Crowdfunding Entrepreneurship: Evidence from US Counties

Thomas Lambert, Aleksandrina Ralcheva, and Peter Roosenboom*

February 12, 2024

Abstract

Are new ideas and projects launched on reward-based crowdfunding platforms associated with entrepreneurship? We develop measures of reward-based crowdfunding activity at the county level based on all projects listed on Kickstarter (the largest US platform). We find that an increase in Kickstarter activity fosters the creation of young businesses, especially in industries that need less startup capital. For identification, we also use a natural quasi-experiment based on a Kickstarter rule change that exogenously increases the number of projects listed on the platform. We observe that this rule change is associated with an increase in the effect of Kickstarter activity on entry. In addition, we find that reward-based crowdfunding contributes to the further development of young businesses by increasing their establishment size. Further analysis indicates that reward-based crowdfunding activity supports entrepreneurship by reducing socio-demographic disparities prevalent in offline entrepreneurial finance. Our findings are consistent with the notion that crowdfunding promotes the "democratization" of entrepreneurship.

JEL classification: G23, L26

Keywords: crowdfunding, entrepreneurship, FinTech, Kickstarter, startup capital

* Lambert and Roosenboom are with Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, 3062 PA Rotterdam, the Netherlands, emails: t.lambert@rsm.nl; proosenboom@rsm.nl. Ralcheva is with Delft University of Technology, Jaffalaan 5, 2628 BX Delft, the Netherlands, email: a.a.ralcheva@tudelft.nl. We are grateful for comments and discussions from Tom Astebro, Fabrizio Core, Sebastian Doerr, Caroline Genc, Mircea Epure, Danny McGowan, Lubomir Litov, Sophie Manigart, Daniel Metzger, Filippo Mezzanotti, Mikael Paaso, Anjana Rajamani, Armin Schwienbacher, Marno Verbeek, Stefan Weik, and many seminar and conference participants. All errors are our own.

1. Introduction

How important is reward-based crowdfunding for entrepreneurship? In the crowdfunding literature, this question has gone largely unanswered despite the vital role of small businesses and high-growth entrepreneurs in growing the economy (Decker et al., 2014).[1] This study fills this gap, finding that the rise of crowdfunding over the past decade fostered the creation and development of young businesses within US counties. With multi-billion dollars raised annually, crowdfunding is no longer to be considered a niche phenomenon in the United States (Ziegler et al., 2021). It allows entrepreneurs to raise capital online from many dispersed individuals and has the potential to expand access to outside capital to those entrepreneurs underserved by traditional, offline sources of early-stage funding (Agrawal et al., 2014; Mollick and Robb, 2016). Yet, we still have a rather limited understanding of the relation between *reward-based* crowdfunding and entrepreneurship. This relation is a priori not clear as reward-based crowdfunding platforms aim at funding new ideas and projects (not investing in firms).[2] The objective of this paper is to study whether and how reward-based crowdfunding activity impacts the rate of entrepreneurship by focusing on Kickstarter (the largest US reward-based platform).

We use a sample of all projects listed on Kickstarter in all US counties from 2009 (the inception of Kickstarter) to 2018 to examine the relation between new ideas and projects launched via reward-based crowdfunding and entrepreneurship. We find that Kickstarter activity at the county level is positively associated with new business creation. A doubling in the number of projects listed on Kickstarter in a county increases the number of new establishments by about 1 percent on average. For the average county, a doubling means moving from listing about nine projects per year to listing eighteen projects per year. This estimate implies that doubling the total number of Kickstarter projects in the average county would stimulate the entry of 2.4 establishments—that is, one new business created for every four projects launched on Kickstarter. We draw similar conclusions if we focus on business applications and startup employment as alternative measures of entrepreneurship.

Early insights from survey data indicate that 90 percent of *successful* Kickstarter campaigns became ongoing businesses (Mollick and Kuppuswamy, 2014).[3] Our analysis shows consistent evidence that

[1] Policy support for crowdfunding is typically based on this assumption. The role of entrepreneurial finance in the US economic dynamism is the underlying motivation behind the Jumpstart Our Business Startups (JOBS) Act, which was passed with bipartisan support and signed into law by President Obama in April 2012 (https://obamawhitehouse.archives.gov/the-press-office/2012/04/05/president-obama-sign-jumpstart-our-business-startups-jobs-act; last accessed: January 2024).

[2] The reward-based crowdfunding model does not require a financial contract. The entrepreneur is expected to give to the crowd a non-monetary reward or a product in return but is not allowed to pay anything back.

[3] Mollick and Kuppuswamy (2014) conducted an online survey among entrepreneurs who engaged with Kickstarter between 2009 and 2012. Among the 163 respondents who successfully raised money, 90 percent of them report that their

successful campaigns increase establishment entry, suggesting that reward-based crowdfunding helps relax entrepreneurs' financing constraints. However, our analysis also reveals that *unsuccessful* Kickstarter campaigns are associated with increased establishment entry, highlighting the informational value of reward-based crowdfunding to would-be entrepreneurs (Belleflamme et al., 2014; Strausz, 2017; Ellman and Hurkens, 2019; Chemla and Tinn, 2020). From this perspective, (failed) reward-based crowdfunding campaigns can offer information about the potential of the business, reducing entrepreneurial uncertainty (see Viotto Da Cruz, 2018, for evidence from failed Kickstarter campaigns). Arguably, the overall effect we document consists of both a direct effect and indirect effects of reward-based crowdfunding on the creation of young businesses. Kickstarter does not strictly speaking exist to facilitate entrepreneurship but funding new ideas and projects—some of which lead to businesses (direct effect), knowledge spillovers (indirect effect), and creating a better access to funding (indirect effect as it may lead others to start their own businesses or pursue their ideas and projects—that may have failed on Kickstarter—because they know more sources of funding have become available). The venture capital (VC) literature has also documented such indirect effects (Samila and Sorenson, 2011; Schnitzer and Watzinger, 2022).

While reward-based crowdfunding activity impacts business creation, entrepreneurs may also resort to this source of funding to further develop their business. We present evidence of a relation between reward-based crowdfunding and business development by analyzing average establishment size. Consistent with the idea that Kickstarter can help businesses to grow further, we find a strong and positive effect of Kickstarter activity on the average employee count per establishment. A doubling in the number of projects listed on Kickstarter in a county implies 0.3 percent increase in the average establishment size. This result highlights the role of reward-based crowdfunding for entrepreneurs not only to start their business but also to nurture their first years of development.

Although our regression models account for the influence of fixed unobserved county characteristics and various time-varying county differences, such as both credit and risk capital markets, an important concern is the possibility that time-varying omitted variables simultaneously affect Kickstarter activity and the number of new establishments. We address this issue by conducting two additional tests. First, we exploit within-county variation across industries. The county-industry variation allows us to account for observed and unobserved heterogeneity at both county and industry levels via granular fixed effects. The inclusion of these fixed effects mitigates the concern that unobservable factors explain the correlation between crowdfunding and new business creation

project turned into ongoing organizations one to four years after their campaign. A third of them also report yearly revenues of over $100,000 and can add an average of about two employees since their Kickstarter campaign.

(Altonji et al., 2005; Oster, 2019). We then argue that in light of its average ticket size, reward-based crowdfunding is more likely to relax entrepreneurs' financing constraints to start or expand their business in industries that require less startup capital to create a new business (Hurst and Lusardi, 2004; Adelino et al. 2015). We find that the number of new establishments increases by significantly more when Kickstarter activity rises in industries that require less startup capital.

Second, we identify an event that captures an exogenous change in the number of projects listed on Kickstarter, providing us with a natural quasi-experiment to test whether reward-based crowdfunding activity is associated with new business creation. We exploit a Kickstarter rule change in June 2014 that removes mandatory campaign vetting and hence exogenously increases the number of projects admitted to the platform (Lin and Pursiainen, 2021). We find that the effect of Kickstarter activity on startup employment is stronger in the quarters following the rule change, confirming our original findings, and providing causal evidence on the effect of reward-based crowdfunding in driving entrepreneurial activity in the United States.

We then highlight an important channel behind these real effects. Early-stage investment has been shown to be subject to socio-demographic bias in terms of gender, race, ethnicity, and education (Munnell et al., 1996; Franke et al., 2006; Coleman and Robb, 2009; Ewens and Townsend, 2019; Fairlie et al., 2020). Crowdfunding is no exception (on race, see Younkin and Kuppuswamy, 2018; on gender, see Gafni et al., 2021). However, the very concept of crowdfunding makes it less costly and more open and accessible for entrepreneurs as compared to other funding sources. Crowdfunding has thus the potential to also mitigate socio-demographic barriers by improving diversity in the pool of entrepreneurs (Mollick and Robb, 2016). Consistent with this premise, we find that crowdfunding reduces socio-demographic disparities prevalent in offline sources of early-stage funding. Specifically, using quarterly data on the composition of startup employment (that is, businesses of age zero to one), our results indicate that Kickstarter primarily boosts the share of startup employees belonging to underserved groups, with respect to their gender, race, ethnicity, and education. These findings imply that Kickstarter activity promotes the "democratization" of entrepreneurship by enabling entrepreneurs from these underrepresented groups to receive funding to start and expand their businesses.

Overall, our results stress the importance of reward-based crowdfunding in economic development through overcoming socio-demographic disparities in offline entrepreneurial finance. However, our focus is on Kickstarter. An argument might still be made that other funding sources are better suited to fund young businesses. At the same time, there is a number of arguments that make us confident that focusing on Kickstarter as a proxy for general reward-based crowdfunding

activity is a useful first step in investigating its real effects. First, Kickstarter is by far the largest platform in the United States, with more than $2.6 billion successfully raised during our sample period spanning from 2009 to 2018.[4] Second, the average amount successfully raised on Kickstarter is around $27,000, while more than 20 percent of projects in the Technology category raise at least $100,000.[5] These are meaningful amounts in keeping with what angels are typically able to invest (Da Rin and Hellmann, 2020). Third, although other crowdfunding models may be equally important for entrepreneurial finance, this is less likely to be the case in the United States over our sample period. Title III of the JOBS Act only went into effect in May 2016, which precluded a nationwide equity-based crowdfunding market to develop prior to it.[6] The total amount raised via equity-based crowdfunding is less than $25 million in 2016 and this amount barely doubles in 2018 (Cumming et al., 2021). The regulated equity-based crowdfunding market in the United States, though flourishing, is still too small to lead to discernable effects on aggregate economic indicators.[7] Regarding lending-based crowdfunding, it has increased substantially in the United States, with the rise of marketplace lending platforms such as Prosper and LendingClub. However, business borrowers on these platforms are typically established small businesses not young businesses, while entrepreneurs resorting to marketplace lending to launch their business often apply for consumer loans rather than business loans (Da Rin and Hellmann, 2020). Moreover, only 5 percent of consumer loans are used for small business funding (Morse, 2015; Jagtiani and Lemieux, 2018).

Our paper mainly contributes to the literature that explores the importance of reward-based crowdfunding for entrepreneurial endeavors (e.g., Mollick, 2014; Mollick and Robb, 2016; Mollick and Nanda, 2016; Sorenson et al., 2016; Yu et al., 2017; Agrawal et al., 2018; Viotto Da Cruz, 2018; Kim and Hann, 2019; Stevenson et al., 2019; Cornelius and Gokpinar, 2020; Kumar et al., 2020; Gafni et al., 2021; Yu and Fleming, 2021). Some of these papers have examined whether reward-based crowdfunding, and Kickstarter in particular, has improved access to capital and substituted for traditional sources of early-stage funding. Agrawal et al. (2018) find that, during college breaks, there are significantly more projects led by students (a demographic with high human capital, but likely excluded from traditional sources of funding) that are posted on Kickstarter in the immediate geographic area next to the colleges. Kim and Hann (2019) report that tightened credit constraints

[4] Kickstarter but also Indiegogo rose to the top of the reward-based crowdfunding market in the United States. Indiegogo no longer provides statistics for their successful campaigns, experts estimate its market share to be very small as compared to Kickstarter (see, e.g., https://www.similarweb.com/website/indiegogo.com/vs/kickstarter.com/; last accessed: January 2024).

[5] These figures are sourced from https://kickstarter.com/help/stats in August 2022.

[6] Title III, the CROWDFUND Act, is a key section of the JOBS Act which legalizes crowdfunding for equity by relaxing various restrictions concerning the sale of securities.

[7] Nevertheless, we verify whether our results are due to the development of equity-based crowdfunding. Our analysis reveals no evidence suggesting so.

imposed by falling housing prices lead to increased use of Kickstarter. Sorenson et al. (2016) and Yu et al. (2017) show that Kickstarter activity in US counties positively correlates with follow-on activity from venture capitalists and angels, respectively. Gafni et al. (2021) report that women-led projects on Kickstarter made up about one-third of all the projects led by one entrepreneur, which is higher than with other comparable capital raising channels. We build on and complement these papers by focusing directly on entrepreneurship. We provide novel evidence that reward-based crowdfunding matters for the creation of young businesses in a wide range of industries, from the arts to technology, and among diverse groups, including women and minorities. Our findings have important policy implications as they challenge the conventional wisdom that crowdfunding, like VC and angel funding, is an early-stage source of funding only relevant for high-growth young businesses in technology industries (for evidence suggesting so, see Yu and Fleming, 2021). We show that ideas and projects from all Kickstarter categories (including arts) may turn into actual businesses and also highlight that all projects (successful and failed) boost entrepreneurial activity within US counties. Our findings thus support the informational value of reward-based crowdfunding for entrepreneurial endeavors as theoretically developed in Belleflamme et al. (2014), Strausz (2017), Ellman and Hurkens (2019), and Chemla and Tinn (2020).

