

Execution Report

Title: Crowdfunding Entrepreneurship: Evidence from US Counties

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Full reference: Lambert, Thomas, Ralcheva, Aleksandrina and Roosenboom, Peter "Crowdfunding Entrepreneurship: Evidence from US Counties", Working paper, February 14, 2024.

The structure and contents of this execution report provided by **cascad** for the certification are similar to those recommended by the [AEA Data Editor](#).

1. DATA DESCRIPTION

This study uses CrowdBerkeley data on all Kickstarter projects from its inception in 2009 to 2018 to study the influence of reward-based crowdfunding on entrepreneurship.

For a thorough description of the data, please refer to Section 2.1 of the paper.

2. CODE DESCRIPTION

The verification package contains the following files:

analysis.do
cntycoord.dta
county-industry-year.dta
county-quarter.dta
county-year.dta
county_panel.dta
map.dta
setup.do
stats.dta
stcoord.dta

setup.do installs all necessary Stata packages, while *analysis.do* import the .dta files and generate the Tables and Figures. They are stored in a *Results* folder.

3. VERIFICATION STEPS

The code was downloaded from the **cascad** website on February 12 and run as per readme, using Stata 18 on a computer with 256GB RAM, Intel Xeon Silver 4210R 2.4GHz (40 cores), NVIDIA RTX™ A5000, and Windows 10 OS. We encountered no issues during the verification process.

4. FINDINGS

We reproduced Tables 1-9, IA1-IA6 as well as Figures 1-6 with perfect accuracy.

4.1 TABLE 1: DESCRIPTIVE STATISTICS

Panel A: Outcome variables	N	Mean	sd	min	p50	max
Establishment entry	30,825.0	214.3	820.4	0	40	27,401.0
Establishment entry (new firms)	30,076.0	138.3	551.4	0	25	19,723.0
Establishment entry (existing firms)	29,916.0	81.7	283.8	0	17	8,616.0
Business applications	31,406.0	881.3	3,664.5	0	140	126,893.0
Total establishments	31,402.0	2,187.3	7,384.3	0	493.5	239,858.0
Establishment entry rate	30,818.0	8.4	2.7	0	8.1	43.5
Job creation	31,402.0	4,896.2	19,500.0	0	728	611,037.0
Average establishment size	31,393.0	13.4	5	1.6	12.9	100.2
Average establishment size (1 to 10 year-old firms)	30,953.0	7.5	3.4	1.3	7.1	109
Average establishment size (10+ year-old firms)	29,839.0	17	6.6	2	16.3	152.5
Startup employment (4th quarter)	30,775.0	1,345.6	5,717.9	0	218	208,793.0
Startup employment (quarterly)	120,029.0	1,370.3	5,778.4	0	228	228,723.0
Female startup employees	119,119.0	50.3	11.2	0	50.5	100
Non-white startup employees	119,819.0	14.5	13.9	0	9.8	100
Hispanic or Latino startup employees	119,869.0	9.2	12.7	0	4.8	100
Startup employees without a bachelor's degree	114,422.0	85.5	4.5	40	86	100
Panel B: Kickstarter variables	N	mean	sd	min	p50	max
Kickstarter projects (annual)	31,420.0	8.5	70.3	0	0	3,826.0
Successful projects (annual)	31,420.0	3.7	35.2	0	0	1,806.0
Failed projects (annual)	31,420.0	4.8	36.2	0	0	2,020.0
Kickstarter projects (quarterly)	122,538.0	2.2	18.1	0	0	1,070.0
Successful projects (quarterly)	122,538.0	0.9	9	0	0	514
Failed projects (quarterly)	122,538.0	1.2	9.4	0	0	654
Panel C: Control variables	N	mean	sd	min	p50	max
VC deals	31,420.0	0.7	9.5	0	0	399
Total deposits	31,101.0	3,132.4	22,493.5	0	412	1,141,247.6
Bank branches	31,101.0	30.3	76.3	1	11	1,811.0
Population growth	30,887.0	0.1	1.3	-34.6	0	33.7
House price growth	24,107.0	0.9	5.1	-31.1	0.9	28.4
Non-white population	31,418.0	14.8	16.4	0.3	7.8	97.2
Elderly population	31,417.0	17.4	4.5	3.3	17	57.6
Bachelor's degree	31,410.0	20.2	9	0	18	80.2
Unemployment rate	31,405.0	6.8	3.1	1.1	6.2	28.9
Per capita income	30,890.0	38,894.0	11,454.6	14,618.0	36,761.0	230,141.0
Equity crowdfunding adoption	31,420.0	0.4	0.5	0	0	1

