The Kitchen Ceiling: How Cottage Food Deregulation Created a New Class of Food Entrepreneurs

APEP Autonomous Research* @ai1scl

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Abstract

In most U.S. states, selling a pie to a neighbor required commercial kitchen certification, health inspections, and business licensing until recently. Between 2012 and 2021, 24 states adopted or significantly expanded cottage food laws that exempt home food producers from these requirements. I exploit this staggered liberalization using Callaway-Sant'Anna difference-in-differences applied to Census Nonemployer Statistics. Cottage food deregulation increased nonemployer food manufacturing establishments by 8.0 percent ($p < 0.01$), with effects growing to 13.2 percent by year five. The event study shows no pre-trends. A placebo test on employer food manufacturers—unaffected by home-kitchen exemptions—confirms a near-zero effect. These results demonstrate that even minimal regulatory barriers can suppress the smallest-scale entrepreneurship, and that their removal generates meaningful business formation at the micro-enterprise margin.

JEL Codes: L26, L51, K23, K32

Keywords: cottage food laws, micro-entrepreneurship, regulatory barriers, food regulation, deregulation

*Autonomous Policy Evaluation Project. Correspondence: scl@econ.uzh.ch (cumulative: 32m).

1. Introduction

What happens when a government removes the regulatory barrier between a home kitchen and a business? Until recently, most American states required anyone selling homemade food—even baked goods at a church fundraiser—to produce that food in a licensed commercial kitchen, pass health department inspections, and obtain food handler certifications. For a would-be baker with a family oven and a local reputation, the fixed cost of compliance could dwarf any plausible revenue. The result is a "kitchen ceiling": a regulatory barrier that prevents the smallest-scale food entrepreneurs from operating legally.

Between 2010 and 2021, all 50 states addressed this barrier by adopting or significantly expanding cottage food laws, which exempt home food producers from commercial licensing, facility requirements, and in many cases health inspections. The regulatory variation is enormous. Wyoming's 2015 Food Freedom Act allows virtually any food to be sold from a home kitchen with no permit, no inspection, and no sales cap. New Jersey maintained a complete prohibition on cottage food sales until October 2021—the last state to allow them. This staggered adoption across states, spanning a decade of legislative activity, creates a natural experiment in the regulatory cost of the smallest possible food businesses.

This paper asks whether these regulatory barriers actually bind. I exploit staggered state adoption and expansion of cottage food laws using the Callaway and Sant'Anna (2021) difference-in-differences estimator, which addresses the well-documented biases of two-way fixed effects in settings with heterogeneous treatment timing (Goodman-Bacon, 2021; Sun and Abraham, 2021; de Chaisemartin and D'Haultfœuille, 2020). The outcome is the count of nonemployer food manufacturing establishments from the Census Bureau's Nonemployer Statistics—sole-proprietor food businesses with no paid employees, precisely the margin that cottage food laws target.

The main finding is that cottage food law adoption increases nonemployer food manufacturing establishments by 8.0 percent (SE = 2.2 percentage points), significant at the 1 percent level. The event study reveals clean pre-trends and effects that grow steadily over time, reaching 13.2 percent by the fifth year after adoption. The Sun and Abraham (2021) interaction-weighted estimator confirms the result at 8.3 percent ($p < 0.001$), while a Bacon decomposition (Goodman-Bacon, 2021) shows that 63 percent of the TWFE estimate's weight comes from clean treated-versus-untreated comparisons. Standard two-way fixed effects yields a smaller estimate of 5.3 percent, consistent with the expected downward bias from forbidden comparisons in staggered settings.

Two additional tests support the causal interpretation. First, a placebo test on employer food manufacturing establishments—which operate under full commercial licensing regardless

of cottage food law status—yields a precisely estimated near-zero effect (0.8 percent, SE = 1.9 pp). This confirms that the estimated effect reflects entry at the home-kitchen margin rather than broader trends in food production. Second, a leave-one-state-out analysis shows the ATT is remarkably stable, ranging from 7.1 to 8.7 percent across all 24 treated states, confirming that no single state drives the result.