Our paper also joins a broader literature surrounding the role of outside capital in entrepreneurship decisions (Gompers and Lerner, 2001; Cosh et al., 2008; Robb and Robinson, 2014). An important body of work within this literature studies the impact of (non-)bank finance on entrepreneurial activity in the United States (on the impact of banks, see Black and Strahan, 2002; Cetorelli and Strahan, 2006; Kerr and Nanda, 2009; Ahnert et al. 2021; of housing collateral and wealth, see Hurst and Lusardi, 2004; Adelino et al., 2015; Corradin and Popov, 2015; of angels, see Lindsey and Stein, 2020; of venture capitalists, see Samila and Sorenson, 2011; Popov, 2014; Akcigit et al., 2022; and of marketplace business lenders, see Cumming et al., 2022). Close to our line of inquiry, Cumming et al. (2022) show that the supply of marketplace business lending (Prosper and LendingClub) positively affects the number of establishments, thereby including all businesses regardless the stage of their lifecycle. Rather, we highlight the role of reward-based crowdfunding for would-be entrepreneurs in starting a business. Popov (2014) uncovers that an increase in the supply of VC positively affects mean firm size by increasing the relative share of medium-sized and larger firms, consistent with the idea that VC promotes the "elitization" of entry by enabling the emergence of large and successful ("superstar") businesses. We complement his study by providing first evidence that crowdfunding "democratizes" entry by allowing more new (small) businesses to enter. In that sense, our study speaks to the literature examining heterogeneity in growth dynamics amongst young businesses (Schoar, 2010; Hurst and Pugsley, 2011; Decker et al., 2014; Guzman and Stern, 2020).

2. Sample and Data

2.1. Variable definitions and data sources

To study the effect of reward-based crowdfunding on entrepreneurship, we construct a panel data set of all US counties and county equivalents between 2009 and 2018 using different data sources.[8] We obtain data on establishment entry, establishment entry rate, number of establishments, number of employees and job creation from the Business Dynamics Statistics (BDS) database published by the US Census Bureau. The BDS data contain annual measures of business dynamics aggregated at different levels (e.g., by county or industry) since 1998 as of March of the reported year. It is important to note that these measures are recorded at the establishment level. However, all establishments are linked to their parent firm so that the net and gross flows of establishments and jobs can be categorized by the characteristics of the parent firm (such as size and age).[9] As described in detail below, we are interested in establishments classified by the age of their parent firm. Following the literature, we define entrepreneurship as the entry of new establishments (Kerr and Nanda, 2009; Braggion et al., 2021). To construct our establishment entry variable, we use data at three different levels: 1) county level; 2) county level, broken down by firm age; and 3) county level, broken down by the two-digit North American Industry Classification (NAICS). The breakdown of establishments by firm age allows us to differentiate between the entry of new firms (i.e., new firm formations consisting of a single establishment) and the entry of new establishments by existing firms (i.e., new establishment openings by existing multi-unit firms). We also use the age-breakdown to compute the average establishment size (measured as the number of employees divided by the number of establishments) of firms in different age groups. We distinguish between establishments by young firms (aged 1 to 10 years) and establishments by older firms (older than 10 years). The breakdown of establishments by industry is important for our identification strategy exploiting industry-level variation within counties. As alternative measures of entrepreneurship based on BDS data, we also consider the total number of establishments, the rate of establishment entry, and job creation (that is, the count of all employment gains). We further measure entrepreneurship using the number of business applications based on data sourced from the Business Formation Statistics (BFS) by the US Census Bureau.

[8] The full list of counties and county equivalents, as well as their corresponding FIPS codes as defined by the American National Standards Institute (ANSI), was retrieved from the US Census Bureau. The list is available at https://www.census.gov/geographies/reference-files/2018/demo/popest/2018-fips.html (last accessed: January 2024). Puerto Rico (state FIPS 72) is a US territory and not a sovereign entity and is, therefore, excluded from our analysis.

[9] An establishment is a single physical location where one predominant activity occurs. A firm is an establishment (i.e., single-unit) or a combination of establishments (i.e., multi-unit).

Additionally, we study entrepreneurship using quarterly data. The Quarterly Workforce Indicators (QWI) data set published by the US Census Bureau contains data on end-of-quarter employment by county, firm age, gender, race, ethnicity, and education. We use the breakdown by firm age to obtain the number of startup employees. Startups are defined as firms of age zero to one as in Adelino et al. (2017) and Doerr (2021), for instance. Turning to the possible democratizing effect reward-based crowdfunding has on entrepreneurship, we also obtain data on the demographic characteristics of entrepreneurs. Using the QWI data set, we construct a set of variables measuring the share of startup employees who are female, non-white, Hispanic or Latino, or who have not acquired a bachelor's degree in a given county, quarter, and year. To the extent that startup employees are most likely the entrepreneurs themselves (Astebro and Tag, 2017), or to the extent entrepreneurs tend to hire from their own social networks and base their early hiring decisions upon similarity to their own social identity (Stewart and Hoell, 2016), the demographic diversity of entrepreneurs in a given region will be reflected by the diversity of their (startup) employees.

As explained previously, in our analysis we rely on Kickstarter activity to proxy for general reward-based crowdfunding activity. The Kickstarter variables are aggregated using the CrowdBerkeley database. The CrowdBerkeley database was assembled by the Fung Institute at UC Berkeley, with the support of the Kauffman Foundation, and contains information on all Kickstarter campaigns (such as project title, location, category and project status) since Kickstarter's inception until the end of 2018 (Sorenson et al., 2016; Yu et al., 2017; Yu and Fleming, 2021). To measure Kickstarter activity at the county level, we first map each location (city and state) to its respective county using the comprehensive version of the US Cities database.[10] We then restrict the sample to all Kickstarter campaigns based in the United States and aggregate the data to two levels: 1) the county-year level; and 2) the county-year-quarter level. We can differentiate between successfully funded and non-funded projects. This yields the number of successful and failed campaigns, as well as the accumulated amount in $ raised by successful campaigns in a given county, a given year, and a given quarter. In this study, the main Kickstarter variable is based on successful and unsuccessful campaigns as both campaign outcomes may drive entrepreneurship. That is, successful campaigns can indeed relax entrepreneurs' financing constraints, while campaigns (whether successful or not) can provide valuable information to entrepreneurs in the making of their business. We match the county-year aggregated Kickstarter data to the BDS data on entrepreneurship, and the county-year-quarter aggregated data to the QWI data on startup employees using Federal Information Processing Standard (FIPS) county unique identifiers.

[10] The US Cities Database is available at https://simplemaps.com/data/us-cities (last accessed: January 2024).

Furthermore, we use an industry-level measure of the amount of capital needed to start a business (startup capital). To construct our startup capital variable, we use the Survey of Business Owners (SBO) Public Use Microdata Sample (PUMS) following Adelino et al. (2015). The SBO PUMS uses responses from the 2007 SBO and allows researchers to study entrepreneurial activity and the relationships between business characteristics such as access to capital, firm size, employer-paid benefits, minority- and women-ownership, and firm age. We focus on the responses on "Amount of startup capital", which are reported in categories of startup capital (less than $5,000; $5,000 to $9,999; $10,000 to $24,999; etc.). To construct the startup capital needed in each industry, we assign the middle point of the category to each observation and take the average for the two-digit NAICS industry level (the most granular level available in the data). Detailed classification and statistics of the startup capital variable by two-digit NAICS industry are available in the Internet Appendix.

In addition, we control for time-varying county-level factors that could confound the effect of reward-based crowdfunding activity on entrepreneurship, in particular risk capital markets (Samila and Sorenson, 2011) and credit markets (Black and Strahan, 2002). We collect data on the number of seed and early-stage VC deals using Thomson One. Data on bank-level variables (total deposits and bank branches) are available by the Federal Deposit Insurance Corporation (FDIC) in its annual survey of branch office deposits—the Summary of Deposits (SOD). We rely on data from the Bureau of Economic Analysis (BEA) to further control for population growth.

For robustness purposes, we consider additional county-level differences in terms of demographic and economic characteristics. We get unemployment rates from the Local Area Unemployment Statistics (LAUS) program of the Bureau of Labor Statistics (BLS). Data on per capita income are obtained from the BEA. The Census Bureau Summary Files provide information on the population distribution in terms of race, age, education, etc. We use this information to define our non-white population, elderly population, and bachelor's degree variables. We also account for the effect of housing collateral using the average change in housing prices at the county level (Adelino et al., 2015). To estimate house price growth, we rely on House Price Index (HPI) data from the Federal Housing Finance Agency (FHFA).

A full description of all variables we use in our analysis and their corresponding sources can be found in Table A1 of the Appendix.

2.2. Descriptive statistics

Our sample of Kickstarter projects consists of 266,641 projects (115,125 successful and 151,426 failed projects) that were launched from the United States between 2009 and 2018. The aggregated amount

successfully raised sums up to more than $2.6 billion in our sample. Projects on Kickstarter are split into fifteen main categories: Art, Comics, Crafts, Dance, Design, Fashion, Film & Video, Food, Games, Journalism, Music, Photography, Publishing, Technology, and Theater. These categories can be clustered into two main groups (Mollick, 2018): product-oriented (Crafts, Design, Fashion, Food, Games, and Technology) and art-oriented (Art, Comics, Dance, Film & Video, Journalism, Music, Photography, Publishing, and Theater) categories. Projects from product-oriented categories are deemed more likely to be commercial in nature, while projects from art-oriented categories contain a high proportion of purely creative projects.[11] Our analysis includes product-oriented and art-oriented projects since all these projects can a priori lead to the creation and development of formal businesses. Figure 1 presents the distribution of US-based projects and the aggregated amount they successfully raised across the different categories. While nearly two thirds of all projects were launched in art-related categories (about 170,000 projects), projects in product-oriented categories attracted most of the funding. Figure 2 illustrates the growth of the platform over time considering the two funding outcomes: successfully funded and non-funded projects. Kickstarter's project base grew exponentially in its first years of operation. However, in the years to follow the number of successful and failed projects followed different trends. The number of successful projects remained steady between 2012 and 2014. Following a slight decline in 2015 and 2016, successful projects consistently reached around 12,000 per year in the last three years of our sample. On the contrary, the number of failed projects steeply increased in 2014, which contributed to a much lower success rate of between 35 and 40 percent in the following years (see the Internet Appendix for the sample distribution of success rates over time). Since it opened to the public in April 2009, Kickstarter remains as of today the largest reward-based crowdfunding platform in the United States.

Table 1 provides the descriptive statistics for all variables in our data set aggregated at the county level. Our data cover a total of 3,142 counties and span 10 years (maximum of 31,420 county-year and 122,538 county-quarter observations).[12] Panel A gives an overview of our dependent variables. On average, there are 214 new establishments entering a given county in a given year, which translates into an 8 percent average entry rate. Approximately 60 percent of those entering establishments are new single-unit firms. In the average county, nearly 900 business applications are submitted each year, there are more than 2,000 establishments in total, and nearly 5,000 jobs are being created each year. The average establishment has 13 workers, however, depending on firm age the average number of

[11] Kickstarter projects have either a presale objective (a specific product is typically offered for which a minimum presale is needed to start production) or a financial objective (a minimum capital requirement is necessary to bring the idea or project to life). In the parlance of crowdfunding, Kickstarter employs an All-or-Nothing reward-based scheme; that is, entrepreneurs get the proceeds of their campaign only if the objective is reached (and nothing otherwise). As a reward-based platform, Kickstarter does not allow the crowd to receive financial rewards (the crowd does not "invest").
[12] There is no Kickstarter activity in the first quarter of 2009.

employees is 8 (in the case of young firms) and 17 (for establishments of older firms). In the average county, more than 1,300 individuals are employed in startups in a given quarter, out of which 50 percent are women, 15 percent are non-white, 9 percent identify as Hispanic or Latino, and 86 percent do not have a bachelor's degree. In the Internet Appendix, we provide the descriptive statistics of our main dependent variable, establishment entry, split in industries above and below the median of startup capital.

As for our Kickstarter variables, each year the average county is home to approximately 9 projects—4 successfully funded and 5 not funded (Panel B). The median value for all of our Kickstarter variables is zero. One of the reasons for this is that there are no projects originating from 591 of the 3,142 counties in our sample. Figure 3 shows the distribution of Kickstarter activity across counties during our sample period. We take an additional look at this in our robustness checks by excluding the counties without any Kickstarter activity from our analysis. In comparison, according to Panel C there is less than one VC deal on average in a given county during our sample period, and 2,716 of the 3,142 counties do not attract VC funding.

3. Main Analysis

3.1. Crowdfunding and business creation

We begin by examining whether the augmented availability of startup financing in the form of reward-based crowdfunding affects the entry of new businesses. Specifically, we consider the following fixed-effects model:

$$Entry_{c,t+1} = \beta Kickstarter\ projects_{c,t} + \gamma X_{c,t} + \phi_c + \tau_t + \varepsilon_{c,t}. \qquad (1)$$

The dependent variable, $Entry_{c,t+1}$, is the natural logarithm of establishment entry in county *c* in year *t+1*. The independent variable of interest capturing general reward-based crowdfunding activity is $Kickstarter\ projects_{c,t}$, the natural logarithm of the number of Kickstarter projects originating from each county *c* in each year *t*. Establishment entry in the BDS data set is reported as of March each year. Therefore, we measure establishment entry at *t+1*, so that there is an overlap of three quarters over each four-quarter (one-year) period with our Kickstarter measure. $X_{c,t}$ is a set of controls that accounts for supply and demand of external funding at the county-year level (VC deals, Total deposits, Bank branches, Population growth).[13] ϕ_c and τ_t denote county and year fixed effects, respectively. County fixed effects control for time-invariant differences in entrepreneurship across

[13] We consider additional controls as robustness in subsection 3.2.

counties, while year fixed effects account for any nationwide temporal variation. $\varepsilon_{c,t}$ is the error term. We cluster standard errors at the county level.

The coefficient of interest in Equation (1) is β, which is identified from the within-county, yearly variation in Kickstarter activity on entry. Its effect can be interpreted as a 100-percent change (that is, a doubling) in Kickstarter activity in a county multiplies expected establishment entry by $e^{\beta \times \ln\left(\frac{[100+100]}{100}\right)}$. If the availability of reward-based crowdfunding (in our case via Kickstarter) has a positive effect on entrepreneurship, we expect $\beta>0$.