4.2. TABLE 2: THE EFFECT OF KICKSTARTER ACTIVITY ON ESTABLISHMENT ENTRY: COUNTY-LEVEL ANALYSIS

VARIABLES	All firms	All firms	All firms	All firms	New firms	Existing firms
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	-0.02
		-	-	-		
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
Observations	30,825	30,105	30,105	30,105	29,362	29,254
R-squared	0.56	0.897	0.784	0.779	0.772	0.679
Number of county_fips	3,141	3,066	3,066	3,066	3,066	3,064
Clustered SE	County	County	County	County	County	County
County FE			Yes	Yes	Yes	Yes
Year FE			Yes	Yes	Yes	Yes

4.3. TABLE 3: ALTERNATIVE MEASURES OF ENTREPRENEURSHIP

VARIABLES	Business applications	Total establishments	Establishment entry rate	Establishment entry (per capita)	Job creation	Startup employment
Kickstarter projects	0.014*** -0.002	0.010*** -0.001	0.050*** -0.018		0.025*** -0.003	0.010** -0.004
Projects (per capita)				0.004* -0.002		
Observations	30,588	30,588	30,105	30,105	30,588	30,072
Number of county_fips	3,066	3,066	3,066	3,066	3,066	3,063
R-squared	0.735	0.924	0.00479	0.0425	0.712	0.843
Controls	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE	County	County	County	County	County	County

4.4. TABLE 4: ALTERNATIVE CONTROLS, SAMPLE, AND METHODS

VARIABLES	Additional control variables	Additional control variables	Excl. counties without KS activity	Regression weighted by population	Three-year averages
Kickstarter projects	0.009*** -0.002	0.017*** -0.002	0.015*** -0.002	0.015*** -0.002	0.020*** -0.004
House price growth	0.003*** 0				
Observations	23,569	30,105	24,766	30,105	8,850
Number of county_fips	2,360	3,066	2,492	3066	3,024
R-squared	0.841	0.614	0.839	0.985	0.853
Controls	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered SE	County	County	County	County	County

4.5. TABLE 5: EQUITY-BASED CROWDFUNDING DEREGULATION

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

4.6. TABLE 6: THE EFFECT OF KICKSTARTER ACTIVITY ON ESTABLISHMENT SIZE

VARIABLES	All firms	All firms	All firms	1 to 10 year-old firms	10+ year-old firms
Kickstarter projects	0.021*** -0.001	0.014*** -0.001	0.004*** -0.001	0.013*** -0.002	0.002** -0.001
VC deals		-0.002 -0.002	-0.002 -0.002	0.002 -0.004	0.001 -0.002
Total deposits		0.116*** -0.015	0.020** -0.009	0.041 -0.025	0.033*** -0.01
Bank branches		-0.040*** -0.013	-0.047*** -0.012	-0.056* -0.034	-0.043*** -0.014
Population growth		0.006*** -0.001	0.007*** -0.001	0.012*** -0.002	0.007*** -0.001
Observations	31,393	30,588	30,588	30,270	29,213
R-squared	3,140	3,066	3,066	3,063	3,056
Number of county_fips	0.15	0.357	0.0592	0.0751	0.0546
Clustered SE	County	County	County	County	County
County FE			Yes	Yes	Yes
Year FE			Yes	Yes	Yes

4.7. TABLE 7: THE EFFECT OF KICKSTARTER ACTIVITY ON ESTABLISHMENT ENTRY: INDUSTRY-LEVEL ANALYSIS

VARIABLES	All industries	Startup capital		All industries	All industries
		≤ median	> median		
Kickstarter projects	0.011***	0.015***	0.006**		
	-0.002	-0.002	-0.002		
ks_projects#startup_capital				-0.008***	-0.008***
				-0.002	-0.002
Observations	365,838	200,707	165,131	364,411	364,411
Counties	3066	3066	3066	3066	3066
Industries	19	10	9	19	19
R-squared	0.828	0.852	0.801	0.955	0.955
Controls	Yes	Yes	Yes		
County FE	Yes	Yes	Yes		
Industry FE	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes		
Clustered SE	County	County	County	County	County × Industry County × Year
Interacted controls				Yes	Yes
County × Industry FE				Yes	Yes
County × Year FE				Yes	Yes
Industry × Year FE				Yes	Yes