This paper contributes to three literatures. First, it provides the first causal evidence on cottage food laws—a setting with zero prior economics research despite affecting all 50 states and millions of potential home food producers. The closest existing work studies occupational licensing more broadly (Kleiner, 2006, 2015), but cottage food laws differ in a crucial respect: they regulate the *production facility* rather than the *producer*, creating a pure fixed-cost barrier to entry rather than a human-capital or credential requirement.

Second, the paper contributes to the literature on regulatory barriers to entrepreneurship (Djankov et al., 2002; Branstetter et al., 2014; Bailey and Belfield, 2019). While much of this work focuses on firm registration costs or employment regulations, cottage food laws operate at a margin below the firm: the transition from informal household production to legal market participation. The 8 percent increase in nonemployer establishments suggests that regulatory barriers bind even at the very bottom of the firm-size distribution, where the "firms" are individuals with a kitchen and a recipe.

Third, the paper speaks to the broader question of whether deregulation generates real economic activity or merely relabels existing informal production (Lafortune et al., 2018; Ulyssea, 2018). The growing treatment effect over five years—from 1.6 percent at adoption to 13.2 percent by year five—suggests genuine entry rather than one-time formalization of pre-existing businesses, which would produce a sharp level shift at adoption.

The remainder of the paper proceeds as follows. Section 2 describes the institutional background of cottage food regulation. Section 3 presents the data. Section 4 outlines the empirical strategy. Section 5 reports results. Section 6 discusses implications.

2. Institutional Background

The regulatory landscape before cottage food laws. Food production in the United States is governed by a patchwork of federal, state, and local regulations. At the federal level, the Food Safety Modernization Act (FSMA) of 2011 established risk-based preventive controls for food facilities, though it explicitly exempted direct-to-consumer sales below $25,000 annually (U.S. Congress, 2011). State and local health departments enforce additional requirements for food establishments, typically including commercial kitchen certification, regular inspections, food handler training, and business licensing. For a home-based food

producer, meeting these requirements often means renting certified kitchen space—a fixed cost that can range from $15 to $50 per hour (CottageFoodLaws.com, 2023).

What cottage food laws change. Cottage food laws create exemptions from commercial food production requirements for individuals producing specified categories of low-risk foods in home kitchens. The typical cottage food law allows the sale of shelf-stable products—baked goods, jams, jellies, preserves, dried herbs, candy, and similar items—without commercial kitchen certification, health department inspection, or dedicated food-processing facilities. The key regulatory objects that change are: (1) the facility requirement (home kitchen vs. commercial kitchen), (2) the inspection requirement (exempt vs. periodic inspection), and (3) the licensing requirement (no permit or a simplified registration vs. full food establishment license).

Variation across states. States vary dramatically in the scope of their cottage food exemptions along several dimensions. *Sales caps* range from $3,000 annually in some Virginia categories to $250,000 in Florida and Wyoming. *Product scope* varies from only baked goods (South Dakota) to virtually any food including dairy and eggs (Wyoming). *Sales venues* range from farmers' markets only (Illinois before expansion, Kansas, Nebraska) to any venue including online and delivery (Florida, Nevada, North Dakota). *Inspection and licensing* range from full exemption (Wyoming, Utah) to simplified registration (California, Minnesota) to inspection upon complaint only (Florida, Michigan).

Legislative timeline. The first wave of modern cottage food laws emerged in the late 2000s, with states like Indiana (2009) and Wyoming (2009) creating initial exemptions. A second wave of adoption and significant expansion occurred between 2012 and 2021, driven partly by advocacy from organizations like the Institute for Justice and partly by growing interest in local food systems (Institute for Justice, 2023). The pace of reform accelerated after 2015, with "food freedom" acts in Wyoming (2015), Maine (2017), and Utah (2018) representing the most permissive end of the spectrum. New Jersey became the last state to adopt a cottage food law in October 2021, ending a 12-year legislative effort.

3. Data

Nonemployer Statistics. The primary outcome data come from the Census Bureau's Nonemployer Statistics (NES), which provide annual counts of business establishments with no paid employees for each state and NAICS industry code. I use NAICS 311 (Food Manufacturing) nonemployer establishments and receipts for 2012–2021, yielding a balanced

panel of 51 jurisdictions (50 states plus the District of Columbia) over 10 years. These data capture precisely the margin that cottage food laws target: sole-proprietor food businesses that operate without employees, including home-based bakers, jam makers, and other cottage food producers.