The results in Table 2 show a positive relation between Kickstarter and entrepreneurial activity that holds true for both successful and failed projects. Column 1 reports the most parsimonious specification. The estimate of β is 0.040 (*s.e.*=0.002), statistically significant at the 1-percent level. Column 2 adds the set of controls. The estimate of β slightly declines in magnitude (0.031; *s.e.*=0.002). Column 3, our preferred specification, augments the previous specification with county and year fixed effects. The within estimate of β is positive and statistically significant at the 1-percent level, albeit of lower magnitude (0.015; *s.e.*=0.002). Economically, the effect on entry is sizeable: a doubling of the number of projects listed on Kickstarter leads to the entry of about 1 percent more new establishments on average (that is, $e^{0.015 \times \ln\left(\frac{[100+100]}{100}\right)}$). Recall from Table 1 that a doubling means moving from about nine projects listed on Kickstarter per year in a county to eighteen projects listed. Therefore, this estimate implies that doubling the number of listed projects stimulates the entry of 2.24 establishments (= 0.010 × 214.3) or one new establishment for approximately every four projects launched on Kickstarter. The latter interpretation speaks of a direct effect of reward-based crowdfunding on entry. However, indirect effects of reward-based crowdfunding may also partly account for this effect. Indeed, the raison d'être for Kickstarter is not strictly speaking to facilitate business creation, but funding new ideas and projects—some of which lead to businesses (direct effect), knowledge spillovers (indirect effect), and improving access to funding (indirect effect as it may lead others to start their own businesses or pursue their ideas and projects—that can have been unsuccessful on Kickstarter—because they know more sources of funding have become available). Unfortunately, our empirical strategy does not allow us to distinguish between direct and any indirect effects.

We also explore whether this effect is primarily coming from successful campaigns, which are the ones that directly relax entrepreneurs' financing constraints. A few studies have only focused on successful Kickstarter campaigns because they are the ones that grant actual money to entrepreneurs

(Sorenson et al., 2016; Yu et al., 2017; Yu et al., 2021).[14] However, failed campaigns may also lead to the creation of new businesses by providing information on the potential of the business. Indeed, running a Kickstarter campaign still enables the entrepreneur to obtain early feedback from the crowd despite failing to get funded, which can greatly facilitate their learning and adaptation (Belleflamme et al., 2014; Strausz, 2017; Ellman and Hurkens, 2019; Chemla and Tinn, 2020). Using a sample of campaigns that failed to reach their goal, Viotto Da Cruz (2018) finds that entrepreneurs are more likely to release their product in the market if the contributions they received during their Kickstarter campaign suggest positive valuation from the crowd. Therefore, in column 4, we decompose our variable, Kickstarter projects, into successful and failed projects. We employ the same specification as in column 3. The within estimate of β is 0.010 (*s.e.*=0.002) for both successful and failed projects. Both within estimates are positive and statistically significant at the 1-percent level, indicating that both types of Kickstarter projects lead to new establishments entering the market. This result is important as it shows that project failures on Kickstarter also contribute to entrepreneurship, underscoring the informational value of reward-based crowdfunding for entrepreneurial efforts in US counties.[15]

Our focus on establishment entry encompasses the entry of new (single-unit) firms and the entry of new establishments by existing (multi-unit) firms. We expect the effect of Kickstarter to be concentrated in newly established firms and less in existing ones, as existing businesses are less likely to finance their multi-unit expansions using crowdfunding. In the remaining columns of Table 2, we examine these effects. The within estimate β for the effect of Kickstarter on new establishments by new firms is 0.017 and statistically significant at the 1-percent level (*s.e.*=0.003). On the contrary, the within estimate β for the effect on the entry of new establishments by existing firms is of smaller magnitude (0.008; *s.e.*=0.003). This result confirms our expectation that Kickstarter activity is mostly associated with the creation of newly established firms rather than the entry of new establishments by existing firms. A breakdown of entry by firm age at the industry level is not available within the BDS data set. For consistency across our analysis, we therefore continue to consider the entry of total establishments as our main independent variable.

[14] Recall that Kickstarter uses an All-or-Nothing funding scheme.

[15] We also explore whether the Kickstarter effect is driven by product-oriented projects, which tend to be more commercial in nature. Product-oriented projects correspond to what typical early-stage investors are interested in (Sorenson et al., 2016; Yu et al., 2017; Yu et al., 2021). However, art-oriented projects, such as journalism, publishing, theater, and music, may also lead to the creation of new businesses albeit likely to a lower extent than product-oriented projects (consistent with Mollick, 2018, see his Figure 7.1). The results reported in the Internet Appendix indicate that art-oriented projects are also positively and significantly associated with establishment entry, a conclusion that has been understated, we think, in the crowdfunding literature so far.

The creation of businesses following increased crowdfunding activity may be relatively slow-moving, with long and uncertain lags. Therefore, we also estimate the dynamic response of Kickstarter activity to entrepreneurship. To trace out the dynamic impact of Kickstarter activity on establishment entry, we use local projections by estimating a model similar to Equation (1) for several time horizons (Jordà, 2005). Figure 4 exhibits the local projections, which are consistent with the baseline results of Table 2 and complement them by illustrating the dynamic effect of Kickstarter activity on establishment entry. Figure 4 shows on average the same increase as reported in Table 2 in the number of new establishments in response to Kickstarter activity within a county after one year (β is also 0.015). Interestingly, we can also see that Kickstarter leads to the entry of even more new establishments on average after 2-3 years. The effect then starts decreasing slowly in years 4 and 5 and more dramatically after year 6.

3.2. Robustness checks

In this subsection, we examine the robustness of our key result. To conserve space, we focus on our preferred specification of column 3 in Table 2 (unless otherwise specified) and only report the within estimates of the coefficients on the Kickstarter variable.

In Table 3, we first use alternative measures of entrepreneurship also used in the literature. In column 1, we measure business formation by considering the number of business applications for tax IDs (Bayard et al., 2018). Business formation indeed captures how many of the business applications turn into businesses after business applications are filed. Therefore, studying business applications helps further understand whether entrepreneurs perceive reward-based crowdfunding to facilitate establishing a business. The within estimate of β is 0.014 in column 1, statistically significant at the 1-percent level (*s.e.*=0.002). In column 2, we use the total number of establishments as a measure of the equilibrium level of entrepreneurship, as used by Cetorelli and Strahan (2006) and Cumming et al. (2022), for instance. The within estimate of β is 0.010, statistically significant at the 1-percent level (*s.e.*=0.001). Next, we take two different approaches used in the literature to scale entry, which allow for better cross-county comparison. In column 3, we consider establishment entry rate as dependent variable (that is, the number of new establishments relative to the total number of establishments, as in, e.g., Popov and Roosenboom, 2013; Lindsey and Stein, 2020; Denes et al., 2023). The within estimate of β is positive and statistically significant at the 1-percent level (0.050; *s.e.*=0.018). In column 4, we standardize our main dependent and independent variables with respect to population (as in, e.g., Braggion et al., 2021). Our key result is consistent: the estimate of β is 0.004, statistically significant at the 10-percent level though (*s.e.*=0.002). In column 5, we analyze the effect of Kickstarter on job creation given that new businesses are an important source of job creation (e.g., Adelino et al., 2017;

Denes et al., 2023). In column 6, we specifically consider the effect on startup employment (that is, employment of businesses of age zero to one).[16] Both estimates we obtain are again positive and statistically significant at the 1-percent and 5-percent levels, respectively (0.025; *s.e.*=0.003; and 0.010; *s.e.*=0.004, respectively).

In Table 4, we rely on alternative specifications, sample choices, and econometric techniques. A potential concern might be that the effect of Kickstarter activity is picking up any other regional factor we fail to account for. In column 1, we consider the effect of house price growth on entrepreneurship, as housing wealth plays an important role in the funding and creation of new businesses (Adelino et al., 2015; Corradin and Popov, 2015; Kim and Hann, 2019). While we do find a positive and statistically significant effect associated with the growth in house prices, our estimate of Kickstarter activity remains positive and statistically significant at the 1-percent level (0.009; *s.e.*=0.002). The smaller magnitude of the effect is attributable to the relatively smaller sample size (n=23,569) due to the unavailability of data on house prices for some of the counties in our sample. In column 2, we introduce additional controls that capture some differences across counties: the unemployment rate, the share of elderly (65+) population, the share of non-white population, the share of individuals with at least a bachelor's degree and per capita income. Our results remain unchanged. In column 3, we exclude the 591 counties with no Kickstarter activity during the sample period. We observe that our results do not change (0.015; *s.e.*=0.002). In column 4, we weight the regression by the logarithm of population. We obtain similar results as in the unweighted regressions. In column 5, we run a regression on non-overlapping three-year averages. Averaging the data for a number of years helps abstract from short-term business cycle effects and captures the longer-run effects of Kickstarter activity on entry. We obtain a β of 0.020, also statistically significant at the 1-percent level (*s.e.*=0.004).

In Table 5, we address the potential concern associated with the recent development of equity-based crowdfunding. Although equity-based crowdfunding in the United States developed at a much slower pace than reward-based crowdfunding, Kickstarter activity may still systematically correlate with the supply of equity-based crowdfunding. During the sample period, federal-level regulations on equity-based crowdfunding were relaxed through the enactment of the JOBS Act in April 2012 and the implementation of Title III in May 2016, which allowed early-stage startups to solicit offerings up to $1 million within 12 months from either accredited or non-accredited investors. At the same time, in anticipation of the federal deregulation of equity-based crowdfunding, some states provided

[16] In column 6, we use the annual QWI data for startup employment. As QWI data are also available on a quarterly basis, in the Internet Appendix, we present panel estimations of the effect of Kickstarter activity on quarterly startup employment over the entire sample period including year-quarter fixed effects. The quarterly results are in line with the annual results.

exemptions to state-level regulation allowing issuers to raise capital from non-accredited investors who reside in the same state where their business is located (intrastate deregulation).[17] To ensure that federal- and state-level deregulations of equity-based crowdfunding do not contaminate our findings, we account for the staggered adoption of equity-based crowdfunding. In column 1 of Table 5, we introduce a dichotomous indicator variable equity crowdfunding adoption, that takes a value of one for each year following the federal deregulation of equity-based crowdfunding (that is, the year 2016) for all states, a value of one for each year following the intrastate crowdfunding deregulation for the twenty-five states that adopted state-level exemptions prior to 2016, and a zero value otherwise. The results remain unchanged. In column 2, we restrict our sample to the period prior to 2016. While the size of the estimate of β is slightly smaller, our key finding remains. Column 3 both restricts the sample period to the period prior to federal deregulation and excludes observations from the twenty-five states that adopted intrastate deregulation. Our main finding still holds.

Last, in Figure 5, we further address the potential concern that a specific state may be driving our result (e.g., due to the higher incorporation rates in Delaware). To do so, we examine the effect of Kickstarter activity on establishment entry from the baseline specification by running regressions excluding each state one at a time. Figure 5 reports the estimate for each regression excluding a state. As can be seen, we do not find any evidence that our baseline estimate is driven by a particular state.

3.3. Crowdfunding and business (early) development

We have shown the importance of reward-based crowdfunding in helping nascent entrepreneurs when launching their business. However, Kickstarter may also aid entrepreneurs in further developing their business by providing additional resources to finance their growth. In this subsection, we examine the effect of Kickstarter activity on this other key aspect of entrepreneurship. To do so, we estimate Equation (1) using as dependent variable the average establishment size measured as the natural logarithm of the average employment count per establishment in a county.

Table 6 displays the results. Across columns, we find a large and positive effect of Kickstarter activity on the average establishment size. Column 1 is again the most parsimonious specification, while columns 2 and 3 augment this specification with controls and fixed effects. In column 3, our preferred specification, the estimate of β is 0.004, statistically significant at the 1-percent level (*s.e.*=0.001). Economically, a doubling in the total number of Kickstarter projects in a county is

[17] Twenty-five states deregulated equity-based crowdfunding at different points in time prior to 2016, including Alabama (2014), Arizona (2015), Colorado (2015), District of Columbia (2014), Florida (2015), Georgia (2011), Idaho (2012), Indiana (2014), Kansas (2011), Kentucky (2015), Maine (2015), Maryland (2014), Massachusetts (2015), Michigan (2013), Mississippi (2015), Montana (2015), Nebraska (2015), Oregon (2015), South Carolina (2015), Tennessee (2015), Texas (2014), Vermont (2014), Virginia (2015), Washington (2014), and Wisconsin (2014).

associated with 0.3 percent increase in the average establishment size (the sample mean reported in Table 1 is 13.4 employees per establishment). This effect is economically sizable and suggests that the response to Kickstarter activity likely combines specific benefits from crowdfunding with more general economic development (e.g., higher demand for additional business services) that indirectly stimulates firm development. This result thus further speaks for the indirect effects induced by reward-based crowdfunding on entrepreneurship, echoing the literature on spillover effects of the supply of VC funding (Samila and Sorenson, 2011; Schnitzer and Watzinger, 2022).

In columns 4 and 5, we examine whether reward-based crowdfunding plays a role in the development of young (less than 10-year-old) versus older businesses. Young firms have fewer options for financing their projects relative to more established firms that have proven track record and better access to alternative internal and external sources of funding. Therefore, we expect the effect of Kickstarter on establishment size to be more pronounced for young rather than older firms. We find that Kickstarter activity indeed impacts much more (statistically and economically) the development of young businesses rather than older ones, suggesting that the Kickstarter effect is decreasing with firm age.

4. Additional Analysis

4.1. High- and low-startup capital industries

As US counties are heterogeneous along many different dimensions, most of which are difficult to observe, our results might be impaired if there is an omitted variable problem that causes inference to break down. Time-varying omitted factors may still coincide with changes in Kickstarter activity, implying that we could incorrectly attribute the changes in establishment entry to changes in Kickstarter activity. Indeed, Kickstarter activity is likely to be high in counties that are considered more entrepreneurial.[18] Such endogeneity concern may weaken the conclusions drawn in the previous section. We address this concern by examining the differential impact of Kickstarter activity on establishment entry in industries that vary in their reliance on startup capital, in a "smoking gun" approach to identification.