4.8. TABLE 8: THE EFFECT OF KICKSTARTER ACTIVITY ON STARTUP EMPLOYMENT: QUASI-EXPERIMENTAL ANALYSIS

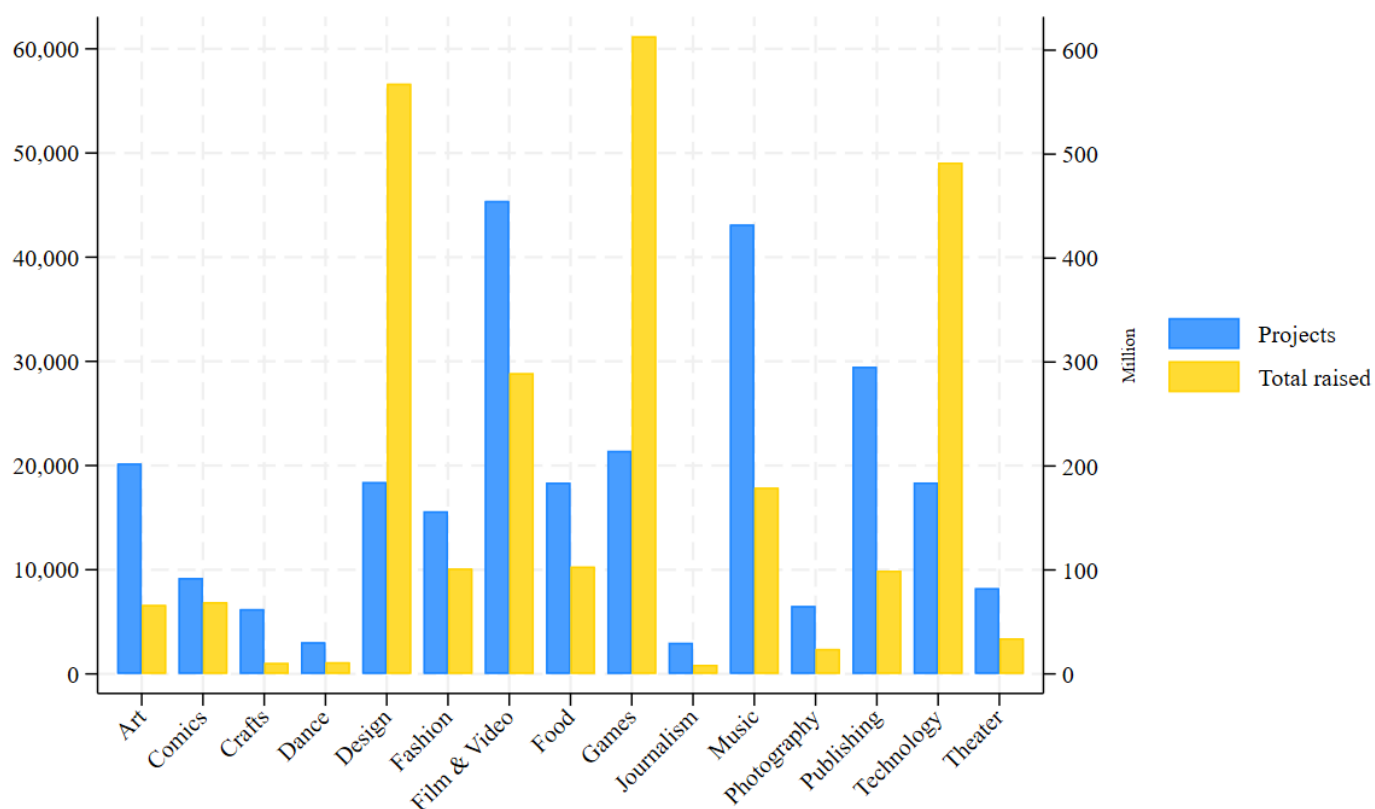
Panel A: Kickstarter projects		All projects	All projects	Successful projects	Successful projects	Failed projects	Failed projects
VARIABLES		Rule change	Placebo test	Rule change	Placebo test	Rule change	Placebo test
Post change		0.147***	-0.003	0.018***	0.001	0.165***	0
		-0.005	-0.004	-0.003	-0.003	-0.005	-0.004
Observations		24,446	24,445	24,446	24,445	24,446	24,445
Counties		3062	3063	3062	3063	3062	3063
R-squared		0.887	0.889	0.881	0.88	0.855	0.856
Controls		Yes	Yes	Yes	Yes	Yes	Yes
County FE		Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE		County	County	County	County	County	County