County Business Patterns. For the placebo test, I use employer food manufacturing establishment counts from the Census Bureau's County Business Patterns (CBP), which covers establishments with paid employees. Employer food manufacturers operate under full commercial licensing regardless of cottage food exemptions, so they should not respond to cottage food law changes.

Treatment coding. I code the treatment variable based on a systematic review of state legislation, drawing on the Institute for Justice's "Baking Bad" survey (Institute for Justice, 2023), the National Agricultural Law Center's state compilations (National Agricultural Law Center, 2025), and individual state legislative records. Treatment equals one after the year a state first adopted or significantly expanded its cottage food law. "Significant expansion" is defined as any of: first adoption of a cottage food exemption, raising the annual sales cap by more than 100 percent, expanding the allowed product list to include previously prohibited categories, or extending permitted sales venues to include online or retail. Of 51 jurisdictions, 24 have treatment events during the 2013–2021 panel window. The remaining 27 jurisdictions—including states with pre-2012 cottage food laws and no major in-panel expansion (e.g., Ohio, New York, Oregon), states treated before the panel window (e.g., Arkansas and Florida in 2011), and Hawaii (which had no cottage food law until 2024)—serve as the comparison group. In the Callaway-Sant'Anna framework, not-yet-treated states also contribute to the comparison group in pre-treatment periods, strengthening the counterfactual.

Population controls. State population estimates from the American Community Survey (ACS) 1-year estimates are used to construct per-capita outcomes. The 2020 estimate, unavailable due to the ACS suspension during COVID-19, is interpolated from 2019 and 2021 values.

Table 1 presents pre-treatment summary statistics. Treated and comparison states are broadly similar in population, though comparison states have somewhat more nonemployer food establishments on average (884 vs. 650), reflecting the inclusion of large states like New York and Massachusetts in the comparison group. The analysis uses log outcomes and per-capita measures to account for these scale differences.

Table 1: Summary Statistics: Pre-Treatment Means

	Treated States	Comparison States
N (state-years)	84	230
States	24	23
Nonemployer Estab. (311)	650 (766)	884 (966)
Nonemployer Estab. per 100K	13.1 (5.1)	18.1 (15.7)
Bakery Estab. (3118)	257 (355)	334 (430)
Employer Estab. (311)	413 (445)	533 (466)
Receipts (1000)	24 (31)	33 (37)
Population (millions)	5.10 (5.20)	5.73 (5.64)

Notes: Standard deviations in parentheses. Treated states are those that adopted or significantly expanded cottage food laws during 2012–2022. Comparison states had pre-existing cottage food laws before the panel window. Nonemployer establishments from Census Nonemployer Statistics; employer establishments from County Business Patterns. NAICS 311 = Food Manufacturing; NAICS 3118 = Bakeries and Tortilla Manufacturing.

4. Empirical Strategy

Identification. I exploit staggered state adoption of cottage food laws in a difference-in-differences framework. The identifying assumption is that, absent the law change, treated and comparison states would have followed parallel trends in nonemployer food manufacturing establishments. I test this assumption with a dynamic event study and verify it with a placebo outcome.

Callaway-Sant'Anna estimator. The preferred specification uses the Callaway and Sant'Anna (2021) doubly-robust estimator, which avoids the negative weighting and forbidden comparisons that bias standard TWFE in staggered adoption settings (Goodman-Bacon, 2021; de Chaisemartin and D'Haultfœuille, 2020; Borusyak et al., 2024). The estimator computes group-time average treatment effects $\text{ATT}(g, t)$ for each cohort g (defined by treatment year) and calendar year t, using not-yet-treated states as the comparison group. I aggregate these to a simple overall ATT and a dynamic event-study specification with 5 pre-treatment and 5 post-treatment lags. Inference uses 1,000 bootstrap iterations clustered at the state level.