To introduce industry variation in our analysis, we expand our data at the county-industry-year level, which allows us to interact the Kickstarter variable with our industry-level variable. We rely on the amount of capital needed to start a business as these investment requirements affect how much a given industry depends on financing alternatives (such as Kickstarter). Following Hurst and Lusardi

[18] The counties with highest Kickstarter activity in our sample in descending order are Los Angeles County (CA), New York County (NY), Kings County (NY), Cook County (IL), San Francisco County (CA), King County (WA), Multnomah County (OR), Suffolk County (MA), etc.

(2004) and Adelino et al. (2015), the idea is that the entry of new establishments should be more or less responsive to changes in the availability of financing depending on the industry's startup capital requirements. The "innate" level of capital required to start a business in some industries (e.g., in software-based services) as compared to others (e.g., in wholesale trade) is what makes for an exogenous measure. In the presence of financing constraints, crowdfunding should matter less for starting a business that requires a large initial capital investment than for a business that requires a small amount of startup capital.

To test whether the availability of crowdfunding relaxes financing constraints for entrepreneurs, mainly in industries that require small amount of startup capital, we estimate regression models of the type:

$$Entry_{c,i,t+1} = \zeta Kickstarter\ projects_{c,t} \times Startup\ capital_i + \theta X_{c,t} \times Startup\ capital_i + \phi_{c,i} + \tau_{c,t} + \eta_{i,t} + \varepsilon_{c,i,t}, \quad (2)$$

in which $Entry_{c,i,t+1}$ denotes the natural logarithm of establishment entry in county *c* in industry *i* in year *t+1*. As before, $Kickstarter\ projects_{c,t}$, is the natural logarithm of the number of Kickstarter projects in county *c* in year *t*. $Startup\ capital_i$ captures the industry's requirement in startup capital (see Internet Appendix for detailed information and statistics about this variable). The specification contains our set of controls, $X_{c,t}$, interacted with $Startup\ capital_i$. We control for these interactions to address the possibility that other external sources of funding (such as VC funding and bank credit) could differentially affect industries with different starting capital requirements. The specification also includes county-industry fixed effects ($\phi_{c,i}$) to control for county-specific industry characteristics, county-year fixed effects ($\tau_{c,t}$) to control for time-varying county shocks, and industry-year fixed effects ($\eta_{i,t}$) to control for time-varying industry shocks. Because $Kickstarter\ projects_{c,t}$ varies at the county-year level, its effect is absorbed by the county-year fixed effects. Similarly, the industry-year fixed effects absorb the effect of the $Startup\ capital_i$ variable. $\varepsilon_{c,i,t}$ denotes the error term.

The coefficient of interest, ζ, is identified from the within-county, cross-industry variation in startup capital. It estimates the effect of Kickstarter activity on entry in industries with high startup capital requirements in a county (for a given amount of Kickstarter activity) relative to industries with low startup capital requirements in the same county. If the availability of crowdfunding relaxes financing constraints in industries with low startup capital requirement, we expect $\zeta<0$.

We test this hypothesis in Table 7. In column 1, we first estimate a version of Equation (2) without interacting the Kickstarter variable with the industry-level variable to obtain a baseline estimate across industries. The coefficient on Kickstarter activity enters positively (0.011) and is statistically significant at the 1-percent level (*s.e.*=0.002). This industry-level result confirms that Kickstarter positively affects establishment entry within counties across industries. In the next columns, we further exploit the variation across industries. In columns 2 and 3, we first segment industries (below/above the median) by the amount of capital needed to start a business. In both columns, the coefficient on Kickstarter activity is positive and statistically significant at the 1- and 5-percent levels, respectively. As expected, the estimate is larger in industries in which the starting capital required is below the median (0.015 versus 0.006). To further tighten identification, in column 4, we estimate Equation (2) interacting the continuous variable startup capital (expressed in natural logarithm) with the Kickstarter variable and also adding the full set of interacted fixed effects. The results confirm the more pronounced relation between Kickstarter and establishment entry in industries in which relatively less startup capital is needed. The estimate on the interaction ζ is negative (-0.008; *s.e.*=0.002) and statistically significant at the 1-percent level. To illustrate the economic effect of the interaction of Kickstarter activity and startup capital, consider two industries: one at the 75th percentile of startup capital and one at the 25th percentile. The logarithmic difference in startup capital between the two industries is 1.05 (= ln(347,874 / 121,601)). A doubling in Kickstarter activity increases entry in the low-startup-capital industry by 0.8 percent (= 0.008 × 1.05) more than in the high-startup-capital industry. This difference represents about 76 percent of the baseline effect of Kickstarter activity on entry estimated in column 1 (0.011). Standard errors in column 4 are clustered (as before) at the county level to account for the within-county correlation of Kickstarter activity over time. In column 5, we depart from this assumption and use two-way clustered standard errors at the county-industry and county-year levels, which allows us to account for the within county-industry correlation over time and the within county-year correlation across industries. As can be seen, our results are robust to this alternative two-way clustering of standard errors. We also note that the inclusion of dense set of fixed effects across columns does not affect our estimates in a statistically or economically meaningful way, despite increasing the R-squared. The stability of the coefficients in light of the increase in R-squared suggests that the effect of crowdfunding activity on establishment entry is orthogonal to (un)observable county and industry factors, reducing potential concerns about omitted variable bias (Altonji et al., 2005; Oster, 2019).

These industry-level results indicate that Kickstarter activity has larger effect on establishment entry in industries in which businesses need comparatively less startup capital. More importantly, identifying a differential relation between Kickstarter activity and establishment entry across industries

helps us mitigate potential endogeneity concerns that arise in the analysis at the county level we documented previously.

4.2. Rule change removing mandatory campaign vetting

We further address endogeneity concerns by exploiting an exogenous change in the quality and quantity of projects listed on Kickstarter. On June 3, 2014, Kickstarter changed its rules to allow individuals to launch campaigns without being subject to manual evaluation, previously mandatory for all campaigns. This rule change, called "Launch Now", effectively allowed any individual to post a project on Kickstarter.[19] "Launch Now" provides us with a natural quasi-experiment to test our hypothesis that the augmented availability of reward-based crowdfunding is associated with more entrepreneurship. Our quasi-experiment is similar to the approach used in Lin and Pursiainen (2021; 2022).

The results are shown in Table 8. We first test in Panel A whether the rule change removing mandatory campaign vetting affects the quantity and quality of projects admitted to the platform. We perform the regression analysis at the county level around the rule change, including a sample period from 4 quarters before the rule change to 4 quarters after it. The use of higher data frequency aims to better pin down the effect of the June 2014 new rule on Kickstarter projects. In odd-numbered columns, the indicator variable $Post\ change_t$ takes the value of one for the four quarters after June 2014 (the rule change), and a zero value otherwise. We include the same set of controls as before and county fixed effects. To make sure our results are indeed driven by the rule change and not a time trend, we report in even-numbered columns placebo tests of the same form but moving the timing of the rule change backward by one year (that is, June 2013). From column 1, we can see that the rule change leads to a very significant increase in the number of campaigns listed on Kickstarter (0.147; *s.e.*=0.005). Economically, the rule change corresponds to an expected increase in the quarterly number of campaigns of 15.8 percent ($e^{0.147}$). In column 2, we find no significant change in the number of campaigns for the placebo test. Since the rule change reduces the cost of posting a project on the Kickstarter platform, it should lead to more low-quality projects. In the next columns, we examine separately the effect of the rule change on successfully funded campaigns and unsuccessfully funded campaigns (that is, the ones most likely of lower quality. Columns 3 and 5 clearly show that the increase in the number of campaigns documented in column 1 is primarily due to an increase of projects for which the Kickstarter campaign eventually fails, consistent with the idea that these projects are of lower quality (Lin and Pursiainen, 2021). We also find no significant results for the

[19] For more information about the "Launch Now" rule, see: https://www.kickstarter.com/blog/introducing-launch-now-and-simplified-rules-0 (last accessed: January 2024).

placebo tests reported in columns 4 and 6. These results in Panel A suggest that the rule change can be interpreted as an exogenous increase in the number of projects on the platform.

Then, in Panel B, we analyze entrepreneurship before and after the rule change, using startup employment as dependent variable. We focus here on startup employment because this variable is available from QWI on a quarterly basis unlike new establishment entry from BDS, which is only available on a yearly basis. To capture the effect of the number of Kickstarter projects on startup employment following the rule change, we use a version of Equation (1) including an interaction term between $Post\ change_t$ and $Kickstarter\ projects_{c,t}$.[20] The sample comprises 8 quarters surrounding the rule change, in which the indicator variable $Post\ change_t$ takes the value of one for the four quarters after the rule change, and a zero value before. In column 1, the coefficient on the interaction term enters positively (0.012) and is statistically significant at the 1-percent level (*s.e.*=0.004), meaning that Kickstarter activity is associated with a significant increase in startup employment after the rule change. Economically, a doubling of the number of projects listed on Kickstarter leads to approximately 1 percent more startup employees on average in the quarter following the rule change ($e^{0.012 \times \ln\left(\frac{[100+100]}{100}\right)}$). In the next columns, we further explore the effect of (un)successful Kickstarter projects. Again, we find a positive and significant effect on startup employment. In terms of economic magnitude, the coefficient on the interaction term is slightly larger in column 3 (0.014) for successful projects than in column 5 (0.012) for failed projects. These results are remarkable because they highlight the importance of reward-based crowdfunding in starting a business, whether Kickstarter campaigns were successful or not. In columns 4 and 6, there are no significant changes in the effect of Kickstarter activity in these placebo tests, supporting a causal interpretation of the rule change.

In Figure 6, we complement this analysis by expanding the time horizon surrounding the rule change. We plot the event study coefficients and 95 percent confidence intervals from the quarterly-level version of Equation (1). We interact our $Kickstarter\ projects_{c,t}$ variable with an indicator variable $Rule\ change_t^h$ that is *h* periods from Kickstarter's rule change. As before, each period encompasses four quarters, that is, the year *t* indicator variable equals *h* for observations in the four quarters relative to June 2014. As can be observed, there are no visible differences in the periods prior to the rule change. However, an increase is evident in the years subsequent to the rule change, corroborating the findings of Table 8.

[20] Quarter (or year) fixed effects cannot be included as they would sweep away the interaction term of interest.

Overall, these quasi-experimental results based on the Kickstarter rule change provide additional support for our main hypothesis that Kickstarter leads to entrepreneurship, as proxied by the number of startup employees.

4.3. Socio-demographic diversity of startup employees

So far, we have established that reward-based activity is positively and significantly associated with entrepreneurship. The promise of crowdfunding has long been to broaden access to finance by lifting geographic frictions but also socio-demographic barriers inherent to the funding of entrepreneurial efforts (Mollick and Robb, 2016).[21] To our knowledge, the "socio-demographic" channel has not been explored in the literature. In this subsection, we evaluate to what extent this is a channel through which reward-based crowdfunding operates to spur startup employment.

Kickstarter has the potential to democratize entrepreneurship by reducing socio-demographic barriers and, thereby, providing a tool for underrepresented entrepreneurs to participate in capital markets. Several studies have documented both gender (Coleman and Robb, 2009; Ewens and Townsend, 2019) and racial and ethnic biases (Munnell et al., 1996; Fairlie et al., 2020) in the access to outside capital. However, these biases are likely to be less severe in reward-based crowdfunding because the capital raising process is by design cheaper, more open, and accessible for entrepreneurs as compared to other funding sources (banks, angels, venture capitalists). We test whether groups that historically have been underserved in capital markets (such as women and minority entrepreneurs) benefit relatively more from outside capital available via Kickstarter.

Table 9 shows the relation between Kickstarter activity and the socio-demographic characteristics of startup employees (that is, employees of businesses of age zero to one). We estimate Equation (1) at the quarterly level using several proxy variables capturing socio-demographic diversity of entrepreneurs as dependent variable.[22] All columns consistently reveal a positive and significant effect of Kickstarter activity at the quarterly level on the share of startup employees belonging to underserved groups, with respect to their gender, race, ethnicity, and education. The effects are economically meaningful, suggesting that all these groups get increasing access to entrepreneurship. More specifically, in column 1, we focus on female entrepreneurs and obtain an estimate for β of 0.222, statistically significant at the 1-percent level (*s.e.*=0.080). This estimate indicates that a doubling

[21] The online nature of crowdfunding implies that entrepreneurs seeking funding on Kickstarter do not need to be located closely. Prior work in fact shows that crowdfunding eliminates many distance-related frictions (Mollick, 2014; Agrawal et al., 2015; Vulkan et al., 2016) and is more broadly distributed than VC and angel funding in terms of geography (Mollick, 2014; Sorenson et al., 2016; Yu et al., 2017; Stevenson et al., 2019). Consistent with this premise, we have illustrated in Figure 3 the large geographic reach of Kickstarter in our sample.

[22] We obtain similar results if we use the fourth quarter values from QWI.

of the number of Kickstarter projects in a quarter leads to more than 0.15 percentage points increase in the share of female employees in startups (= 0.222 × ln([100+100]/100)), relative to a sample mean of 50.3 percent. In column 2, the estimate of β is positive and statistically significant at the 1-percent level (0.366; *s.e.*=0.043). Economically, this estimate implies that a doubling of Kickstarter quarterly activity is associated with more than 0.25 percentage points increase in the share of non-white employees in startups (= 0.366 × ln([100+100]/100)), as compared to sample mean of 14.5 percent).[23] In column 3, we find a similar trend with respect to the ethnicity of startup employees (β is 0.104 with a *s.e.* of 0.035). Last, in column 4, we observe that Kickstarter activity also significantly affects the share of startup employees with respect to their education. The estimate of β is 0.337 (*s.e.*=0.029), suggesting that a doubling in Kickstarter quarterly activity increases the share of startup employees without a bachelor's degree by 0.23 percentage points (= 0.337 × ln([100+100]/100)) relative to the sample mean of 85.5 percent. The remarkable economic significance of these results indicates that reducing socio-demographic disparities is a key channel via which reward-based crowdfunding drives startup employment. In that sense, we argue that reward-based crowdfunding promotes the democratization of entrepreneurship.