Panel B: Startup employment		All projects	All projects	Successful projects	Successful projects	Failed projects	Failed projects
VARIABLES		Rule change	Placebo test	Rule change	Placebo test	Rule change	Placebo test
Kickstarter projects		0.012***	0.003	0.014***	0.002	0.012***	0.004
x Post change		-0.004	-0.004	-0.004	-0.005	-0.004	-0.005
Post change		-0.001	0.021***	0.002	0.022***	0	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		3048	3054	3048	3054	3048	3054
R-squared		0.975	0.974	0.975	0.974	0.975	0.974
Clustered SE		County	County	County	County	County	County

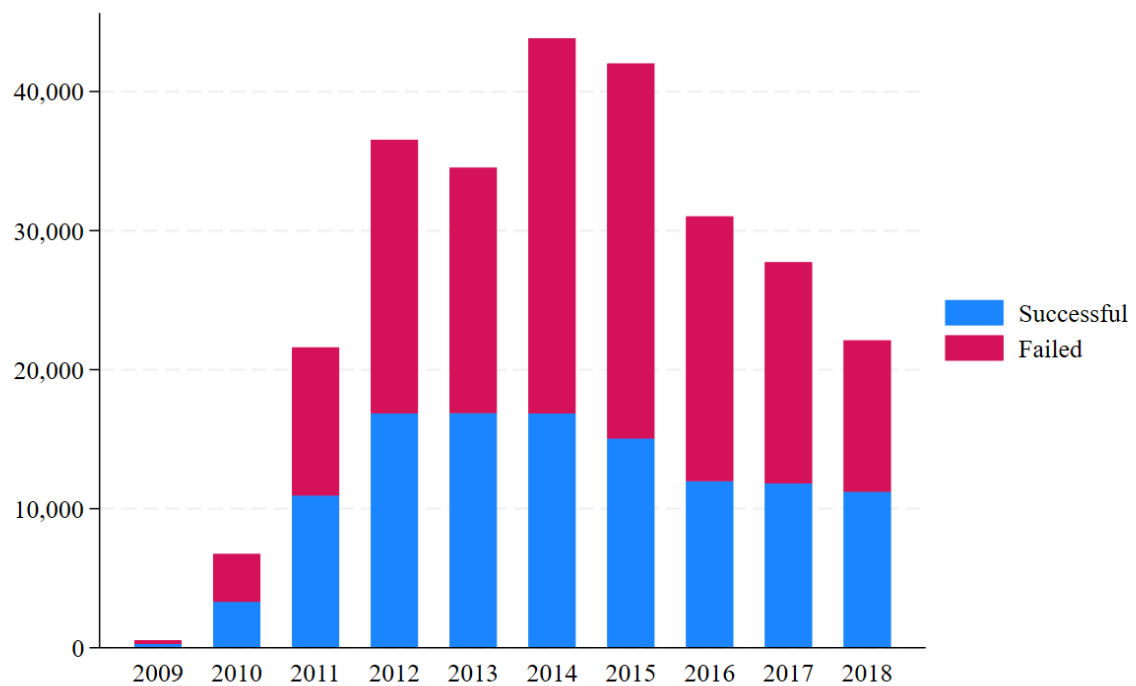
4.9. TABLE 9: THE EFFECT OF KICKSTARTER ACTIVITY ON THE SOCIO-DEMOGRAPHIC DIVERSITY OF STARTUP EMPLOYMENT