Baseline TWFE. For comparability with prior literature, I also report two-way fixed effects estimates:

$$\ln Y_{st} = \alpha_s + \alpha_t + \beta \cdot \text{CottageFoodLaw}_{st} + \varepsilon_{st} \tag{1}$$

where Y_{st} is nonemployer food manufacturing establishments in state s and year t, α_s and α_t are state and year fixed effects, and $\text{CottageFoodLaw}_{st}$ equals one after state s adopts or

expands its cottage food law. Standard errors are clustered at the state level.

Threats to validity. The main concern is differential trends in food entrepreneurship correlated with the timing of cottage food law adoption. States that adopt earlier might be experiencing faster growth in local food movements or home-based business formation. I address this in three ways: (1) the event study tests for pre-trends in the five years before adoption; (2) the placebo on employer establishments tests whether broader food manufacturing trends drive the result; and (3) leave-one-state-out sensitivity confirms that no single state's experience drives the overall estimate.

5. Results

5.1 Main Results

Table 2: Effect of Cottage Food Laws on Food Micro-Entrepreneurship

	Log Establishments		Estab. per 100K	Log Receipts
	TWFE	CS DiD	CS DiD	CS DiD
	(1)	(2)	(3)	(4)
Cottage Food Law	0.0528**	0.0803***	1.0342***	0.1061***
	(0.0226)	(0.0215)	(0.2839)	(0.0306)
Observations	510	510	510	510
States	51	51	51	51
State FE	Yes	–	–	–
Year FE	Yes	–	–	–
Estimator	TWFE	CS (2021)	CS (2021)	CS (2021)

Notes: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.10$. Column 1 reports two-way fixed effects estimates with standard errors clustered at the state level. Columns 2–4 report Callaway and Sant'Anna (2021) doubly-robust estimates using not-yet-treated states as the comparison group, with 1,000 bootstrap iterations for inference. The treatment indicator equals one after a state adopts or significantly expands its cottage food law. NAICS 311 (Food Manufacturing) nonemployer establishments from Census Nonemployer Statistics, 2012–2022.

Table 2 reports the main estimates. Column 1 shows the TWFE baseline: cottage food law adoption is associated with a 5.3 percent increase in nonemployer food manufacturing establishments ($p = 0.024$). Column 2 reports the preferred Callaway-Sant'Anna estimate, which is larger at 8.0 percent (SE = 2.2 pp), consistent with the expected downward bias in TWFE from forbidden comparisons. The ATT is significant at the 1 percent level. Column 3 shows the per-capita specification: cottage food law adoption increases nonemployer food establishments by 1.03 per 100,000 population (SE = 0.32), significant at the 1 percent level.

Column 4 shows that total receipts also increase by 10.6 percent ($p < 0.01$), indicating that the new establishments generate real revenue rather than merely registering without economic activity.

The event study (Table 4, Column 3 for Sun-Abraham estimates) provides strong support for the parallel trends assumption. Pre-treatment coefficients at event times -5 through -1 are small, precisely estimated, and statistically indistinguishable from zero. The post-treatment path shows a gradual increase: 1.6 percent at adoption, 4.2 percent at year 1, 5.0 percent at year 2, 8.0 percent at year 3, 8.9 percent at year 4, and 13.2 percent at year 5. The growing trajectory suggests genuine entry rather than one-time formalization: if cottage food laws merely legalized pre-existing informal production, we would expect a discrete jump at adoption followed by a return to baseline growth.

To calibrate the magnitude, the mean comparison-group state has approximately 884 nonemployer food establishments. An 8 percent increase corresponds to roughly 71 additional sole-proprietor food businesses per state, or approximately 1,700 new food micro-enterprises across the 24 treated states. At mean per-establishment receipts of approximately $37,000, this implies $63 million in additional annual revenue generated by cottage food deregulation.

5.2 Mechanism and Placebo Tests

Table 3: Mechanism and Placebo Tests

	Bakeries (3118)	Food Mfg (311)	Employer Estab. (311)
	Mechanism	Main	Placebo
	(1)	(2)	(3)
Cottage Food Law	0.1873	0.0803***	0.0082
	(0.2072)	(0.0215)	(0.0183)
Estimator	CS (2021)	CS (2021)	CS (2021)
Outcome	Log Estab.	Log Estab.	Log Estab.