5. Conclusion

Reward-based crowdfunding emerged in the United States with the inception of Kickstarter in 2009, which rapidly grew as the predominant reward-based platform worldwide. The aim of reward-based crowdfunding platforms like Kickstarter is to tap into online communities to fund new ideas and projects (not to invest in firms). Therefore, it is not obvious whether and how Kickstarter projects convert into actual businesses. In this paper, we examine the extent to which ideas and projects launched on Kickstarter spur entrepreneurship. We find that the rise of Kickstarter over the past decade fostered the creation and early development of small businesses in US counties. Interestingly, all projects (both successful and failed) help stimulate entrepreneurship, highlighting the informational value of reward-based crowdfunding campaigns for would-be entrepreneurs. We present first systematic evidence that supporting women and minority entrepreneurs (groups traditionally facing more difficulties in obtaining funding) is an important channel behind the effect of Kickstarter on entrepreneurship. Overall, our findings lend support for various policy initiatives, such as the JOBS Act, that aim to stimulate entrepreneurship by encouraging the development of crowdfunding as an alternative source of early-stage funding in a broad range of industries, from the arts to technology.

[23] We probe the robustness of this finding by additionally exploiting differences in regional characteristics. In the Internet Appendix, we show that Kickstarter activity is associated with increased startup employment in regions with relatively larger non-white population (that is, regions usually underserved by traditional early-stage sources of funding).

References

Adelino, M., Schoar, A., & Severino, F. (2015). House prices, collateral, and self-employment. *Journal of Financial Economics*, 117(2), 288-306.

Adelino, M., Ma, S., & Robinson, D. (2017). Firm age, investment opportunities, and job creation. *Journal of Finance*, *72*(3), 999-1038.

Ahnert, T., Doerr, S., Pierri, N., & Timmer, Y. (2021). Does IT help startups? Information Technology in Banking and Entrepreneurship. Working Paper.

Agrawal, A., Catalini, C., & Goldfarb, A. (2014). Some simple economics of crowdfunding. *Innovation Policy and the Economy*, 14(1), 63-97.

Agrawal, A., Catalini, C., & Goldfarb, A. (2015). Crowdfunding: Geography, social networks, and the timing of investment decisions. *Journal of Economics & Management Strategy*, 24(2), 253-274.

Agrawal, A., Catalini, C., Goldfarb, A., & Luo, H. (2018). Slack time and innovation. *Organization Science*, 29(6), 1056-1073.

Akcigit, U., Dinlersoz, E., Greenwood, J., & Penciakova, V. (2022). Synergizing ventures. *Journal of Economic Dynamics and Control*, 104427.

Altonji, J. G., Elder, T. E., & Taber, C. R. (2005). Selection on observed and unobserved variables: Assessing the effectiveness of Catholic schools. *Journal of Political Economy*, 113(1), 151-184.

Åstebro, T., & Tåg, J. (2017). Gross, net, and new job creation by entrepreneurs. *Journal of Business Venturing Insights*, 8, 64-70.

Bayard, K., Dinlersoz, E., Dunne, T., Haltiwanger, J., Miranda, J., & Stevens, J. (2018). Early-stage business formation: An analysis of applications for employer identification numbers. Working Paper.

Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585-609.

Black, S. E., & Strahan, P. E. (2002). Entrepreneurship and bank credit availability. *Journal of Finance*, *57*(6), 2807-2833.

Braggion, F., Dwarkasing, M., & Ongena, S. (2021). Household inequality, entrepreneurial dynamism, and corporate financing. *Review of Financial Studies*, *34*(5), 2448-2507.

Cetorelli, N., & Strahan, P. E. (2006). Finance as a barrier to entry: Bank competition and industry structure in local US markets. *Journal of Finance*, *61*(1), 437-461.

Chemla, G., & Tinn, K. (2020). Learning through crowdfunding. *Management Science*, 66(5), 1783-1801.

Coleman, S., & Robb, A. (2009). A comparison of new firm financing by gender: evidence from the Kauffman Firm Survey data. *Small Business Economics*, 33(4), 397-411.

Cornelius, P. B., & Gokpinar, B. (2020). The role of customer investor involvement in crowdfunding success. *Management Science*, 66(1), 452-472.

Corradin, S., & Popov, A. (2015). House prices, home equity borrowing, and entrepreneurship. *Review of Financial Studies*, 28(8), 2399-2428.

Cosh, A., Cumming, D., & Hughes, A. (2009). Outside entrepreneurial capital. *Economic Journal*, 119(540), 1494-1533.

Cumming, D. J., Farag, H., Johan, S., & McGowan, D. (2022). The digital credit divide: Marketplace lending and entrepreneurship. *Journal of Financial and Quantitative Analysis,* forthcoming.

Cumming, D. J., Johan, S., & Reardon, R. (2021). Governance and success in US equity crowdfunding. Working Paper.

Da Rin, M., & Hellmann, T. (2020). *Fundamentals of Entrepreneurial Finance.* Oxford University Press.

Decker, R., Haltiwanger, J., Jarmin, R., & Miranda, J. (2014). The role of entrepreneurship in US job creation and economic dynamism. *Journal of Economic Perspectives*, 28(3), 3-24.

Denes, M. R., Howell, S. T., Mezzanotti, F., Wang, X., & Xu, T. (2023). Investor tax credits and entrepreneurship: Evidence from US states, *Journal of Finance*, forthcoming.

Doerr, S. (2021). Stress tests, entrepreneurship, and innovation. *Review of Finance*, 25(5), 1609-1637.

Ellman, M., & Hurkens, S. (2019). Optimal crowdfunding design. *Journal of Economic Theory*, 184, 104939.

Ewens, M., & Townsend, R. R. (2020). Are early stage investors biased against women? *Journal of Financial Economics*, 135(3), 653-677.

Fairlie, R., Robb, A., & Robinson, D. T. (2022). Black and white: Access to capital among minority-owned start-ups. *Management Science*, 68(4), 2377-2400.

Franke, N., Gruber, M., Harhoff, D., & Henkel, J. (2006). What you are is what you like—similarity biases in venture capitalists' evaluations of start-up teams. *Journal of Business Venturing*, 21(6), 802-826.

Gafni, H., Marom, D., Robb, A., & Sade, O. (2021). Gender dynamics in crowdfunding (Kickstarter): Evidence on entrepreneurs, backers, and taste-based discrimination. *Review of Finance*, 25(2), 235-274.

Gompers, P., & Lerner, J. (2001). The venture capital revolution. *Journal of Economic Perspectives*, 15(2), 145-168.

Guzman, J., & Stern, S. (2020). The state of American entrepreneurship: New estimates of the quantity and quality of entrepreneurship for 32 US States, 1988–2014. *American Economic Journal: Economic Policy*, 12(4), 212-43.

Hurst, E., & Lusardi, A. (2004). Liquidity constraints, household wealth, and entrepreneurship. *Journal of Political Economy*, 112(2), 319-347.

Hurst, E., & Pugsley, B. W. (2011). What do small businesses do? *Brookings Papers on Economic Activity*, 2, 73-118.

Jagtiani, J., & Lemieux, C. (2018). Do FinTech lenders penetrate areas that are underserved by traditional banks? *Journal of Economics and Business*, 100, 43-54.

Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. *American Economic Review*, 95(1), 161-182.

Kerr, W. R., & Nanda, R. (2009). Democratizing entry: Banking deregulations, financing constraints, and entrepreneurship. *Journal of Financial Economics*, 94(1), 124-149.

Kumar, P., Langberg, N., & Zvilichovsky, D. (2020). Crowdfunding, financing constraints, and real effects. *Management Science*, 66(8), 3561-3580.

Lin, T. C., & Pursiainen, V. (2021). The round number heuristic and entrepreneur crowdfunding performance. *Journal of Corporate Finance*, 68, 101894.

Lin, T. C., & Pursiainen, V. (2022). Regional social capital and moral hazard in crowdfunding. *Journal of Business Venturing*, 37(4), 106224.

Lindsey, L. A., & Stein, L. C. (2020). Angels, entrepreneurship, and employment dynamics: Evidence from investor accreditation rules. Working Paper.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1-16.

Mollick, E. (2018). Crowdfunding as a font of entrepreneurship: Outcomes of reward-based crowdfunding. In *The Economics of Crowdfunding* (pp. 133-150). Palgrave Macmillan, Cham.

Mollick, E. R., & Kuppuswamy, V. (2014). After the campaign: Outcomes of crowdfunding. UNC Kenan-Flagler Research Paper No. 2376997.

Mollick, E., & Nanda, R. (2016). Wisdom or madness? Comparing crowds with expert evaluation in funding the arts. *Management Science*, 62(6), 1533-1553.

Mollick, E., & Robb, A. (2016). Democratizing innovation and capital access: The role of crowdfunding. *California Management Review*, 58(2), 72-87.

Morse, A. (2015). Peer-to-peer crowdfunding: Information and the potential for disruption in consumer lending. *Annual Review of Financial Economics*, 7, 463-482.

Munnell, A. H., Tootell, G. M., Browne, L. E., & McEneaney, J. (1996). Mortgage lending in Boston: Interpreting HMDA data. *American Economic Review*, 86(1), 25-53.

Oster, E. (2019). Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2), 187-204.

Popov, A. (2014). Venture capital and industry structure: Evidence from local US markets. *Review of Finance*, 18(3), 1059-1096.

Popov, A., & Roosenboom, P. (2013). Venture capital and new business creation. *Journal of Banking & Finance*, *37*(12), 4695-4710.

Kim, K., & Hann, I. H. (2019). Crowdfunding and the democratization of access to capital—An illusion? Evidence from housing prices. *Information Systems Research*, 30(1), 276-290.

Robb, A. M., & Robinson, D. T. (2014). The capital structure decisions of new firms. *Review of Financial Studies*, 27(1), 153-179.

Samila, S., & Sorenson, O. (2011). Venture capital, entrepreneurship, and economic growth. *Review of Economics and Statistics*, 93(1), 338-349.

Schnitzer, M., & Watzinger, M. (2022). Measuring the Spillovers of Venture Capital. *Review of Economics and Statistics*, 104(2), 276-292.

Schoar, A. (2010). The divide between subsistence and transformational entrepreneurship. *Innovation Policy and the Economy*, 10(1), 57-81.

Sorenson, O., Assenova, V., Li, G. C., Boada, J., & Fleming, L. (2016). Expand innovation finance via crowdfunding. *Science*, 354(6319), 1526-1528.

Stevenson, R. M., Kuratko, D. F., & Eutsler, J. (2019). Unleashing main street entrepreneurship: Crowdfunding, venture capital, and the democratization of new venture investments. *Small Business Economics*, 52(2), 375-393.

Stewart, S. A., & Hoell, R. C. (2016). Hire someone like me, or hire someone I need: Entrepreneur identity and early-stage hiring in small firms. *Journal of Small Business & Entrepreneurship*, *28*(3), 187-201.

Strausz, R. (2017). A theory of crowdfunding: A mechanism design approach with demand uncertainty and moral hazard. *American Economic Review*, 107(6), 1430-1476.

Viotto Da Cruz, J. (2018). Beyond financing: crowdfunding as an informational mechanism. *Journal of Business Venturing*, 33(3), 371-393.

Vulkan, N., Åstebro, T., & Sierra, M. F. (2016). Equity crowdfunding: A new phenomena. *Journal of Business Venturing Insights*, 5, 37-49.

Younkin, P., & Kuppuswamy, V. (2018). The colorblind crowd? Founder race and performance in crowdfunding. *Management Science*, 64(7), 3269-3287.

Yu, S., Johnson, S., Lai, C., Cricelli, A., & Fleming, L. (2017). Crowdfunding and regional entrepreneurial investment: an application of the CrowdBerkeley database. *Research Policy*, 46(10), 1723-1737.

Yu, S., & Fleming, L. (2021). Regional crowdfunding and high tech entrepreneurship. *Research Policy*, 104348.

Ziegler, T., Shneor, R., & Wenzlaff, K. (2021). *The 2nd Global Alternative Finance Market Benchmarking Report.* Cambridge Centre for Alternative Finance.

