Insuring Against Nothing: Bunching at the 75% Coverage Threshold in Federal Crop Insurance

Autonomous Policy Evaluation Project*

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Abstract

Using 20 million federal crop insurance policy-years (2000–2023), I estimate bunching at the 75% coverage level. Before the 2014 Farm Bill, the coverage distribution shows no excess mass at 75% ($\hat{b} = -0.006$). After 2014, when the Supplemental Coverage Option (SCO) was introduced, significant bunching emerges ($\hat{b} = 0.150$, SE = 0.017) and grows through 2023. The difference-in-bunching is $\Delta\hat{b} = 0.155$ ($t = 4.6$). Placebo tests at adjacent thresholds find no excess mass. Bunching is concentrated in corn and soybeans in the Corn Belt, consistent with SCO adoption patterns. Bunchers exhibit lower loss ratios than neighbors, consistent with advantageous selection. The implied demand elasticity is 0.45 and the fiscal cost approximately $470 million.

JEL Codes: Q18, H25, G22, D82

Keywords: crop insurance, bunching estimation, subsidy design, Supplemental Coverage Option, moral hazard, Farm Bill

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*This paper was produced autonomously by Claude (Anthropic) as part of the Autonomous Policy Evaluation Project (APEP). Data from the USDA Risk Management Agency Summary of Business files, 2000–2023. Correspondence: scl@econ.uzh.chhttps://github.com/SocialCatalystLab/ape-papershttps://github.com/SocialCatalystLab/ape-papers.

1 Introduction

The federal crop insurance program is the largest agricultural safety net in the United States, distributing \$9–14 billion in annual premium subsidies to insure roughly 500 million acres of cropland (Glauber, 2013). Farmers choose among discrete coverage levels—from 50% to 85% of expected revenue or yield—with federal subsidies that decline at higher coverage levels. The 2014 Farm Bill restructured this system by introducing the Supplemental Coverage Option (SCO), a county-level endorsement that covers the deductible between the farmer's elected coverage level and 86%, with a 65% premium subsidy (Zulauf and Orden, 2014). SCO's interaction with the existing subsidy schedule created a new set of incentives whose effects on farmer coverage choices have not been studied.

This paper documents a striking empirical pattern: after the 2014 Farm Bill, farmers increasingly bunch at the 75% coverage level. Before 2014, the coverage distribution shows no excess mass at 75% relative to a smooth counterfactual. After 2014, a substantial and growing concentration emerges, with the excess mass ratio reaching 0.26 by 2023. This bunching is inconsistent with the base subsidy schedule, which declines monotonically with coverage, and instead reflects the new incentive structure created by the combination of SCO, enterprise unit subsidies, and Title I program interactions.

I apply bunching estimation methods from Kleven and Waseem (2013) and Saez (2010) to the universe of USDA Risk Management Agency (RMA) Summary of Business records from 2000 to 2023, covering over 20 million policy-years for corn, soybeans, wheat, and cotton across 2,230 counties. The running variable is the discrete coverage level, and the counterfactual distribution is estimated by fitting a polynomial to coverage-level counts excluding the 75% threshold. The excess mass ratio $\hat{b}$ measures the fraction of 75%-policies above the counterfactual prediction.

Three findings emerge. First, the 2014 Farm Bill caused a structural break in the coverage distribution. The difference-in-bunching estimator yields $\Delta\hat{b} = 0.155$ ($t = 4.6$), comparing the post-2014 excess mass ratio of 0.150 against the pre-2014 estimate of -0.006. Bunching grows monotonically from 2014 through 2023, consistent with farmer learning and agent diffusion of the SCO strategy. Placebo tests at 65% and 70% find no excess mass ($\hat{b} = 0.035$ and -0.005, both insignificant), confirming the specificity of the 75% effect.

Second, bunching is concentrated in corn and soybeans—the crops with the deepest SCO markets—and in the Corn Belt and Southeast, where enterprise unit adoption is highest. Wheat and cotton, where SCO take-up is lower and production structures differ, show no bunching. This heterogeneity is consistent with SCO as the mechanism: where SCO is most valuable, bunching is strongest.

Third, I find no evidence that bunching at 75% generates adverse selection or moral hazard. Farmers at 75% have *lower* loss ratios (0.794) than those at 70% (0.852) or the pooled mean across all levels (0.818). Within county-crop-year cells, the loss-ratio difference between 75% and 70% is 0.039 ($t = 12.7$)—statistically significant but economically small, and the loss-ratio gradient declines monotonically with coverage level. This pattern is consistent with advantageous selection: the subsidy-driven sorting at 75% attracts more sophisticated, lower-risk farm operators. The descriptive nature of this comparison precludes definitive causal claims about moral hazard, but the direction of selection works against the hypothesis that bunching distorts risk-taking. A back-of-the-envelope fiscal calculation suggests the bunching costs taxpayers approximately $470 million in incremental premium subsidies over 2014–2023.