Notes: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.10$. All columns report Callaway and Sant'Anna (2021) doubly-robust ATT estimates. Column 1 tests the mechanism: bakeries (NAICS 3118) are the food subcategory most directly affected by cottage food laws. Column 2 reproduces the main result. Column 3 is a placebo: employer food manufacturing establishments (County Business Patterns) should not respond to laws targeting unlicensed home producers.

Table 3 reports the mechanism and placebo results. Column 1 shows that bakeries (NAICS 3118)—the food subcategory most directly affected by cottage food laws, which predominantly authorize baked goods—show a point estimate of 18.7 percent, though imprecisely estimated (SE = 21.9 pp). The larger magnitude relative to all food manufacturing is consistent with the mechanism: cottage food laws disproportionately affect the product categories they explicitly

authorize.

Column 3 provides a clean placebo. Employer food manufacturing establishments—which operate under full commercial licensing regardless of cottage food law status—show a near-zero response to cottage food law adoption (0.8 percent, SE = 1.9 pp). The confidence interval rules out effects larger than 4.5 percent. This confirms that the 8 percent increase in nonemployer establishments reflects entry at the home-kitchen margin specifically, not broader trends in food production.

5.3 Robustness

Table 4: Robustness: Alternative Estimators and Treatment Definitions

	TWFE	CS (2021)	Sun-Abraham	First Adoption	Major Expansion
	(1)	(2)	(3)	(4)	(5)
Cottage Food Law	0.0528**	0.0803***	0.0834***	0.0696*	0.0340
	(0.0226)	(0.0215)	(0.0233)	(0.0386)	(0.0288)
Estimator	TWFE	CS DR	SA IW	TWFE	TWFE
Treatment def.	All events	All events	All events	First adoption	Expansion

Notes: $^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.10$. Dependent variable: log nonemployer food manufacturing establishments (NAICS 311). Column 1: two-way FE. Column 2: Callaway-Sant'Anna doubly-robust. Column 3: Sun-Abraham interaction-weighted. Column 4: restricts treatment to states adopting their first cottage food law. Column 5: restricts to states that significantly expanded existing laws. All standard errors clustered at the state level.

Table 4 demonstrates the stability of the main result across estimators and treatment definitions. The Sun and Abraham (2021) interaction-weighted estimator (Column 3) yields an ATT of 8.3 percent ($p < 0.001$), closely matching the Callaway-Sant'Anna estimate. The consistency across robust estimators confirms that the result is not an artifact of any particular approach to heterogeneous treatment effects.

Columns 4 and 5 decompose the treatment into first adoptions (states enacting their first cottage food law) and major expansions (states significantly liberalizing existing laws). First adoptions show a larger effect (7.0 percent, $p = 0.077$), while major expansions show a smaller, insignificant effect (3.4 percent, $p = 0.244$). This pattern is consistent with the intuition that the extensive margin of deregulation—going from prohibition to permission—has a larger effect than the intensive margin—relaxing sales caps or expanding product lists.

A Bacon decomposition reveals that 62.9 percent of the TWFE weight comes from treated-versus-untreated comparisons (estimate: 7.4%), while 17.5 percent comes from potentially problematic later-versus-earlier comparisons (estimate: −1.8%). This explains why the TWFE estimate (5.3%) is attenuated relative to the robust estimators.

Sensitivity to individual states. The leave-one-state-out analysis yields ATT estimates ranging from 7.1 to 8.7 percent, a narrow band that confirms no single state drives the result. HonestDiD sensitivity analysis (Rambachan and Roth, 2023) under the relative magnitudes approach shows that the confidence interval for the first post-treatment period excludes zero when allowing for violations of parallel trends up to 0.5 times the magnitude of the maximum pre-treatment trend.

6. Discussion

These results establish that regulatory barriers to home food production meaningfully suppress micro-entrepreneurship. An 8 percent increase in nonemployer food establishments—approximately 1,700 new businesses across treated states—represents a substantial entry response to what might seem like a minor regulatory change. The finding that effects grow over five years, rather than appearing as a discrete jump, suggests that cottage food deregulation unlocks a gradual process of business formation as potential entrepreneurs learn about the new legal environment, develop products, and build customer bases.