Appendix

Table A1: Variable names, definitions, and data sources

Variable	Definition	Source
Panel A: Outcome variables		
Establishment entry	The count of establishment entrants in county *c* in year *t*. For brevity, we use the label Establishment entry in referring to the logarithm of establishment entry in the regression tables.	Business Dynamics Statistics (BDS)
Business applications	The number of applications for an Employer Identification Number (EIN) through filings of IRS Form SS-4 in county *c* in year *t*. For brevity, we use the label Business applications in referring to the logarithm of business applications in the regression tables.	Business Formation Statistics (BFS)
Total establishments	The count of establishments in county *c* in year *t*. For brevity, we use the label Total establishments in referring to the logarithm of total establishments in the regression tables.	Business Dynamics Statistics (BDS)
Establishment entry rate	The count of establishment entrants in county *c* in year *t* divided by the average count of employment active establishments in county *c* in year *t* and year *t-1* (expressed in percent).	Business Dynamics Statistics (BDS)
Job creation	The count of all employment gains from expanding and opening establishments in county *c* in year *t*. For brevity, we use the label Job creation in referring to the logarithm of job creation in the regression tables.	Business Dynamics Statistics (BDS)
Average establishment size	The number of workers employed in county *c* in year *t* divided by the total number of establishments in county *c* in year *t*. For brevity, we use the label Average establishment size in referring to the logarithm of average establishment size in the regression tables.	Business Dynamics Statistics (BDS)
Startup employment	The number of startup (i.e., firms of age 0 to 1) employees in county *c* in quarter *q* and year *t*. For brevity, we use the label Startup employment in referring to the logarithm of startup employment in the regression tables.	Quarterly Workforce Indicators (QWI)

(Continued)

Table A1: Variable names, definitions, and data sources *(Continued)*

Variable	Definition	Source
Panel A: Outcome variables		
Female/non-white/Hispanic or Latino startup employees	The ratio of female/non-white/Hispanic or Latino employees in startups (i.e., firms of age 0 to 1) to the total number of employees in startups in county *c* in quarter *q* and year *t* (expressed in percent).	Quarterly Workforce Indicators (QWI)
Startup employees without a Bachelor's degree	The ratio of startup (i.e., firms of age 0 to 1) employees without a Bachelor's degree to the total number of startup employees in county *c* in quarter *q* and year *t* (expressed in percent).	Quarterly Workforce Indicators (QWI)
Panel B: Kickstarter variables		
Kickstarter projects	The number of Kickstarter projects in county *c* (in quarter *q*) in year *t*. For brevity, we use the label Kickstarter projects in referring to the logarithm of Kickstarter projects in the regression tables.	CrowdBerkeley
Successful projects	The number of successful Kickstarter projects in county *c* (in quarter *q*) in year *t*. For brevity, we use the label Successful projects in referring to the logarithm of successful projects in the regression tables.	CrowdBerkeley
Failed projects	The number of failed Kickstarter projects in county *c* (in quarter *q*) in year *t*. For brevity, we use the label Failed projects in referring to the logarithm of failed projects in the regression tables.	CrowdBerkeley
Panel C: Industry variable		
Startup capital	The average amount of capital needed to start a firm in industry *i* (as in Hurst and Lusardi, 2004; and Adelino et al., 2015). For brevity, we use the label Startup capital in referring to the logarithm of startup capital in the regression tables.	2007 Survey of Business Owners (SBO) Public Use Microdata Sample (PUMS)

(Continued)

Table A1: Variable names, definitions, and data sources *(Continued)*

Panel D: Control variables		
VC deals	The number of venture capital deals in county *c* in year *t*. For brevity, we use the label VC deals in referring to the logarithm of VC deals in the regression tables.	ThomsonOne
Total deposits	The total deposits held by bank branches in county *c* in year *t*. For brevity, we use the label Total deposits in referring to the logarithm of total deposits in the regression tables.	Federal Deposit Insurance Corporation (FDIC)
Bank branches	The total number of bank branches in county *c* in year *t*. For brevity, we use the label Bank branches in referring to the logarithm of bank branches in the regression tables.	Federal Deposit Insurance Corporation (FDIC)
Population growth	The year-on-year growth in total population in county *c* in year *t* (expressed in percent).	Census Bureau
House price growth	The year-on-year growth in house prices in county *c* in year *t* (expressed in percent).	Federal Housing Finance Agency (FHFA)
Non-white population	The share of non-white population in county *c* in year *t* (expressed in percent).	Census Bureau
Elderly population	The share of the population of age 65 or older in county *c* in year *t* (expressed in percent).	Census Bureau
Bachelor's degree	The share of the population with at least a Bachelor's degree in county *c* in year *t* (expressed in percent).	Census Bureau
Unemployment rate	The rate of unemployment in count *c* in year *t* (expressed in percent).	Bureau of Labor Statistics (BLS)
Per capita income	The personal income of county *c* in year *t* divided by the resident population of county *c* in year *t*. For brevity, we use the label Per capita income in referring to the logarithm of per capita income in the regression tables.	Bureau of Economic Analysis (BEA)
Equity crowdfunding adoption	An indicator variable equal to one if (intrastate) crowdfunding (de)regulation allowed businesses to raise capital from non-accredited investors in state *s* in year *t,* and equal to zero otherwise.	

Table 1: Descriptive statistics

This table presents summary statistics for the variables used in the analysis (n=3,142; t=10). Table A1 summarizes variable definitions and sources.

	Obs.	Mean	Std. Dev.	Min.	Median	Max.
Panel A: Outcome variables						
Establishment entry	30,825	214.3	820.4	0	40	27,401
Establishment entry (new firms)	30,076	138.3	551.4	0	25	19,723
Establishment entry (existing firms)	29,916	81.7	283.8	0	17	8,616
Business applications	31,406	881.3	3,664.5	0	140	126,893
Total establishments	31,402	2,187.3	7,384.3	0	493.5	239,858
Establishment entry rate	30,818	8.4	2.7	0	8.1	43.5
Job creation	31,402	4,896.2	19,500.0	0	728	611,037
Average establishment size	31,393	13.4	5.0	1.6	12.9	100.2
Average establishment size (1 to 10 year-old firms)	30,953	7.5	3.4	1.3	7.1	109.0
Average establishment size (10+ year-old firms)	29,839	17.0	6.6	2	16.3	152.5
Startup employment (4th quarter)	30,775	1,345.6	5,717.9	0	218	208,793
Startup employment (quarterly)	120,029	1,370.3	5,778.4	0	228	228,723
Female startup employees (quarterly)	119,119	50.3	11.2	0	50.5	100
Non-white startup employees (quarterly)	119,819	14.5	13.9	0	9.8	100
Hispanic or Latino startup employees (quarterly)	119,869	9.2	12.7	0	4.8	100
Startup employees without a Bachelor's degree (quarterly)	114,422	85.5	4.5	40	86	100

(Continued)

Table 1: Descriptive statistics *(Continued)*

	Obs.	Mean	Std. Dev.	Min.	Median	Max.
Panel B: Kickstarter variables						
Kickstarter projects (annual)	31,420	8.5	70.3	0	0	3,826
Successful projects (annual)	31,420	3.7	35.2	0	0	1,806
Failed projects (annual)	31,420	4.8	36.2	0	0	2,020
Kickstarter projects (quarterly)	122,538	2.2	18.1	0	0	1,070
Successful projects (quarterly)	122,538	0.9	9	0	0	514
Failed projects (quarterly)	122,538	1.2	9.4	0	0	654
Panel C: Control variables						
VC deals	31,420	0.7	9.5	0	0	399
Total deposits (in $1,000)	31,101	3,132	22,494	0	412	1,141,248
Bank branches	31,101	30.3	76.3	1	11	1,811
Population growth	30,887	0.1	1.3	-34.6	0	33.7
House price growth	24,107	0.9	5.1	-31.1	0.9	28.4
Non-white population	31,418	14.8	16.4	0.3	7.8	97.2
Elderly population	31,417	17.4	4.5	3.3	17	57.6
Bachelor's degree	31,410	20.2	9	0	18	80.2
Unemployment rate	31,405	6.8	3.1	1.1	6.2	28.9
Per capita income	30,890	38,894	11,455	14,618	36,761	230,141
Equity crowdfunding adoption	31,420	0.4	0.5	0	0	1

Table 2: The effect of Kickstarter activity on establishment entry: County-level analysis

This table presents panel estimations of the effect of Kickstarter activity on entry in US counties over the 2009-2018 period. The dependent variable is Establishment entry. In columns 5 and 6, we distinguish between the entry of new firms versus new establishments by existing firms. Table A1 summarizes variable definitions and sources. The sample includes all counties and county equivalents in the 50 States and the District of Columbia as defined by the state governments in 2018, except county-year cells for which data are not available. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	All firms				New firms	Existing firms
	(1)	(2)	(3)	(4)	(5)	(6)
Kickstarter projects	0.040***	0.031***	0.015***		0.017***	0.008***
	(0.002)	(0.002)	(0.002)		(0.003)	(0.003)
Successful projects				0.010***		
				(0.002)		
Failed projects				0.010***		
				(0.002)		
VC deals		0.026***	0.017***	0.016***	0.022***	0.007
		(0.006)	(0.005)	(0.005)	(0.007)	(0.005)
Total deposits		0.291***	0.105***	0.104***	0.122***	0.087***
		(0.023)	(0.017)	(0.017)	(0.029)	(0.020)
Bank branches		0.777***	-0.061***	-0.061***	-0.090***	-0.004
		(0.027)	(0.024)	(0.024)	(0.032)	(0.035)
Population growth		0.023***	0.011***	0.011***	0.020***	-0.001
		(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
County FE			Yes	Yes	Yes	Yes
Year FE			Yes	Yes	Yes	Yes
Observations	30,825	30,105	30,105	30,105	29,362	29,254
Counties	3,141	3,066	3,066	3,066	3,066	3,064
R-squared	0.560	0.897	0.784	0.779	0.772	0.679
Clustered SE	County	County	County	County	County	County

Table 3: Alternative measures of entrepreneurship

This table documents the effect of Kickstarter activity on entrepreneurship in US counties over the 2009-2018 period using alternative variable definitions. The dependent variables are indicated in column headers. All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. The sample includes all counties and county equivalents in the 50 States and the District of Columbia as defined by the state governments in 2018, except county-year cells for which data are not available. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Business applications	Total establishments	Establishment entry rate	Establishment entry (per capita)	Job creation	Startup employment
	(1)	(2)	(3)	(4)	(5)	(6)
Kickstarter projects	0.014***	0.010***	0.050***		0.025***	0.010**
	(0.002)	(0.001)	(0.018)		(0.003)	(0.004)
Kickstarter projects (per capita)				0.004*		
				(0.002)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	30,588	30,588	30,105	30,105	30,588	30,072
Counties	3,066	3,066	3,066	3,066	3,066	3,063
R-squared	0.735	0.924	0.005	0.043	0.712	0.843
Clustered SE	County	County	County	County	County	County

Table 4: Alternative controls, sample, and methods

This table documents the effect of Kickstarter activity on entrepreneurship in US counties over the 2009-2018 period using alternative controls, sample, and methods. The dependent variable is Establishment entry. Column 1 includes House price growth as control variable. Column 2 includes an additional set of control variables that capture socio-demographic differences across counties: Non-white population, Elderly population, Bachelor's degree, Unemployment rate, and Per capita income. Column 3 excludes counties with no Kickstarter activity during the sample period. Column 4 shows a weighted regression by the natural logarithm of population. Column 5 estimates the baseline model using non-overlapping three-year-averages. All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Additional control variables		Excl. counties without KS activity	Regression weighted by population	Three-year averages
	(1)	(2)	(3)	(4)	(5)
Kickstarter projects	0.009***	0.017***	0.015***	0.015***	0.020***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)
House price growth	0.003***				
	(0.000)				
Controls	Yes	Yes	Yes	Yes	Yes
Other socio-demographic controls		Yes			
County FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	23,569	30,105	24,766	30,105	8,850
Counties	2,360	3,066	2,492	3,066	3,024
R-squared	0.841	0.614	0.839	0.985	0.853
Clustered SE	County	County	County	County	County

Table 5: Equity-based crowdfunding deregulation

This table presents panel estimations of the effect of Kickstarter activity on entry in US counties. The dependent variable is Establishment entry. The subsamples used are specified in the column header. Column 1 documents the results of estimating Equation (1) while additionally considering the effect of Equity crowdfunding adoption. In column 2, we restrict our sample to the period from 2009 to 2015 (i.e., the period prior to the introduction of Title III JOBS Act in 2016). In column 3, we again consider the 2009-2015 period, but exclude observations from states that had removed restrictions on equity crowdfunding prior to 2016 (Alabama, Arizona, Colorado, District of Columbia, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, Nebraska, Oregon, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington and Wisconsin). All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	All states All periods	All states 2009-2015	Excl. states with intrastate deregulation 2009-2015
	(1)	(2)	(3)
Kickstarter projects	0.015***	0.013***	0.012***
	(0.002)	(0.002)	(0.003)
Equity crowdfunding adoption	-0.001		
	(0.006)		
Controls	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	30,105	21,091	8,808
Counties	3,066	3,064	1,275
R-squared	0.784	0.775	0.829
Clustered SE	County	County	County

Table 6: The effect of Kickstarter activity on establishment size

This table presents panel estimations of the effect of Kickstarter activity on establishment size in US counties over the 2009-2018 period. The dependent variable is Average establishment size. In columns 4 and 5, we distinguish between the size of relatively young firms versus older firms. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	All firms			1 to 10 year-old firms	10+ year-old firms
	(1)	(2)	(3)	(4)	(5)
Kickstarter projects	0.021***	0.014***	0.004***	0.013***	0.002**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
VC deals		-0.002	-0.002	0.002	0.001
		(0.002)	(0.002)	(0.004)	(0.002)
Total deposits		0.116***	0.020**	0.041	0.033***
		(0.015)	(0.009)	(0.025)	(0.010)
Bank branches		-0.040***	-0.047***	-0.056*	-0.043***
		(0.013)	(0.012)	(0.034)	(0.014)
Population growth		0.006***	0.007***	0.012***	0.007***
		(0.001)	(0.001)	(0.002)	(0.001)
County FE			Yes	Yes	Yes
Year FE			Yes	Yes	Yes
Observations	31,393	30,588	30,588	30,270	29,213
Counties	3,140	3,066	3,066	3,063	3,056
R-squared	0.150	0.357	0.059	0.075	0.055
Clustered SE	County	County	County	County	County

Table 7: The effect of Kickstarter activity on establishment entry: Industry-level analysis

This table presents panel estimations of the effect of Kickstarter activity on entry in US counties across industries over the 2009-2018 period. The dependent variable is Establishment entry and is measured at the county, two-digit NAICS industry level. Column 1 shows the results of the baseline model while additionally including industry fixed effects. Columns 2 and 3 show the coefficients split using the variable Startup capital (above and below the median). Columns 4 and 5 show the coefficients of the interaction between the Kickstarter measure and the industry variable. All specifications include the standard set of (interacted) control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county unless otherwise specified. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	All industries	Startup capital		All industries	
		≤ median	> median		
	(1)	(2)	(3)	(4)	(5)
Kickstarter projects	0.011***	0.015***	0.006**		
	(0.002)	(0.002)	(0.002)		
Kickstarter projects × Startup capital				-0.008***	-0.008***
				(0.002)	(0.002)
(Interacted) controls	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes		
Industry FE	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes		
County × Industry FE				Yes	Yes
County × Year FE				Yes	Yes
Industry × Year FE				Yes	Yes
Observations	365,838	200,707	165,131	364,411	364,411
Counties	3,066	3,066	3,066	3,066	3,066
Industries	19	10	9	19	19
R-squared	0.828	0.852	0.801	0.955	0.955
Clustered SE	County	County	County	County	County × Industry, County × Year

