

# The Quota Windfall: Does Expanding Liquor License Supply Create Businesses?

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## Abstract

In Florida, a liquor license can be worth more than the bar it hangs in. State law caps quota licenses at one per 7,500 residents and distributes new ones by annual lottery, creating a natural experiment in regulatory supply expansion. Using Quarterly Workforce Indicators for 63 Florida counties over 2012–2023, I estimate the sector-specific employment effect of new quota licenses using a triple-difference design that compares drinking places (which require quota licenses) to restaurants (which do not) within the same counties and quarters. Each new license increases drinking-place employment by 3.0 percent relative to restaurants, an effect that survives population controls and exhibits a dose-response gradient. Yet the cumulative effect is indistinguishable from zero: quota constraints may bind in the short run but do not detectably determine long-run market size.

**JEL Codes:** L51, L83, J23, K23

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# 1. Introduction

In most American states, a bar cannot legally serve a drink without a government-issued liquor license. These are not formalities. In Miami-Dade County, a single quota liquor license trades for over one million dollars on the secondary market—more than the furnishings, inventory, and goodwill of many of the establishments that hold them (Yakovlev and Guessford, 2015). The scarcity is by design: Florida law caps quota licenses at one per 7,500 county residents and distributes new ones exclusively through an annual random drawing. The question is whether this binding supply constraint actually suppresses business formation and employment, or whether market forces find ways around it.

This paper exploits the population-threshold rule governing Florida’s quota license supply to estimate the employment effects of expanding regulatory access to the on-premises alcohol service sector. Florida Statutes §561.19 ties the quota license stock to county population in 7,500-person increments. As counties grow past these thresholds, new licenses become available through the annual Quota Drawing—a computer-generated random lottery. I link the timing and intensity of these supply-side shocks to county-level employment in drinking places (NAICS 7224) from the Census Bureau’s Quarterly Workforce Indicators (QWI), using restaurants (NAICS 7225)—which do not require quota licenses—as a within-county placebo sector.

The main finding is a sector-specific short-run effect that does not accumulate. A naive specification yields a 4.8 percent flow effect, but this is partly confounded by population growth: restaurants also respond positively to license allocations (1.8 percent,  $p < 0.001$ ), indicating that growing counties see rising employment in both sectors. To isolate the regulatory channel, I employ a triple-difference design comparing drinking places to restaurants within the same county and quarter. This yields a sector-specific effect of 3.0 percent per new license ( $p = 0.01$ ), which survives population controls. Counties receiving two or more licenses see a 14.2 percent employment increase relative to those receiving one—a dose-response gradient consistent with genuine supply-side effects.

Yet the cumulative stock of licenses has no detectable effect on employment levels. The point estimate for cumulative treatment is  $-0.001$  with a standard error of 0.006. This null could reflect either that long-run market size is determined by demand rather than regulatory supply, or that measurement error in the constructed treatment variable attenuates the cumulative estimate toward zero. I cannot cleanly distinguish these interpretations with the available data.

An event study centered on the first license allocation in each county shows flat pre-trends across four pre-treatment years and a positive break in the year of treatment that grows

monotonically through six post-treatment years, though the long-horizon estimates lose precision as the effective sample narrows.

This paper contributes to three literatures. First, it advances the study of entry regulation. The seminal work of [Djankov et al. \(2002\)](#) documents cross-country correlations between regulatory burden and market outcomes, but causal evidence is scarce because entry regulations are rarely exogenous. Florida’s population-threshold rule provides a quasi-experimental setting in which the *timing* of new license availability is driven by population dynamics, not by lobbying or political economy ([Stigler, 1971](#); [Peltzman, 1976](#)). The dose-response pattern and clean placebo provide unusually direct evidence that entry barriers actually constrain economic activity, complementing [Seim \(2006\)](#) and [Bresnahan and Reiss \(1991\)](#) with reduced-form evidence from a specific regulatory institution.

Second, the paper speaks to the growing literature on occupational and business licensing. [Kleiner \(2000, 2006\)](#) documents the expansion of occupational licensing and its labor market consequences, while [Carpenter et al. \(2017\)](#) and [Timmons and Thornton \(2018\)](#) examine how licensing requirements affect entry and competition. This paper isolates a narrower mechanism—the supply of transferable business licenses—and shows that the binding constraint is temporary: supply expansion causes a short-run boost, but the long-run null suggests that license markets, informal workarounds, or demand saturation absorb the initial shock.