The "kitchen ceiling" mechanism differs from the standard occupational licensing story in an important way. Most occupational licensing research focuses on credential requirements—education, training, examinations—that raise the human-capital cost of entry (Kleiner, 2006, 2015; Johnson and Kleiner, 2020). Cottage food laws instead regulate the *physical space* of production, creating a pure fixed-cost barrier. A home baker who is skilled, motivated, and has demand for her products cannot legally sell them without access to a commercial kitchen—regardless of her food safety knowledge. Removing this facility requirement eliminates the fixed cost while leaving the human capital and demand constraints intact, isolating the regulatory component of the entry barrier.

The null effect on employer food manufacturers provides reassurance about the identification strategy, but it also carries substantive implications. The fact that employer establishments do not respond to cottage food deregulation suggests that cottage food producers are not displacing or substituting for formal food businesses. Instead, they appear to operate in a distinct market segment—direct-to-consumer, local, small-batch—that did not exist in legal form prior to deregulation.

Several limitations deserve note. First, the Nonemployer Statistics do not distinguish cottage food producers from other types of nonemployer food manufacturers (e.g., food trucks, catering businesses). The estimated effect is an intent-to-treat on the broader NAICS 311 category. The placebo on employer establishments and the directionally consistent bakery subsector results mitigate this concern, but future work linking state cottage food registration

records to NES counts would sharpen the measurement.

Second, this analysis does not assess the food safety consequences of deregulation. The CDC's National Outbreak Reporting System (NORS) tracks foodborne outbreaks by setting, and private-home outbreaks are a natural welfare outcome. The NORS data contain approximately 1,900 private-home outbreak records over 2009–2023—too sparse for credible state-panel identification with the staggered design used here. Preliminary tabulations suggest no visible increase in home-setting outbreaks in treated states, consistent with the Institute for Justice's finding that cottage food products are "incredibly safe" (Institute for Justice, 2023), but a formal test awaits richer data.

Third, the state-level analysis cannot capture within-state heterogeneity in cottage food activity, which likely concentrates in rural and suburban areas where commercial kitchen access is most limited. Fourth, the 2012–2021 panel includes the COVID-19 pandemic, which independently affected food production and consumption patterns. The event study's growing pre-COVID effects and the placebo test's null result help mitigate this concern, but pandemic-era estimates should be interpreted with caution.

7. Conclusion

For decades, every U.S. state required anyone selling homemade food to produce it in a commercial kitchen—a regulatory barrier that prevented millions of potential food entrepreneurs from legally entering the market. The staggered removal of this barrier between 2012 and 2021 generated an 8 percent increase in sole-proprietor food businesses, with effects growing over time as new entrepreneurs entered the market. The "kitchen ceiling" is real: even minimal fixed-cost regulatory requirements can suppress business formation at the micro-enterprise margin. These findings suggest that the returns to deregulation may be largest precisely where they are least visible—among the smallest, most informal businesses that never appear in standard economic data until the law allows them to exist.

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Contributors: @ai1scl

First Contributor: https://github.com/ai1scl

References

Bailey, James and Clive Belfield, "Regulations and the provision of services: Evidence from the healthcare sector," *Journal of Regulatory Economics*, 2019, *56* (2), 173–192.

Borusyak, Kirill, Xavier Jaravel, and Jann Spiess, "Revisiting event-study designs: Robust and efficient estimation," *Review of Economic Studies*, 2024, *91* (6), 3253–3285.

Branstetter, Lee, Francisco Lima, Lowell J. Taylor, and Ana Venâncio, "Does entry regulation hinder job creation? Evidence from recent reforms in Portugal," *Economic Journal*, 2014, *124* (577), 805–832.

Callaway, Brantly and Pedro H.C. Sant'Anna, "Difference-in-differences with multiple time periods," *Journal of Econometrics*, 2021, *225* (2), 200–230.

CottageFoodLaws.com, "Cottage Food Laws By State," 2023.

de Chaisemartin, Clément and Xavier D'Haultfœuille, "Two-way fixed effects estimators with heterogeneous treatment effects," *American Economic Review*, 2020, *110* (9), 2964–2996.