Table 8: The effect of Kickstarter activity on startup employment: Quasi-experimental analysis

This table presents panel estimations of the quarterly effect of Kickstarter on startup employment surrounding Kickstarter's rule change in June 2014, when mandatory campaign vetting was removed, and entrepreneurs were allowed to launch campaigns without prior manual evaluation. The dependent variable in Panel A is Kickstarter projects and is measured at the quarterly level. The dependent variable in Panel B is Startup employment and is measured at the quarterly level. The type of Kickstarter projects (all, successful, or failed) used is specified in the column header. In odd-numbered columns, Post change is a dummy taking the value of one for the four quarters after June 2014 (the rule change), and zero for the four quarters before. In even-numbered columns, Post change is a dummy taking the value of one for the four quarters after June 2013 (the placebo test), and zero for the four quarters before. All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Panel A: Kickstarter projects

	All projects		Successful projects		Failed projects	
	Rule change (Jun 2014)	Placebo test (Jun 2013)	Rule change (Jun 2014)	Placebo test (Jun 2013)	Rule change (Jun 2014)	Placebo test (Jun 2013)
	(1)	(2)	(3)	(4)	(5)	(6)
Post change	0.147***	-0.003	0.018***	0.001	0.165***	-0.000
	(0.005)	(0.004)	(0.003)	(0.003)	(0.005)	(0.004)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,446	24,445	24,446	24,445	24,446	24,445
Counties	3,062	3,063	3,062	3,063	3,062	3,063
R-squared	0.887	0.889	0.881	0.880	0.855	0.856
Clustered SE	County	County	County	County	County	County

Panel B: Startup employment

	All projects		Successful projects		Failed projects	
	Rule change (Jun 2014)	Placebo test (Jun 2013)	Rule change (Jun 2014)	Placebo test (Jun 2013)	Rule change (Jun 2014)	Placebo test (Jun 2013)
	(1)	(2)	(3)	(4)	(5)	(6)
Kickstarter projects × Post change	0.012***	0.003	0.014***	0.002	0.012***	0.004
	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)
Post change	-0.001	0.021***	0.002	0.022***	-0.000	0.021***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
Kickstarter projects	0.001	0.001	-0.003	-0.002	0.003	0.003
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,273	24,261	24,273	24,261	24,273	24,261
Counties	3,048	3,054	3,048	3,054	3,048	3,054
R-squared	0.975	0.974	0.975	0.974	0.975	0.974
Clustered SE	County	County	County	County	County	County

Table 9: The effect of Kickstarter activity on the socio-demographic diversity of startup employment

This table presents panel estimations of the effect of Kickstarter activity on the socio-demographic characteristics of startup employees in US counties over the 2009-2018 period. The dependent variables are indicated in column headers and are measured at the quarterly level. All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. The sample includes all counties and county equivalents in the 50 States and the District of Columbia as defined by the state governments in 2018, except county-year cells for which data are not available. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Female startup employees	Non-white startup employees	Hispanic or Latino startup employees	Startup employees without a bachelor's degree
	(1)	(2)	(3)	(4)
Kickstarter projects (quarterly)	0.222***	0.366***	0.104***	0.337***
	(0.080)	(0.043)	(0.035)	(0.029)
Controls	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Year × Quarter FE	Yes	Yes	Yes	Yes
Observations	116,455	117,136	117,150	111,985
Counties	3,063	3,063	3,063	3,061
R-squared	0.006	0.024	0.015	0.159
Clustered SE	County	County	County	County

Figure 1: Distribution of Kickstarter activity per category

This figure shows the sample distribution of successful Kickstarter projects and volume raised split by main categories: Art, Comics, Crafts, Dance, Design, Fashion, Film & Video, Food, Games, Journalism, Music, Photography, Publishing, Technology, and Theater.

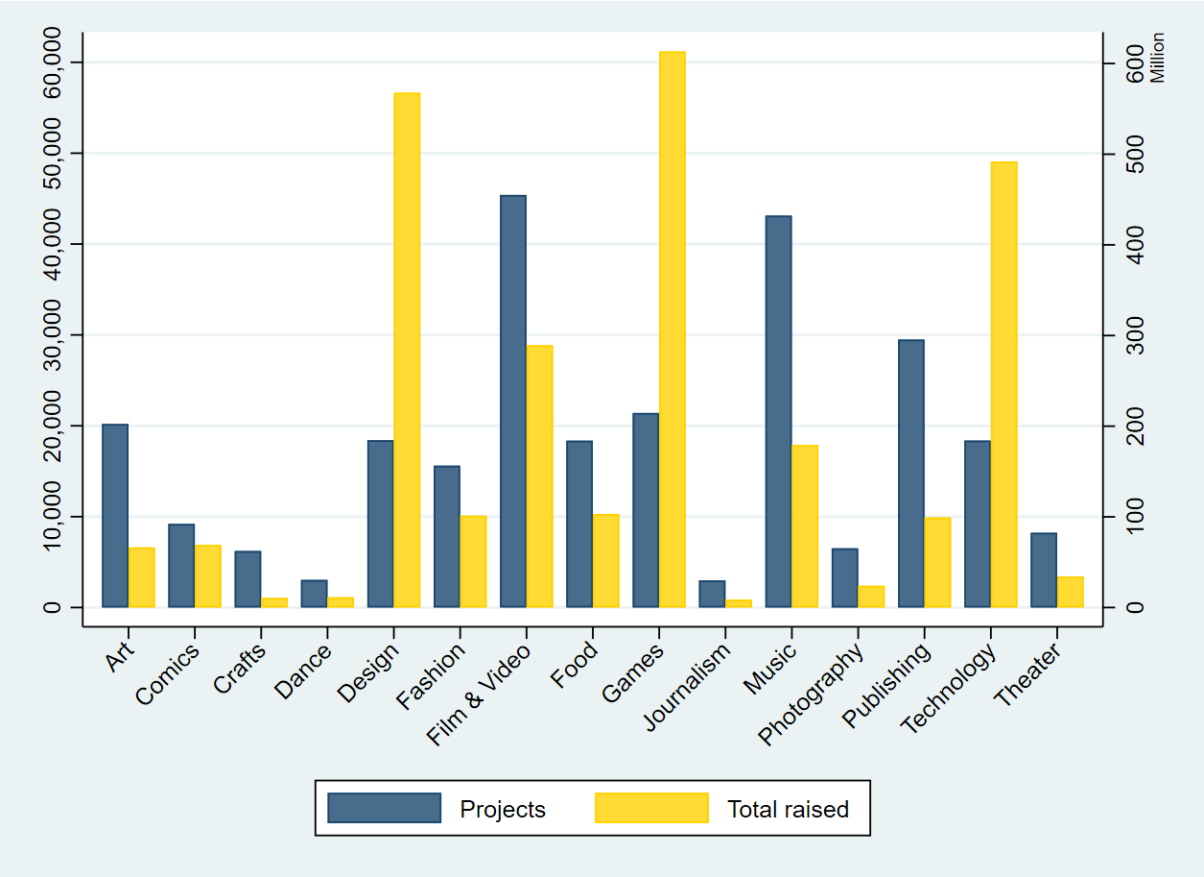


Figure 2: Distribution of Kickstarter projects over time

This figure shows the sample distribution of Kickstarter projects over the 2009-2018 period split in terms of funding outcomes: successfully funded (blue bars) and non-funded projects (red bars).

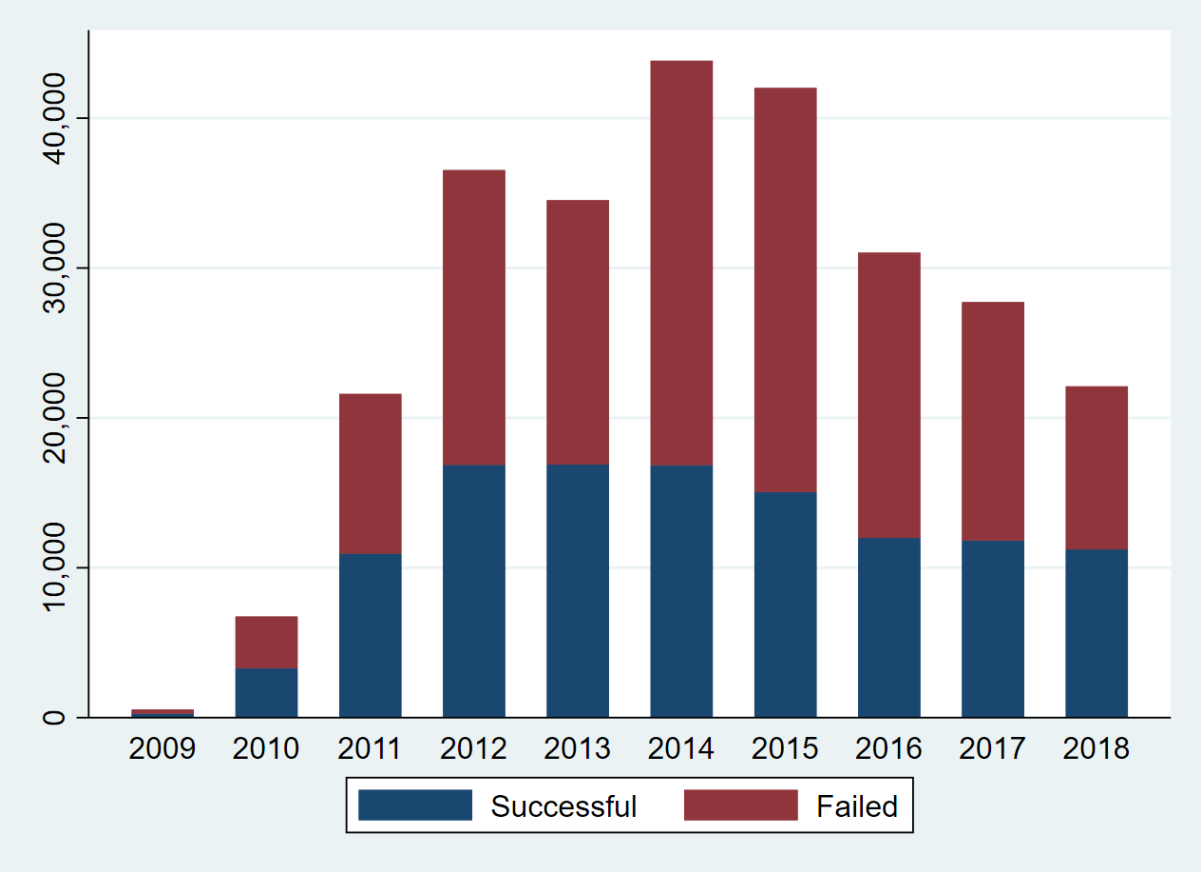


Figure 3: Kickstarter activity in the United States

This figure shows the distribution of all Kickstarter projects in the contiguous United States at the county level aggregated over the 2009-2018 period. Darker blue regions denote higher Kickstarter activity.

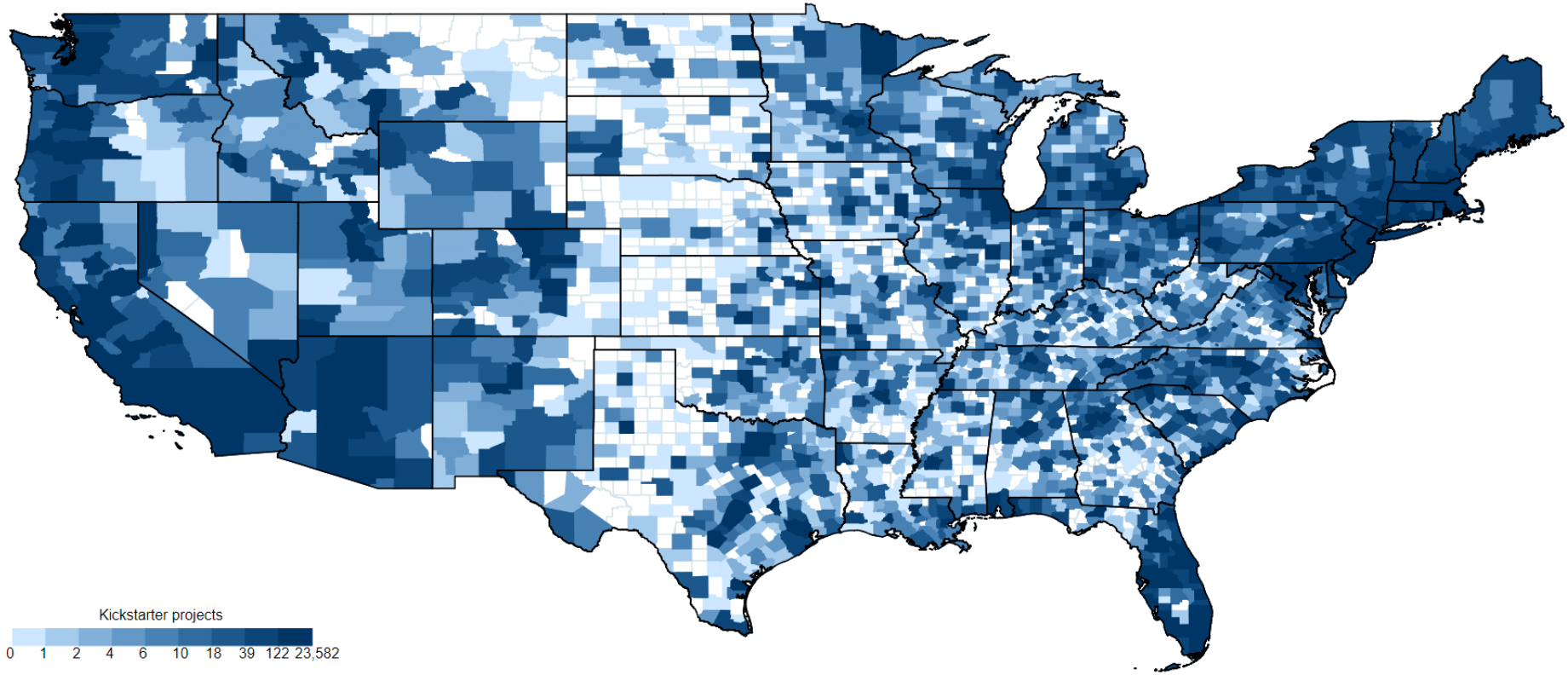


Figure 4: Establishment entry response

This figure shows the dynamic response of establishment entry to Kickstarter activity in a county, estimated using local projections. That is, for each horizon h, we estimate the following model: $Entry_{c,t+h} = \beta^h Kickstarter\ projects_{c,t} + \gamma^{h\prime} X_{c,t} + \phi_c + \tau_t + \varepsilon_{c,t}$. The superscripts or subscripts h are the horizon (a year t). All variables are the same as in Equation (1) and the Greek symbols are parameters to be estimated. The sample covers all counties from 2009-2018. Each point represents the point estimate of the coefficient of $Kickstarter\ projects$ in a specific lead year ("horizon h"). The dashed line represents 95% confidence intervals using standard errors clustered by county.