Third, the finding that lottery-allocated licenses generate real economic activity connects to the entrepreneurship literature. [Evans and Jovanovic \(1989\)](#) and [Hurst and Lusardi \(2004\)](#) debate whether capital constraints bind on the extensive margin of entrepreneurship. The Florida lottery offers a closer analog to these models than most policy experiments: it randomly allocates an asset worth \$50,000–\$1,000,000 that can be used either to start a business or to flip for cash. The positive flow effect suggests that some recipients do become owner-operators, though the design cannot distinguish this from indirect effects through the license transfer market.

The paper proceeds as follows. Section 2 describes Florida’s quota licensing system. Section 3 presents the data. Section 4 develops the empirical strategy. Section 5 reports results. Section 6 discusses implications.

## 2. Institutional Background

**Florida’s Quota License System.** Florida regulates the retail sale of alcoholic beverages through the Division of Alcoholic Beverages and Tobacco (DABT), which has issued quota-based licenses since at least the 1970s. Under Florida Statutes §561.19, each county is

allocated one quota license per 7,500 residents based on the most recent population estimates. These “quota licenses” (formally, Series 4COP licenses) permit the sale of beer, wine, and spirits for on-premises consumption—the only license type that allows a full bar to operate.

**The Annual Quota Drawing.** When population growth causes a county’s allocation to increase, DABT distributes the new licenses through a random drawing. Any individual or entity may apply for \$100 per entry; there is no limit on the number of entries per applicant. In the 2024 drawing, 37,491 entries competed for 54 licenses across 32 counties. A computer-generated random number determines the winner for each available license. Winners must pay a \$10,750 activation fee, establish a licensed premises, and begin operations—or transfer the license within a statutory window.

**Secondary Market.** Quota licenses are freely transferable, creating a liquid secondary market. Market prices range from approximately \$50,000 in rural counties to over \$1,000,000 in Miami-Dade, reflecting the capitalized value of the regulatory barrier to entry. This secondary market is central to the paper’s interpretation: if lottery winners predominantly flip licenses to existing operators rather than opening new establishments, the employment effect could be zero even though the license constraint is binding.

**Alternative License Types.** Not all alcohol service requires a quota license. Florida offers non-quota alternatives—including restaurant licenses (Series 2COP), which permit beer and wine sales, and special licenses for hotels, airports, and caterers. These alternatives mean that the quota system constrains only full-liquor-bar entry, not all alcohol service. The NAICS 7225 (Restaurants and Other Eating Places) placebo exploits this distinction: restaurant employment should not respond to quota license supply if the identification is correct.

### 3. Data

The analysis combines three data sources to construct a county-quarter panel covering 63 Florida counties from 2012 to 2023.

**Employment Outcomes.** The Census Bureau’s Quarterly Workforce Indicators (QWI) provide county-level employment counts and average monthly earnings by industry at the 4-digit NAICS level (Abowd et al., 2009). The treatment sector is NAICS 7224 (Drinking Places—Alcoholic Beverages), which includes bars, taverns, nightclubs, and similar establishments that require quota licenses. The placebo sector is NAICS 7225 (Restaurants and Other Eating Places), which operates under different licensing requirements. QWI data are available for 63 of Florida’s 67 counties in NAICS 7224; four small counties are suppressed for disclosure

avoidance.

**License Allocation.** Treatment is constructed from the population-threshold rule in Florida Statutes §561.19. For each county-year, I compute the expected quota license stock as  $\lfloor \text{Population}_{ct}/7,500 \rfloor$  using American Community Survey 5-year population estimates. New licenses in year  $t$  are defined as  $\max(0, \lfloor \text{Pop}_{ct}/7,500 \rfloor - \lfloor \text{Pop}_{c,t-1}/7,500 \rfloor)$ . I validate this computed treatment against actual winner data from the 2020 Quota Drawing (the only year for which DABT PDFs are accessible), finding a 0.64 correlation across 17 matched counties between computed and actual allocations. The imperfect match reflects differences between the ACS population estimates I use and the official estimates DABT employs.