VARIABLES	Female startup employees	Non-white startup employees	Hispanic or Latino startup employees	Startup employees without a bachelor's degree
Kickstarter projects	0.222*** -0.08	0.366*** -0.043	0.104*** -0.035	0.337*** -0.029
Observations	116,455	117,136	117,150	111,985
Number of county_fips	3,063	3,063	3,063	3,061
R-squared	0.00621	0.0238	0.0145	0.159
Clustered SE	County	County	County	County
Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year x Quarter FE	Yes	Yes	Yes	Yes

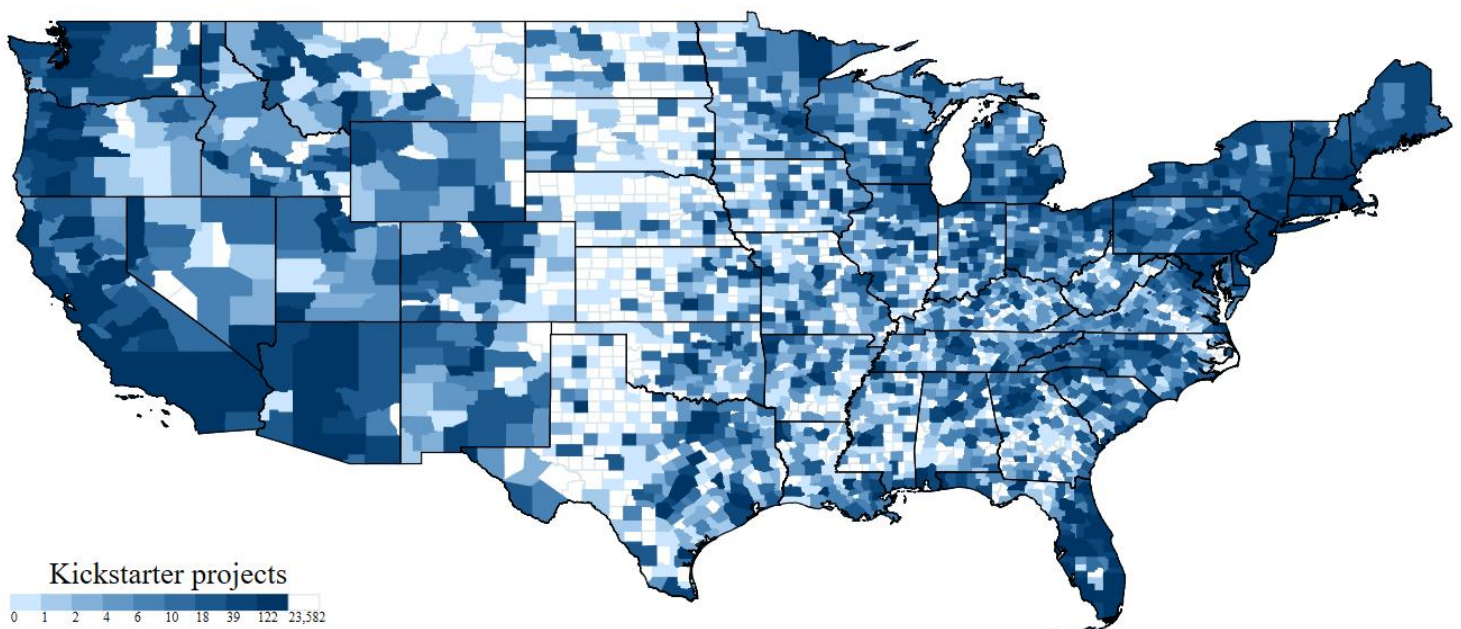
4.10. FIGURE 1: DISTRIBUTION OF KICKSTARTER ACTIVITY PER CATEGORY



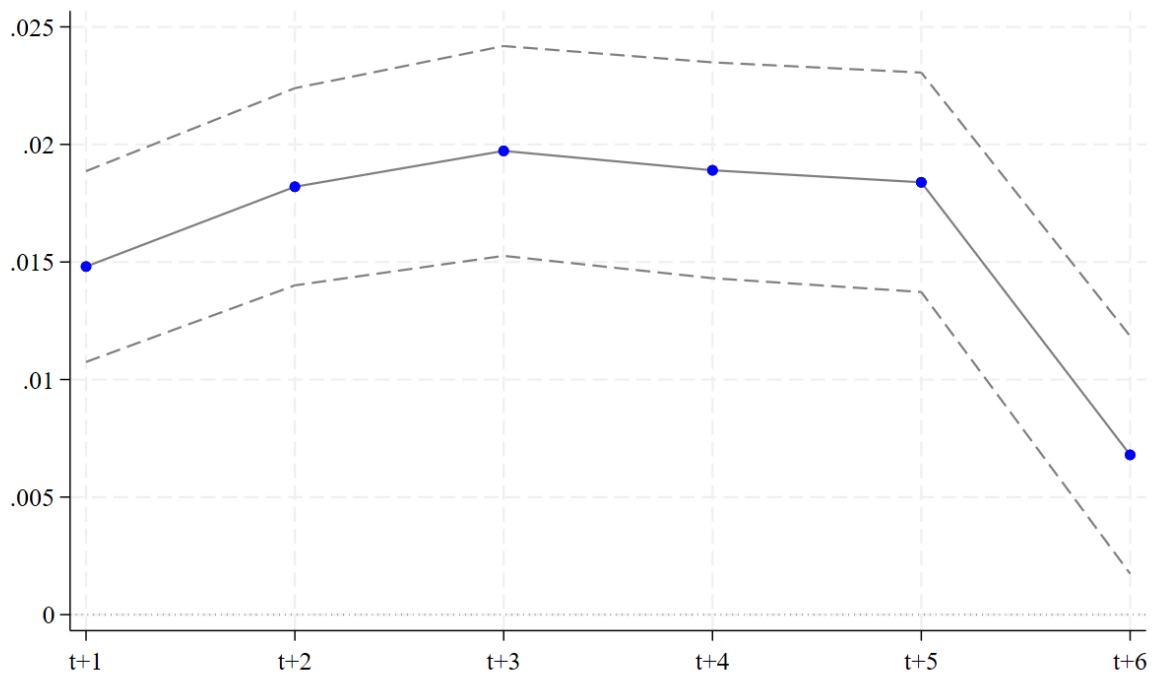
4.11. FIGURE 2: DISTRIBUTION OF KICKSTARTER PROJECTS OVER TIME



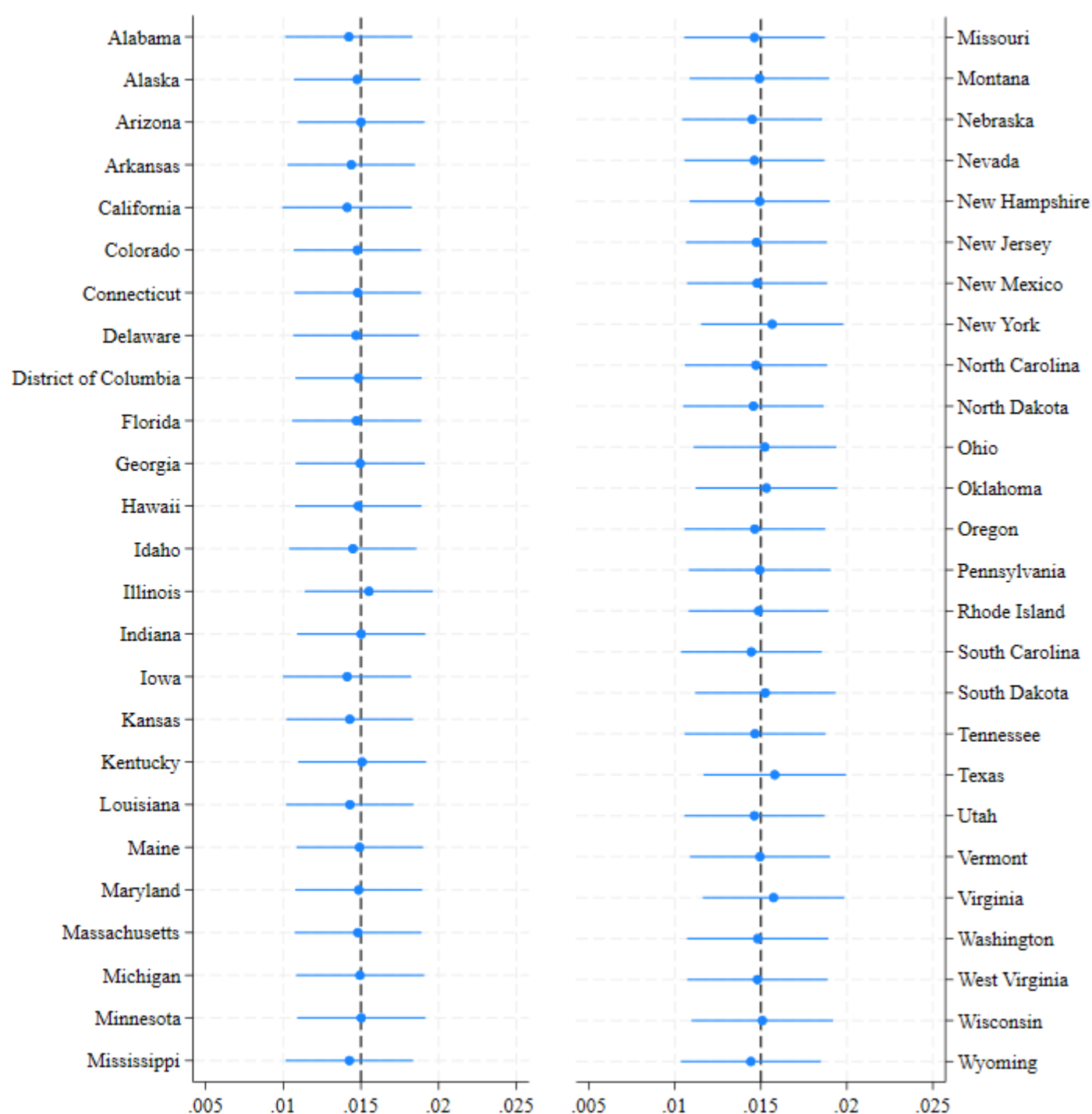
4.12. FIGURE 3: KICKSTARTER ACTIVITY IN THE UNITED STATES