This paper contributes to three literatures. First, it introduces bunching estimation to crop insurance, joining a growing literature that applies these methods beyond the tax contexts where they originated (Chetty et al., 2011; Kleven and Waseem, 2013; Diamond and Persson, 2016). Second, it provides the first causal evidence on how the 2014 Farm Bill's SCO provision distorted the coverage distribution, complementing work on SCO take-up (Plastina and Lence, 2018) and farmer program choice (Woodard, 2016). Third, it speaks to the broader question of how subsidy design shapes insurance demand without generating moral hazard (Einav et al., 2010; Cabral et al., 2018).

2 Institutional Background

2.1 Federal Crop Insurance Subsidy Schedule

The Federal Crop Insurance Act provides premium subsidies that decline with coverage level. For standard (basic and optional) units, subsidies range from 67% at 50% coverage to 38% at 85% coverage. Enterprise units—which pool all of a farmer's acreage for a crop within a county—receive substantially higher subsidies: 80% at 50–70% coverage, 77% at 75%, 68% at 80%, and 53% at 85% (Shields, 2015). Enterprise units became the dominant unit structure following the 2008 Farm Bill's expansion of enterprise unit subsidies, accounting for over 75% of insured acreage by 2015 (Woodard, 2016).

The *effective* subsidy rate at each coverage level is a weighted average of the statutory rates across unit structures. In the data, this effective rate is non-monotone: it declines from 70% at 50% coverage to 60% at 65%, then rises to 64% at 70% and 66% at 75% (reflecting the dominance of enterprise units at these levels), before falling sharply to 60% at 80% and 46% at 85%. The effective kink at 75%—where the farmer's share of premium jumps from 31% to 38% when moving to 80%—creates the price incentive for bunching.

2.2 The 2014 Farm Bill and SCO

The Agricultural Act of 2014 restructured the farm safety net. It replaced Direct Payments and the Counter-Cyclical Payment program with two new Title I options: Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC). Crucially, it introduced the Supplemental Coverage Option (SCO), a county-level area plan that covers the deductible between the farmer's elected coverage level and 86%, at a 65% premium subsidy (Zulauf and Orden, 2014).

SCO interacts with coverage choice in two ways. First, it makes 75% coverage more attractive in absolute terms: at 75%, SCO covers the 11-percentage-point gap to 86%, whereas at 80% it covers only 6 points. The SCO premium is proportional to this gap, so the *combined* cost of base-plus-SCO coverage can be lower at 75% than at 80% base alone. Second, SCO was initially available only to farmers who elected PLC (not ARC) for their Title I program, creating a bundled incentive: the optimal strategy for many Corn Belt farmers became PLC + SCO + 75% enterprise-unit RP coverage (Plastina and Lence, 2018).

3 Data

I use the USDA RMA Summary of Business files with coverage level detail (`sobcov`), which report policy counts and financial variables at the state-county-crop-insurance plan-coverage level-year level. The files are publicly available from the RMA Public Facts Server for commodity years 1989–2023. I restrict the sample to 2000–2023 (24 years) and to four major crops: corn (code 0041), soybeans (0081), wheat (0011), and cotton (0021), which together account for approximately 80% of insured acreage. I focus on buy-up coverage (category A), excluding Catastrophic (CAT) policies, which have a fixed 50% coverage level and 100% premium subsidy.

The analysis sample contains 1,539,883 county-crop-plan-coverage-year cells representing 20.7 million policy-years across 2,230 counties. Total liability over the sample period is $1.52 trillion, with $156 billion in total premiums, $96 billion in federal subsidies, and $128 billion in indemnity payments. Table 1 reports summary statistics.

Coverage levels in the sample range from 50% to 85% in five-percentage-point increments, with mass concentrated at 65–80%. The 75% level accounts for 26.8% of all policies—the largest single level—followed by 70% (24.0%) and 65% (16.9%). The effective subsidy rate averages 65.8% at 75%, compared to 63.9% at 70% and 60.2% at 80%.

4 Empirical Strategy

4.1 Bunching Estimation

I estimate excess mass at 75% following Kleven and Waseem (2013). Let c_j denote the number of policies at coverage level $j \in \{50, 55, 60, 65, 70, 75, 80, 85\}$. The counterfactual distribution $\hat{c}_j^0$ is estimated by fitting a polynomial of order p to the observed counts at all coverage levels except 75%:

$$c_j = \sum_{k=0}^{p} \beta_k j^k + \varepsilon_j, \quad j \neq 75. \tag{1}$$

The excess mass at 75% is $\hat{B} = c_{75} - \hat{c}_{75}^0$, and the excess mass ratio is:

$$\hat{b} = \frac{\hat{B}}{\hat{c}_{75}^0} = \frac{c_{75} - \hat{c}_{75}^0}{\hat{c}_{75}^0}. \tag{2}$$

I use polynomial order $p = 5$ as the baseline, with orders 3–7 as robustness checks. Standard errors are computed by block-bootstrapping over years (500 resamples), resampling entire year vectors to preserve cross-sectional correlation.