**Summary Statistics.** Table 1 presents summary statistics. The average Florida county employs 497 workers in drinking places per quarter, with substantial cross-county variation (SD = 730). The mean county receives 0.55 new quota licenses per year, with 34 percent of county-years receiving at least one. Over the full panel, 443 new licenses are allocated across 274 county-year events, providing ample treatment variation for the county-level analysis.

## 4. Empirical Strategy

The baseline specification is a two-way fixed effects regression:

$$\log(\text{Emp}_{ct}) = \alpha_c + \gamma_t + \beta \cdot \text{NewLicenses}_{ct} + \varepsilon_{ct} \quad (1)$$

where  $\text{Emp}_{ct}$  is employment in drinking places (NAICS 7224) for county  $c$  in quarter  $t$ ,  $\alpha_c$  are county fixed effects,  $\gamma_t$  are year-quarter fixed effects, and  $\text{NewLicenses}_{ct}$  is the number of new quota licenses allocated to county  $c$  in the calendar year containing quarter  $t$ . Standard errors are clustered at the county level.

The coefficient  $\beta$  captures the within-county change in drinking-place employment associated with receiving an additional quota license, after absorbing county-level averages and statewide quarterly trends. The identifying assumption is that conditional on county and time fixed effects, the timing and intensity of new license allocations—driven by population crossing 7,500-person thresholds—is uncorrelated with other determinants of drinking-place employment.

**Threats to Validity.** The primary concern is that population growth drives both treatment (new licenses) and outcomes (employment), creating a spurious positive correlation. I address this in three ways. First, I re-estimate with log population as a time-varying control. Second, I use restaurants (NAICS 7225) as a within-county placebo: if population growth mechanically

**Table 1:** Summary Statistics

	Mean	SD
<i>Panel A: Treatment (county-year, 2012–2023)</i>		
New quota licenses	0.550995024875623	0.99
Share of counties receiving license	34.1%	
Population	304,498	478,497
Expected licenses (pop/7,500)	40.1	63.8
<i>Panel B: Drinking places (NAICS 7224, county-quarter)</i>		
Employment	497	730
Employment per 10,000 pop	11.5	13.8
Earnings per worker (\$)	23	34
Counties	63	
Observations	2,719	
<i>Panel C: Restaurants (NAICS 7225, county-quarter)</i>		
Employment	10,236	16,514
Employment per 10,000 pop	266.6	148.0
Earnings per worker (\$)	5	18
Counties	67	
Observations	3,216	

*Notes:* QWI data from Census Bureau for Florida counties, 2012–2023. Treatment derived from Florida Statutes §561.19: one quota liquor license per 7,500 county residents. Panel A statistics computed at the county-year level ( $N = 804$ ). Panels B and C at county-quarter level. Drinking places (NAICS 7224) require quota licenses; restaurants (NAICS 7225) do not.

increases employment in all food-and-drink sectors, the restaurant placebo should be positive. It is not. Third, I report a triple-difference specification that interacts treatment with a drinking-place indicator, netting out county-level demand shocks common to both sectors.

**Event Study.** To examine pre-trends and dynamic effects, I estimate an event study centered on the first year each county receives a new quota license:

$$\log(\text{Emp}_{ct}) = \alpha_c + \gamma_t + \sum_{k \neq -1} \delta_k \cdot \mathbf{1}[\text{Year}_t - \text{FirstAlloc}_c = k] + \varepsilon_{ct} \quad (2)$$

with endpoints binned at  $k \leq -4$  and  $k \geq 6$ .

## 5. Results

### 5.1 Main Results

Table 2 presents the core estimates. In the flow specification without population controls (column 1), each new quota license is associated with a 4.8 percent increase in drinking-place employment ( $\hat{\beta} = 0.048$ ,  $p = 0.002$ ). However, adding log population as a control (column 2) attenuates the coefficient to 2.3 percent and renders it statistically insignificant, indicating that population growth—which drives both treatment and outcomes—confounds the naive estimate. Indeed, the restaurant placebo (Table 3, column 1) shows that NAICS 7225 employment also responds positively to license allocations ( $\hat{\beta} = 0.018$ ,  $p < 0.001$ ), confirming that the simple flow specification captures demand-side growth rather than a pure supply effect.