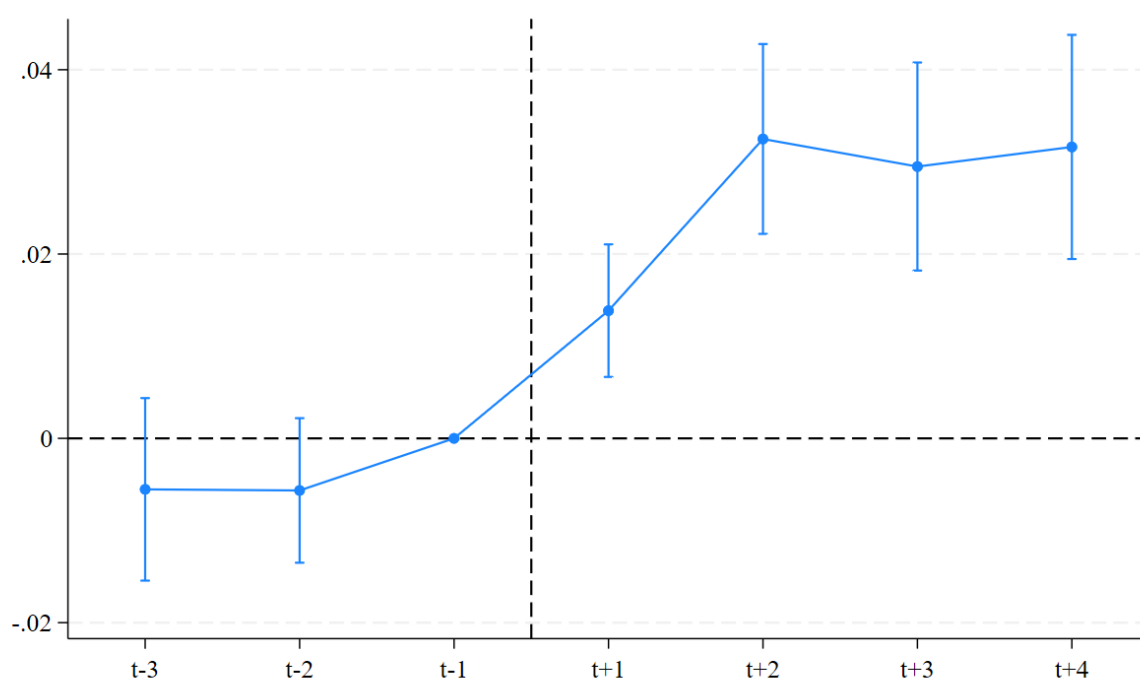
4.13. FIGURE 4: ESTABLISHMENT ENTRY RESPONSE