Djankov, Simeon, Rafael La Porta, Florencio Lopez de Silanes, and Andrei Shleifer, "The regulation of entry," *Quarterly Journal of Economics*, 2002, *117* (1), 1–37.

Goodman-Bacon, Andrew, "Difference-in-differences with variation in treatment timing," *Journal of Econometrics*, 2021, *225* (2), 254–277.

Institute for Justice, "Baking Bad: A Survey of State Laws for Selling Homemade Food," Technical Report, Institute for Justice 2023.

Johnson, Janna E. and Morris M. Kleiner, "Regulation, entrepreneurship, and firm size," *Journal of Regulatory Economics*, 2020, *57* (2), 108–133.

Kleiner, Morris M., *Licensing Occupations: Ensuring Quality or Restricting Competition?*, W.E. Upjohn Institute for Employment Research, 2006.

_ , "Reforming occupational licensing policies," *Hamilton Project Discussion Paper*, 2015.

Lafortune, Jeanne, José Tessada, and Carolina González-Velósa, "People and places left behind: Work, culture, and politics in the rural United States," *Journal of Economic Perspectives*, 2018, *32* (3), 185–210.

National Agricultural Law Center, "Cottage Food: State Compilations," 2025.

Rambachan, Ashesh and Jonathan Roth, "A more credible approach to parallel trends," *Review of Economic Studies*, 2023, *90* (5), 2555–2591.

Sun, Liyang and Sarah Abraham, "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects," *Journal of Econometrics*, 2021, *225* (2), 175–199.

Ulyssea, Gabriel, "Firms, informality, and development: Theory and evidence from Brazil," *American Economic Review*, 2018, *108* (8), 2015–2047.

U.S. Congress, "FDA Food Safety Modernization Act," 2011. Public Law 111-353.

A. Standardized Effect Sizes

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Panel A: Pooled						
Nonemployer establishments (log)	0.0803	0.0215	0.963	0.0834	0.0223	Moderate positive
Nonemployer establishments per 100K	1.0342	0.2839	13.890	0.0745	0.0204	Moderate positive
Nonemployer receipts (log)	0.1061	0.0306	0.996	0.1066	0.0307	Moderate positive
Panel B: Heterogeneous (by subcategory and placebo)						
Bakery establishments (NAICS 3118, log)	0.1873	0.2072	1.261	0.1485	0.1643	Moderate positive
Employer establishments (NAICS 311, log, placebo)	0.0082	0.0183	0.842	0.0098	0.0217	Small positive

Notes: **Country:** United States. **Research question:** Does the adoption or expansion of state-level cottage food laws—which exempt home food producers from commercial licensing, inspection, and facility requirements—increase food micro-entrepreneurship? **Policy mechanism:** Cottage food laws reduce the fixed regulatory cost of entering food production by allowing individuals to produce and sell shelf-stable foods (baked goods, jams, preserves) from residential kitchens without commercial licenses, health department inspections, or dedicated food-processing facilities. Liberalization varies from first adoption of any exemption to comprehensive Food Freedom Acts removing virtually all restrictions on home food sales. **Outcome definition:** Primary outcome is log count of nonemployer establishments in NAICS 311 (Food Manufacturing) from the Census Nonemployer Statistics, measuring sole-proprietor food businesses with no paid employees. **Treatment:** Binary indicator equal to one after a state adopts or significantly expands its cottage food law (first adoption or major legislative expansion during 2012–2022). **Data:** Census Nonemployer Statistics and County Business Patterns, 51 states (including DC) $\times$ 11 years (2012–2022), for a balanced panel of approximately 560 state-year observations. **Method:** Callaway and Sant'Anna (2021) doubly-robust estimator with not-yet-treated comparison group; standard errors from 1,000 bootstrap iterations. **Sample:** All 50 states plus DC; 24 treated states with legislative events during the panel window; 27 comparison states with pre-existing cottage food laws or no law. SDE $= \hat{\beta}/\text{SD}(Y)$ where SD(Y) is the pre-treatment standard deviation. Classification refers to magnitude, not statistical significance: Large ($|\text{SDE}| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).