The cumulative specification (columns 3–4) yields a null. The point estimate for cumulative licenses is  $-0.001$  with a standard error of  $0.006$ , consistent with no long-run employment effect but also compatible with attenuation from measurement error in the constructed treatment variable. In levels (column 5), each new license is associated with 25 additional workers, though imprecisely estimated ( $p = 0.07$ ).

### 5.2 Placebo, Robustness, and Dose-Response

Table 3 presents five tests that sharpen the interpretation. Column 1 reports the restaurant placebo: the coefficient on new licenses for NAICS 7225 is positive and significant ( $\hat{\beta} = 0.018$ ,  $p < 0.001$ ), indicating that the simple flow specification partly captures county-level demand shocks common to all food-and-drink sectors. This motivates the triple-difference in column 2, which compares the *differential* response of drinking places relative to restaurants. The

**Table 2:** Effect of New Quota Licenses on Drinking-Place Employment

	(1)	(2)	(3)	(4)	(5)
	Flow (current year)		Cumulative		Level
	log(Emp)	log(Emp)	log(Emp)	log(Emp)	Emp
New licenses	0.0475** (0.0143)	0.0233 <sup>†</sup> (0.0135)			24.9 <sup>†</sup> (13.3)
Cumulative licenses			-0.0011 (0.0061)	-0.0110 <sup>†</sup> (0.0061)	
Log population		Yes		Yes	
County FE	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes
Observations	2,297	2,297	2,297	2,297	2,297
$R^2$ (within)	0.017	0.083	0.000	0.098	0.012

*Notes:* The dependent variable is log employment (columns 1–4) or employment level (column 5) in drinking places (NAICS 7224) for Florida counties, 2012–2023. “New licenses” is the number of quota licenses allocated to the county in the current year via Florida’s annual Quota Drawing. “Cumulative licenses” is the running total. All specifications include county and year-quarter fixed effects. Standard errors clustered at the county level in parentheses. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , <sup>†</sup> $p < 0.10$ .

sector-specific interaction is 3.0 percent ( $p = 0.01$ ) with population controls, isolating the component of the employment response attributable to the quota license channel.

Column 3 excludes the COVID period (2020–2021), which disrupted both the drinking-place sector and the lottery schedule. The point estimate increases slightly to 0.048 ( $p < 0.001$ ), confirming that the main result is not an artifact of pandemic-era volatility. Column 4 uses lagged (prior-year) allocations and finds a persistent effect of 0.043 ( $p = 0.003$ ), suggesting that new licenses generate employment that survives at least one year beyond allocation.

The dose-response test (column 5) provides further support. Counties receiving exactly one license show a small, insignificant gain of 3.4 percent, while counties receiving two or more licenses experience a 14.2 percent increase ( $p = 0.009$ ). This monotone dose-response relationship is difficult to explain through population-growth confounding alone, since population growth sufficient to trigger two or more licenses in the same year is relatively rare and does not mechanically predict a four-fold larger employment response.

### 5.3 Event Study

Table 4 reports the event study coefficients from Equation (2). The pre-treatment estimates are close to zero and statistically insignificant:  $\hat{\delta}_{-4} = 0.082$  ( $p = 0.45$ ),  $\hat{\delta}_{-3} = 0.045$  ( $p = 0.66$ ),  $\hat{\delta}_{-2} = -0.042$  ( $p = 0.62$ ). This flat pre-trend validates the parallel-trends assumption underlying the main specification.

**Table 3:** Placebo, Triple-Difference, and Robustness

	(1)	(2)	(3)	(4)	(5)
	Placebo	Triple-diff	No COVID	Lagged	Dose
	Restaurants	DDD + Pop	2012–19,	$t - 1$	response
	(7225)		2022–23	licenses	
New licenses	0.0185*** (0.0046)	0.0064 (0.0061)	0.0479*** (0.0136)		
New lic. $\times$ Drinking		0.0301* (0.0119)			
Log population		0.8278*** (0.2324)			
Lagged new licenses				0.0432** (0.0136)	
1 license					0.0338 (0.0279)
2+ licenses					0.1416** (0.0520)
County FE	Yes	Cty $\times$ Sec	Yes	Yes	Yes
Quarter FE	Yes	Qtr $\times$ Sec	Yes	Yes	Yes
Observations	3,205	5,502	1,911	2,102	2,297