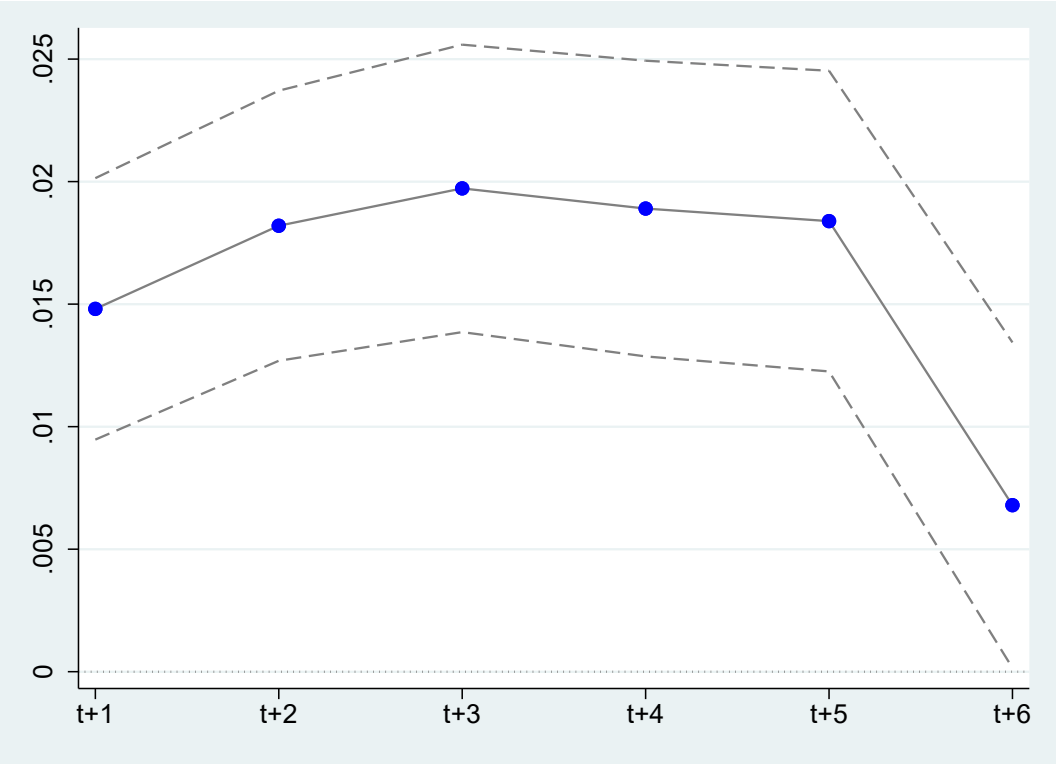
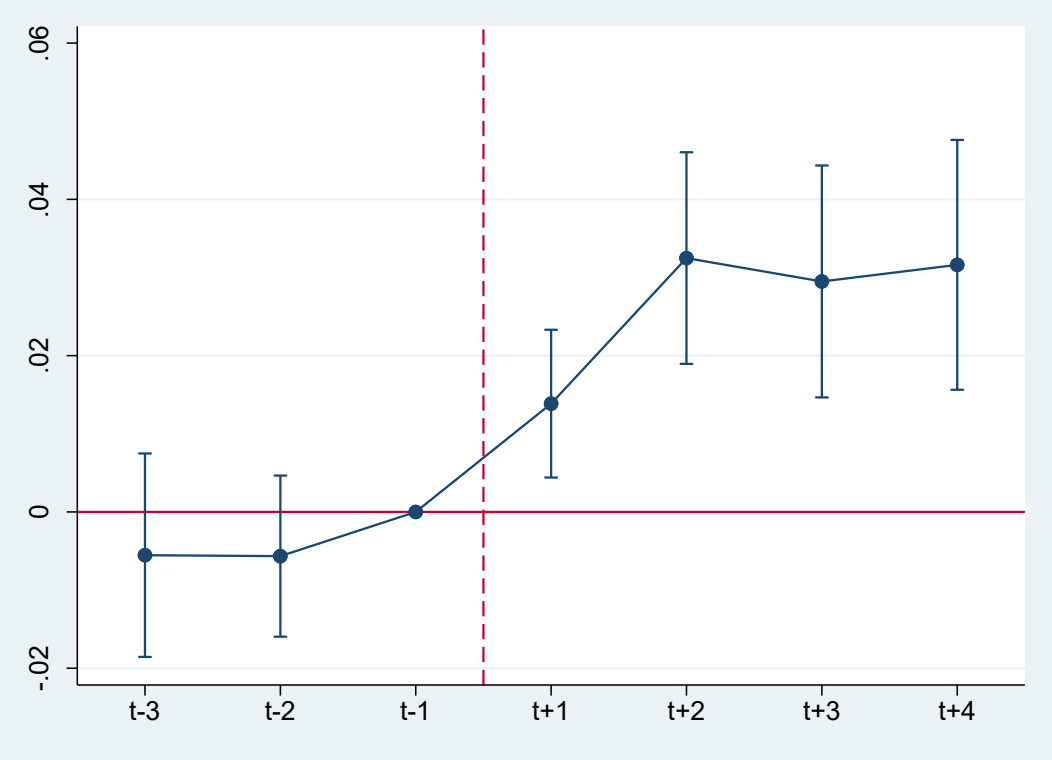


Figure 5: Excluding each state

This figure shows the robustness of the results of the baseline specification including county-level controls and fixed effects to the exclusion of each state. For comparison, the within estimate of β (from column 3 of Table 2) is represented by the vertical red line.

Figure 6: The effect of the Kickstarter rule change on startup employment

This figure plots the event study coefficients and 95 percent confidence intervals from the quarterly level regression surrounding the Kickstarter rule change. The dependent variable is Startup employment. We estimate a version of Equation (1) including an interaction term between $Kickstarter\ projects_{c,t}$ and $Rule\ change_t^h$, where $Rule\ change_t^h$ is an indicator variable that is *h* periods from Kickstarter's rule change, i.e., the year *t* indicator variable equals *h* for observations in the four quarters relative to June 2014 (the dashed line). Observations in the four quarters prior to the rule change under study (*t-1*) are dropped. Standard errors are clustered by county.



Internet Appendix to
"Crowdfunding Entrepreneurship: Evidence from US Counties"

This internet appendix presents additional statistics and results to accompany the paper "Crowdfunding Entrepreneurship: Evidence from US Counties". The content is as follows:

- **Table IA1** reports statistics on the startup capital variable broken down by 2-digit NAICS industry.
- **Table IA2** reports the sample distribution of successful and failed Kickstarter projects over time.
- **Table IA3** reports descriptive statistics on the main dependent variable used in the industry-level analysis.
- **Table IA4** reports estimates of the effect of art- and product-oriented projects on establishment entry.
- **Table IA5** reports estimates of the effect of Kickstarter activity on quarterly startup employment.
- **Table IA6** reports estimates of the effects of Kickstarter activity on startup employment for counties below and above the median level of non-white population.

Table IA1: Detail on average startup capital by 2-digit NAICS industry

This table presents the average startup capital by two-digit NAICS industry used in Table 7. Startup capital is defined as the average amount of capital needed to start a firm in industry *i* (as in Hurst and Lusardi, 2004; and Adelino et al., 2015). The data come from the Survey of Business Owners (SBO) Public Use Microdata Sample (PUMS) using responses to the question about "Amount of start-up or acquisition capital".

Industry	NAICS2	Average startup capital ($)
Agriculture, Forestry, Fishing and Hunting	11	172,422
Mining, Quarrying, and Oil and Gas Extraction	21	352,528
Utilities	22	278,369
Construction	23	113,191
Manufacturing	31	358,808
Wholesale Trade	42	347,874
Retail Trade	44	204,167
Transportation and Warehousing	48	190,502
Information	51	244,828
Finance and Insurance	52	301,761
Real Estate and Rental and Leasing	53	298,783
Professional, Scientific, and Technical Services	54	105,212
Management of Companies and Enterprises	55	990,260
Admin. and Supp. and Waste Mgmt and Rem. Svcs	56	121,601
Educational Services	61	100,658
Health Care and Social Assistance	62	174,319
Arts, Entertainment, and Recreation	71	189,331
Accommodation and Food Services	72	423,887
Other Services (except Public Administration)	81	111,496

Table IA2: Distribution of successful and failed Kickstarter projects over time

This table presents the sample distribution of successful and failed Kickstarter projects over the 2009-2018. Quarterly breakdown is available for the twelve quarters surrounding the Kickstarter rule change in June 2014.

Year		Successful	Failed	Success rate
2009		270	272	49.8%
2010		3,305	3,441	49.0%
2011		10,950	10,651	50.7%
2012		16,865	19,667	46.2%
2013		16,886	17,636	48.9%
	Q1	*3,583*	*3,587*	*50.0%*
	Q2	*4,904*	*4,699*	*51.1%*
	Q3	*4,293*	*4,684*	*47.8%*
	Q4	*4,106*	*4,666*	*46.8%*
2014		16,852	26,978	38.4%
	Q1	*3,444*	*3,807*	*47.5%*
	Q2	*4,327*	*4,858*	*47.1%*
	Q3	*4,637*	*10,426*	*30.8%*
	Q4	*4,444*	*7,887*	*36.0%*
2015		15,052	26,963	35.8%
	Q1	*3,409*	*5,951*	*36.4%*
	Q2	*4,521*	*8,506*	*34.7%*
	Q3	*3,550*	*6,705*	*34.6%*
	Q4	*3,572*	*5,801*	*38.1%*
2016		11,988	19,036	38.6%
2017		11,822	15,903	42.6%
2018		11,225	10,879	50.8%
Total		115,215	151,426	43.2%

Table IA3: Descriptive statistics (n=3,142; i=19; t=10)

This table presents summary statistics for the main dependent variable Establishment entry split in industries above and below the median of the startup capital variable.

	Obs.	Mean	Std. Dev.	Min.	Median	Max.
Establishment entry (all industries)	375,728	17.0	71.1	0	3	4,240
Establishment entry (industries with ≤ P50 startup capital)	205,968	21.4	82.7	0	4	4,240
Establishment entry (industries with > P50 startup capital)	169,760	11.7	53.2	0	0	2,445

Table IA4: The effect of art- and product-oriented projects on establishment entry

This table presents panel estimations of the effect of art- and product-oriented projects on entry in US counties over the 2009-2018 period. The dependent variable is Establishment entry. Table A1 summarizes variable definitions and sources. The sample includes all counties and county equivalents in the 50 States and the District of Columbia as defined by the state governments in 2018, except county-year cells for which data are not available. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	(1)	(2)	(3)
Art-oriented projects	0.016***		0.010***
	(0.002)		(0.002)
Product-oriented projects		0.016***	0.010***
		(0.002)	(0.002)
VC deals	0.017***	0.017***	0.016***
	(0.005)	(0.005)	(0.005)
Total deposits	0.104***	0.105***	0.104***
	(0.017)	(0.017)	(0.017)
Bank branches	-0.062***	-0.063***	-0.061***
	(0.024)	(0.024)	(0.024)
Population growth	0.011***	0.011***	0.011***
	(0.002)	(0.002)	(0.002)
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	30,105	30,105	30,105
Counties	3,066	3,066	3,066
R-squared	0.774	0.774	0.781
Clustered SE	County	County	County

Table IA5: The effect of Kickstarter activity on startup employment

This table presents panel estimations of the effect of Kickstarter activity on quarterly startup employment in US counties over the 2009-2018 period. The dependent variable is Startup employment. Table A1 summarizes variable definitions and sources. The sample includes all counties and county equivalents in the 50 States and the District of Columbia as defined by the state governments in 2018, except county-year cells for which data are not available. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	(1)	(2)	(3)
Kickstarter projects	0.041***	0.025***	0.014***
	(0.003)	(0.004)	(0.003)
VC deals		0.024***	0.019***
		(0.008)	(0.006)
Total deposits		0.483***	0.178***
		(0.038)	(0.033)
Bank branches		0.582***	-0.055
		(0.042)	(0.049)
Population growth		0.036***	0.030***
		(0.004)	(0.004)
County FE			Yes
Year × Quarter FE			Yes
Observations	120,007	117,271	117,271
Counties	3,142	3,063	3,063
R-squared	0.429	0.867	0.824
Clustered SE	County	County	County

Table IA6: The effect of Kickstarter activity on startup employment conditional on regional characteristics

This table presents panel estimations of the effect of Kickstarter activity on startup employment conditional on regional characteristics. The sample is split below and above the median level of non-white population in the year prior to the launch of Kickstarter. All specifications include the standard set of control variables: VC deals, Total deposits, Bank branches, and Population growth. Table A1 summarizes variable definitions and sources. Standard errors are in parenthesis and are clustered by county. *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Non-white population	
	≤ median	> median
	(1)	(2)
Kickstarter projects	-0.004	0.024***
	(0.006)	(0.004)
Controls	Yes	Yes
County FE	Yes	Yes
Year × Quarter FE	Yes	Yes
Observations	59,533	57,738
Counties	1,551	1,512
Within R-squared	0.729	0.830
Clustered SE	County	County