0015)	0.0004 (0.0027)	0.0006 (0.0028)
<i>B. Entry</i>				
Rep	-0.0004 (0.0009)	-0.0001 (0.0007)	-0.0004 (0.0008)	-0.0008 (0.0009)
<i>C. Exit</i>				
Rep	-0.0414*** (0.0090)	-0.0109* (0.0062)	-0.0196** (0.0080)	-0.0191** (0.0076)

NOTES: Regressions include all fixed effects and controls and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

and run a placebo RD using equation (2). Table 7 shows that there are no discontinuities in the outcomes in the term prior to the election.³⁰

Fourth, we present the results using polynomials of different orders and bandwidths. Table 8 reports the results for entrepreneurs and unincorporated self-employed individuals. The results presented in this table are broadly in line with those in tables 2 and 4.³¹

Fifth, one may argue that it may take some time before the influence of politics on entrepreneurial activity becomes evident. To address this potential lagged effect, we consider the impact of elections in a given year on the entrepreneurial activities in later years separately. The first two columns of

³⁰ For entry from the unincorporated self-employed, the estimated coefficient on Rep is -0.0022 (0.0064).

³¹ Note that the sign for Exit becomes positive when the polynomial function is linear and the MV equals 20%. It is also positive and statistically insignificant when we use propensity score matching, see table A1 in the appendix.

TABLE 9
Impact of party affiliation on entrepreneurship with different time windows

Variable	Excluding the first year			Excluding the first two years		
	Stock I	Entry II	Exit III	Stock IV	Entry V	Exit VI
<i>A. Entrepreneurs</i>						
Rep	-0.0018 (0.0016)	-0.0007 (0.0007)	-0.0118 (0.0151)	-0.0025 (0.0016)	-0.0012 (0.0008)	-0.0055 (0.0153)
<i>B. Unincorporated self-employed</i>						
Rep	0.0002 (0.0023)	-0.0009 (0.0008)	-0.0215*** (0.0071)	-0.0002 (0.0026)	-0.0010 (0.0008)	-0.0144* (0.0079)

NOTES: Regressions include all fixed effects and controls and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

table 9 represent the impact of party affiliation on entrepreneurial activity where we drop the first year of the governor's term, whereas the last two columns report the corresponding results when we drop the first two years of the governor's term.³² A comparison of table 9 with tables 2 and 4 shows that dropping the first few years after the election does not change results.³³

Sixth, another important point is to investigate the impact of party affiliation when legislatures and governors are from the same party. This is important, because one may argue that neither Democratic nor Republican governors are likely to make much of a difference unless they are matched with legislatures that are of the same party. For example, Wisconsin passed right-to-work laws only after the recent election of Republican legislatures and governors. To this end, pro-business policies may be more likely to be implemented when governors and legislatures are of the same party. However, the results based on the sample of states where governors and legislatures are of the same party are not qualitatively different from those in tables 2 and 4.³⁴

³² For example, if a governor was elected in 2004, they would begin their job in 2005 and stay in the office until the end of 2008. Consequently, in table 2, we consider the impact of this governor on entrepreneurial activity in years 2006, 2007 and 2008.

³³ We also investigate whether the 2008 financial crisis has had any significant impact on the results. For this purpose, we restricted the sample between 1980–2007. However, the results based on this shorter period were very similar to our main results.

³⁴ The estimated coefficients on Rep for stock, entry and exit are -0.0015 (0.0013), -0.0003 (0.0010) and 0.0111 (0.0128), respectively. The estimated coefficients on Rep for stock, entry and exit for unincorporated self-employed are -0.0005 (0.0026), -0.0007 (0.0010) and -0.0288 *** (0.0102), respectively.

TABLE 10

Impact of party affiliation on entrepreneurship with more controls

Variable	Stock I	Entry II	Exit III
<i>A. Entrepreneurs</i>			
Rep	-0.0020 (0.0015)	-0.0014 (0.0009)	-0.0206 (0.0172)
<i>B. Unincorporated self-employed</i>			
Rep	-0.0015 (0.0027)	-0.0015 (0.0010)	-0.0132* (0.0073)

NOTES: Regressions include all fixed effects and controls and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Finally, we extend our baseline model by including additional controls such as the state-level unemployment rate, unionization rate in private sector, minimum wage, a composite labour-market index that measures the intensity of hiring and firing regulations along with working hours restrictions and a composite tax index that measures the intensity of takings and discriminatory taxes.³⁵ Results shown in table 10 are qualitatively the same as those in tables 2 and 4.³⁶

6. Conclusion

Fostering entrepreneurship and supporting business is a contentious issue in American politics. Both parties claim that they have policies that are more conducive for business activity. Republicans complain about high tax rates imposed on American firms, whereas Democrats claim that they have fought to remove barriers that stand in the way of businesses, helping small businesses especially. The common public perception is that Republicans are more pro-business. Are Republicans really more pro-business than Democrats?

In this paper, we addressed the above question by investigating the causal impact of Republican governors on entrepreneurial activity using micro-level data. Following Levine and Rubinstein (2017), we identify incorporated, self-employed individuals as entrepreneurs. More specifically, using data on gubernatorial elections across states over the last three decades, we investi-

³⁵ These composite indexes are obtained from Stansel et al. (2015) at the Fraser Institute. The data on unemployment rate and minimum wages are from Bureau of Labor Statistics (BLS). Finally, state-level unionization rates are taken from Hirsch and Macpherson (2003), whose data are available at unionstats.com.