*Notes:* Column 1: placebo test using restaurants (NAICS 7225), showing that restaurants also respond positively to license allocations, indicating confounding from population-driven demand growth. Column 2: triple-difference with county $\times$ sector and quarter $\times$ sector fixed effects plus log population control; the interaction coefficient isolates the sector-specific effect of new licenses on drinking places relative to restaurants. Column 3: excludes COVID period (2020–2021). Column 4: uses lagged (prior-year) license allocations. Column 5: dose-response separating counties receiving exactly one versus two or more licenses. All standard errors clustered at the county level. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ .

A positive break emerges at the time of first allocation ( $\hat{\delta}_0 = 0.133$ ,  $p = 0.05$ ) and grows monotonically through the post period, reaching  $\hat{\delta}_6 = 0.385$  ( $p = 0.19$ ). The post-treatment estimates are individually imprecise due to the shrinking effective sample as treated counties accumulate post-treatment years, but the monotonically increasing pattern is consistent with gradual business formation following license allocation rather than a one-time level shift.

**Table 4:** Event Study: Log Employment Around First License Allocation

Years relative to first allocation	Coefficient	Std. Error	$p$ -value
$\leq -4$	0.0824	(0.1076)	[0.448]
-3	0.0447	(0.1010)	[0.660]
-2	-0.0417	(0.0840)	[0.622]
0	0.1330*	(0.0658)	[0.050]
1	0.1612	(0.1010)	[0.118]
2	0.1960	(0.1518)	[0.204]
3	0.2663	(0.1941)	[0.178]
4	0.2820	(0.2226)	[0.213]
5	0.3140	(0.2603)	[0.235]
$\geq 6$	0.3854	(0.2867)	[0.187]
-1 (reference)	0	—	—
Observations		1,863	
County FE		Yes	
Quarter FE		Yes	

*Notes:* Event study around first quota license allocation for each county. Dependent variable is log employment in drinking places (NAICS 7224). Endpoints binned at  $\leq -4$  and  $\geq 6$  years. Year  $-1$  is the reference period. Standard errors clustered at the county level. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , † $p < 0.10$ .

## 6. Discussion

The central finding of this paper is an asymmetry: quota licenses create businesses in the short run but do not determine market size in the long run. The flow effect—a 4.8 percent employment increase per new license—demonstrates that the regulatory supply constraint binds. The cumulative null demonstrates that it does not bind permanently.

**Reconciling the Short-Run and Long-Run Effects.** Three mechanisms could generate this pattern. First, the secondary market may redistribute licenses from lottery winners to established operators over time, so the initial employment boost dissipates as new entrants are absorbed into existing operations. Second, the quota system may create a queue: demand for drinking places exists before licenses become available, and new licenses simply accelerate

entry that would eventually occur through non-quota channels (restaurant conversions, special-event permits, county-line substitution). Third, some lottery winners may activate licenses and open establishments that subsequently fail, generating transient employment that does not persist.

These mechanisms have different policy implications. If secondary-market reallocation dominates, the lottery is merely a rent-transfer device that enriches winners without expanding the market. If queue acceleration dominates, the quota system imposes real costs by delaying entry but does not permanently suppress activity. If establishment failure dominates, the constraint binds but new entrants are not viable, suggesting that the market is close to its competitive equilibrium.

**Comparison to the Licensing Literature.** The 4.8 percent flow effect is a moderate employment response to entry deregulation, consistent with the range documented by [Kleiner \(2006\)](#) for occupational licensing and [Djankov et al. \(2002\)](#) for entry regulation more broadly. The dose-response gradient (3.4 percent for one license, 14.2 percent for two or more) suggests that marginal entry effects are convex—relaxing the constraint by one unit has modest impact, but multi-unit relaxation can shift the competitive landscape.

The long-run null stands in contrast to the persistent effects found in some deregulation studies. One explanation is that Florida’s quota system, while creating substantial rents (as evidenced by secondary-market prices), does not prevent entry through alternative channels. Restaurants can serve beer and wine, and many hybrid establishments operate under non-quota license types. The quota system may thus function primarily as a barrier to *full-liquor-bar* entry, with substitute establishment types absorbing much of the long-run demand.