4.14. FIGURE 5: EXCLUDING EACH STATE



4.15. FIGURE 6: THE EFFECT OF THE KICKSTARTER RULE CHANGE ON STARTUP EMPLOYMENT



4.16. TABLE IA1: DETAIL ON AVERAGE STARTUP CAPITAL BY 2-DIGIT NAICS INDUSTRY

industry	Mean
Agriculture, For	172422
Mining, Quarryin	352528
Utilities	278369
Construction	113191
Manufacturing	358808
Wholesale Trade	347874
Retail Trade	204167
Transportation a	190502
Information	244828
Finance and Insu	301761
Real Estate and	298783
Professional, Sc	105212
Management of Co	990260
Admin. and Supp.	121601
Educational Serv	100658
Health Care and	174319
Arts, Entertainm	189331
Accommodation an	423887
Other Services (111496
Total	267368.3

4.17. TABLE IA2: DISTRIBUTION OF SUCCESSFUL AND FAILED KICKSTARTER PROJECTS OVER TIME

Year		Successful	Failed	Success rate
2009		270	272	49.8%
2010		3305	3441	49.0%
2011		10950	10651	50.7%
2012		16865	19667	46.2%
2013		16886	17636	48.9%
	Q1	3583	3587	50.0%
	Q2	4904	4699	51.1%
	Q3	4293	4684	47.8%
	Q4	4106	4666	46.8%
2014		16852	26978	38.4%
	Q1	3444	3807	47.5%
	Q2	4327	4858	47.1%
	Q3	4637	10426	30.8%
	Q4	4444	7887	36.0%
2015		15052	26963	35.8%
	Q1	3409	5951	36.4%
	Q2	4521	8506	34.7%
	Q3	3550	6705	34.6%
	Q4	3572	5801	38.1%
2016		11988	19036	38.6%
2017		11822	15903	42.6%
2018		11225	10879	50.8%
Total		115215	151426	43.2%

4.18. TABLE IA3: DESCRIPTIVE STATISTICS (N=3,142; I=19; T=10)

VARIABLES	N	mean	sd	min	p50	max
Establishment entry (all industries)	375,728.0	17	71.1	0	3	4,240.0
Establishment entry (industries with ≤ P50 startup capital)	205,968.0	21.4	82.7	0	4	4,240.0
Establishment entry (industries with > P50 startup capital)	169,760.0	11.7	53.2	0	0	2,445.0

4.19. TABLE IA4: THE EFFECT OF ART- AND PRODUCT-ORIENTED PROJECTS ON ESTABLISHMENT ENTRY

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

4.20. TABLE IA5: THE EFFECT OF KICKSTARTER ACTIVITY ON STARTUP EMPLOYMENT

VARIABLES			
Kickstarter projects	0.041*** -0.003	0.025*** -0.004	0.014*** -0.003
VC deals		0.024*** -0.008	0.019*** -0.006
Total deposits		0.483*** -0.038	0.178*** -0.033
Number of branches		0.582*** -0.042	-0.055 -0.049
Population growth		0.036*** -0.004	0.030*** -0.004
Observations	120,007	117,271	117,271
Number of county_fips	3,140	3,063	3,063
R-squared	0.429	0.867	0.824
Cluster	County	County	County
Country FE			Yes
Year x Quarter FE			Yes

4.21. TABLE IA6: THE EFFECT OF KICKSTARTER ACTIVITY ON STARTUP EMPLOYMENT
CONDITIONAL ON REGIONAL CHARACTERISTICS

VARIABLES		
Kickstarter projects	-0.004	0.024***
	-0.006	-0.004
Observations	59,533	57,738
Number of county_fips	1,551	1,512
R-squared	0.729	0.83
Controls	Yes	Yes
County FE	Yes	Yes
Year FE	Yes	Yes
Clustered SE	County	County