³⁶ For entry into entrepreneurship from the unincorporated self-employed, the estimated coefficient on Rep is 0.0004(0.0069).

gate the impact of Republican governors on the entry of new entrepreneurs (business creation) and exit of existing entrepreneurs (business destruction) by exploiting the random variation in close election in a regression discontinuity (RD) design. We find that neither the creation of new businesses nor the closure of exiting ones is different at the individual-owner level when comparing Democratic and Republican governors. We also find that the exit rate of unincorporated self-employed individuals is significantly less than under Democratic governors, and the results are driven mainly by minorities and unskilled workers. We argue that the higher exit rate under Democratic governors stems from the better job opportunities in the labour market in those states.

Appendix

TABLE A1

Impact of party affiliation on entrepreneurship, propensity-score matching

Variable	Stock	Entry		Exit
		All	Unincorp.	
Rep	-0.0011 (0.0008)	-0.0002 (0.0005)	-0.0017 (0.0023)	0.0073 (0.0064)
Observations	1,411,282	1,325,162	121,978	53,623

NOTES: Regressions include state and year fixed effects and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE A2

Impact of party affiliation on entrepreneurship, skilled white males

Variable	Stock	Entry		Exit
		All	Unincorp.	
Rep	-0.0044 (0.0046)	-0.0031 (0.0026)	0.0091 (0.0169)	0.0005 (0.0190)
Observations	208,670	189,731	20,364	17,859

NOTES: Regressions include state and year fixed effects and are weighted by CPS weights. Numbers in parentheses are standard errors based on clustering data at the state level. ***, ** and * represent statistical significance at the 1%, 5% and 10% levels, respectively.

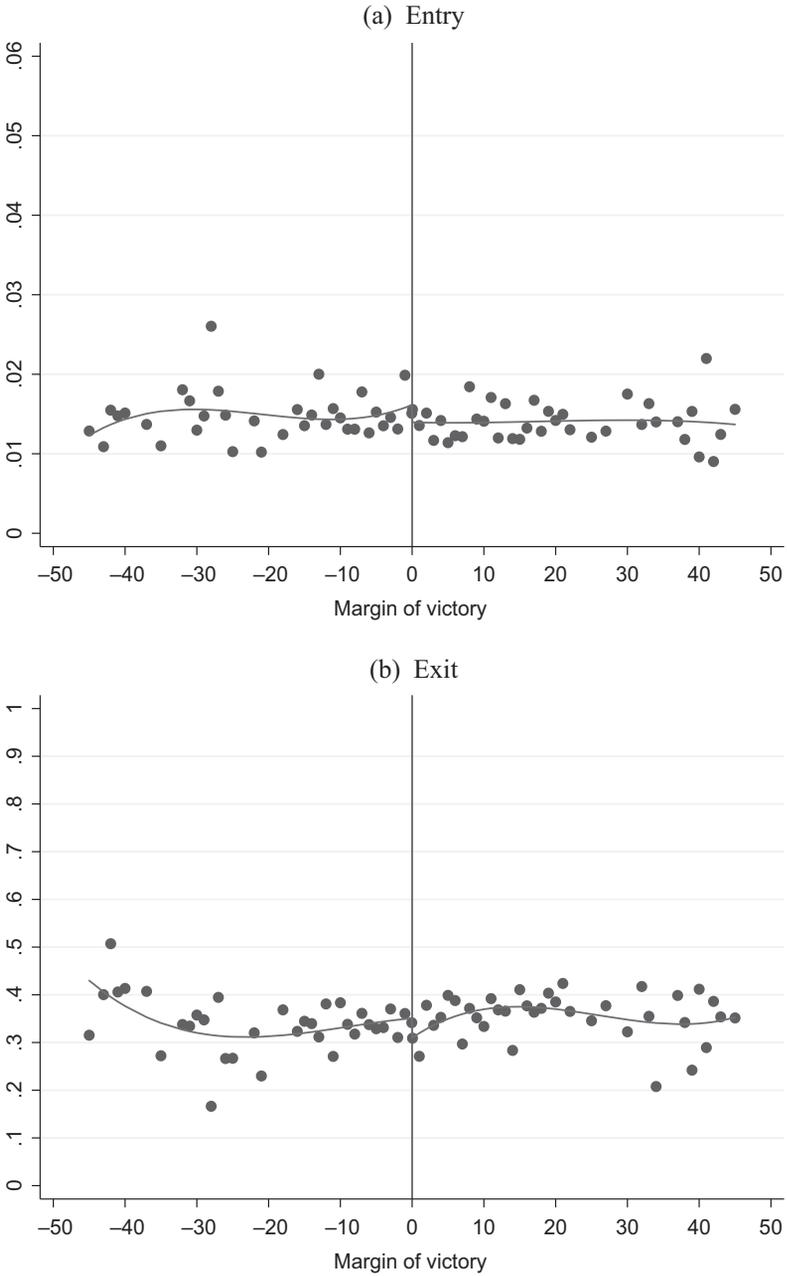


FIGURE A1 The impact of Republican governors on entrepreneurial activities

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