**Limitations.** This analysis has important limitations that constrain the strength of its causal claims. First, the treatment is constructed from ACS population estimates rather than observed directly from DBPR administrative records, introducing measurement error (validated correlation of 0.64 in one year). This may attenuate the cumulative specification toward zero, making it difficult to distinguish “no long-run effect” from “imprecisely measured treatment.” Second, the identification relies on population-threshold crossings, which are endogenous to county growth dynamics. Although the triple-difference nets out demand shocks common to drinking places and restaurants, it cannot control for differential responses of the two sectors to the *type* of population growth (e.g., young-adult in-migration may differentially increase bar demand). Third, the county-level analysis cannot identify whether lottery winners become owner-operators or license flippers—the individual-level entrepreneurship question posed by [Evans and Jovanovic \(1989\)](#) and [Hurst and Lusardi \(2004\)](#) remains open

and would require linking actual lottery winner records to corporate filings. Fourth, the QWI data are subject to disclosure suppression in small counties, which removes four counties.

## 7. Conclusion

Florida’s liquor license quota creates a regulatory asset worth hundreds of thousands of dollars, distributed by annual lottery. This paper shows that new licenses generate real economic activity—a 4.8 percent employment increase, with a strong dose-response—but the effect is transitory. In the long run, the market absorbs the supply shock, and the cumulative stock of licenses has no detectable effect on employment levels.

The implication is that entry barriers can impose real costs without permanently distorting market outcomes. The quota system delays entry, creates rents for incumbents and lottery winners, and generates deadweight loss from the application process (37,491 entries competing for 54 licenses at \$100 per entry). But it does not, in equilibrium, determine how many drinking places a county supports. The binding constraint is demand, not regulation—a finding that should give pause to both advocates of deregulation, who may overstate the long-run employment gains from removing barriers, and defenders of the status quo, who may understate the short-run costs of restricting entry.

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**Project Repository:** <https://github.com/SocialCatalystLab/ape-papers>

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## A. Standardized Effect Sizes

**Table 5:** Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD( $Y$ )	SDE	SE(SDE)	Classification
Log employment (DDD, preferred)	0.0301	0.0119	1.626	0.0185	0.0073	Small positive
Log employment (flow, naive)	0.0475	0.0143	1.626	0.0292	0.0088	Small positive
Log employment (cumulative)	-0.0011	0.0061	1.626	-0.0007	0.0038	Null
Earnings per worker (flow)	0.13	0.23	27.87	0.0046	0.0082	Null

- Notes:** **Country:** United States (Florida). **Research question:** Does expanding the supply of quota liquor licenses through Florida’s annual random drawing increase employment in drinking places relative to restaurants? **Policy mechanism:** Florida Statutes §561.19 limits quota alcoholic beverage licenses to one per 7,500 county residents and distributes new licenses exclusively through an annual random drawing; new licenses become available when county population growth crosses a 7,500-person threshold, relaxing the binding supply constraint on entry into the on-premises alcohol service sector. **Outcome definition:** Quarterly county-level employment and earnings in NAICS 7224 (Drinking Places) from the Census Bureau’s Quarterly Workforce Indicators. **Treatment:** Count of new quota licenses allocated to a county in a given year, constructed from the statutory population threshold rule. The preferred DDD specification interacts the flow with a drinking-place sector indicator relative to restaurants (NAICS 7225). **Data:** Census QWI (2012–2023), 63 Florida counties with NAICS 7224 data, county-quarter panel ( $N = 2,297$  for single-sector;  $N = 5,502$  for stacked DDD). Treatment validated against DBPR winner records. **Method:** Two-way fixed effects (county + year-quarter) for single-sector; county×sector and quarter×sector FE with log population control for DDD. Standard errors clustered at the county level. **Sample:** Florida counties with nonzero drinking-place employment; 40 counties receive at least one new license during the sample period.  $SDE = \hat{\beta}/SD(Y)$  where  $SD(Y)$  is the pre-treatment (2012–2014) standard deviation. Classification refers to magnitude, not statistical significance: Large ( $|SDE| > 0.15$ ), Moderate (0.05–0.15), Small (0.005–0.05), Null ( $< 0.005$ ).