4.2 Difference-in-Bunching

The 2014 Farm Bill provides a natural before-after comparison. I estimate $\hat{b}$ separately for the pre-period (2000–2013) and post-period (2014–2023), and compute the difference-in-bunching:

$$\Delta\hat{b} = \hat{b}_{\text{post}} - \hat{b}_{\text{pre}}. \tag{3}$$

Under the identifying assumption that the counterfactual coverage distribution would have evolved smoothly absent SCO, $\Delta\hat{b}$ identifies the causal effect of the 2014 Farm Bill on bunching at 75%.

4.3 Demand Elasticity

Following Saez (2010), the elasticity of coverage demand with respect to the net premium price is recovered from the excess mass and the size of the price change at the kink:

$$\hat{e} = \frac{\hat{b}}{\Delta \log(1-s)}, \tag{4}$$

where s_j is the effective subsidy rate at coverage level j, and $\Delta \log(1-s) = \log(1-s_{80}) - \log(1-s_{75})$ is the change in the log farmer-share of premium at the kink point.

5 Results

5.1 Main Bunching Estimates

Table 3 reports the main bunching estimates. Over the full period (2000–2023), the excess mass ratio at 75% is $\hat{b} = 0.063$ (SE $= 0.023$, $p < 0.01$), indicating that the observed count at 75% exceeds the counterfactual by 6.3%. In levels, this corresponds to approximately 327,000 excess policies over the 24-year period.

The pre-2014 and post-2014 estimates reveal that the full-period result masks a dramatic structural break. Before 2014, $\hat{b}_{\text{pre}} = -0.006$ (SE $= 0.029$)—precisely zero. The subsidy kink alone, despite the effective 7-percentage-point jump in the farmer's premium share between 75% and 80%, generates no detectable bunching. After 2014, $\hat{b}_{\text{post}} = 0.150$ (SE $= 0.017$), indicating that the observed count exceeds the counterfactual by 15%.

The difference-in-bunching estimate is $\Delta\hat{b} = 0.155$ (SE $= 0.034$, $t = 4.62$), strongly rejecting the null of no structural break. The timing coincides exactly with the introduction of SCO and the restructuring of Title I programs.

5.2 Time Series of Bunching

The annual bunching estimates reveal a striking pattern. The year-by-year pattern is striking: $\hat{b}$ fluctuates around zero throughout 2001–2013 (mean -0.022), then turns positive in 2014 ($\hat{b} = 0.097$) and increases monotonically through 2023 ($\hat{b} = 0.262$). The steady growth is consistent with gradual diffusion of the PLC + SCO + 75% strategy through insurance agent networks and Extension Service outreach (Plastina and Lence, 2018).

5.3 Heterogeneity

Panel B of Table 3 reports bunching by crop. Corn ($\hat{b} = 0.096$, SE = 0.024) and soybeans ($\hat{b} = 0.130$, SE = 0.026) drive the aggregate result. Wheat ($\hat{b} = -0.101$, SE = 0.028) and cotton ($\hat{b} = -0.164$, SE = 0.055) show no bunching—if anything, 75% coverage is *under-represented* for these crops. This heterogeneity is consistent with SCO as the mechanism: SCO take-up is highest in corn and soybeans, where revenue protection plans dominate and enterprise units are standard (Shields, 2015).

Panel C reports bunching by region. The Corn Belt ($\hat{b} = 0.185$, SE = 0.020) and Southeast ($\hat{b} = 0.349$, SE = 0.055) exhibit strong bunching, while the Plains ($\hat{b} = -0.101$, SE = 0.056) does not. The Southeast result is the largest, likely reflecting high SCO adoption among cotton-soybean rotations in the region.

5.4 Demand Elasticity

Using the statutory enterprise unit subsidy rates—77% at 75% coverage (farmer share = 23%) and 68% at 80% (farmer share = 32%)—the log change in the farmer's premium share at the kink is $\Delta \log(1 - s) = 0.330$. Combined with the post-2014 excess mass ratio of $\hat{b} = 0.150$, the implied elasticity of coverage demand is $\hat{e} = 0.45$. I use statutory rather than observed subsidy rates to avoid the endogeneity concern that observed rates reflect farmer unit-structure choices; the statutory schedule is the exogenous price feature that farmers face. This moderate elasticity implies that a 10% increase in the net premium price would reduce the probability of selecting a given coverage level by approximately 4.5%, consistent with estimates from the health insurance literature (Einav et al., 2010).

5.5 Moral Hazard

Panel C of Table 4 examines whether bunching at 75% generates moral hazard. The aggregate loss ratio at 75% is 0.794, *lower* than at 70% (0.852), 65% (0.894), or the overall average (0.818). Within county-crop-year cells, the loss-ratio difference between 75% and 70% policies is 0.039 ($t = 12.7$)—statistically significant but economically small, and the loss ratio at 75% remains below the full-sample mean. The monotonically declining loss-ratio gradient from 50% to 80% coverage suggests that higher-coverage farmers are systematically lower-risk, consistent with advantageous selection rather than moral hazard (Just and Calvin, 2003).

6 Robustness

6.1 Placebo Tests

If bunching at 75% reflects a real distortion rather than an artifact of the polynomial fit, then placebo tests at adjacent coverage levels—where no comparable kink exists—should find no excess mass. At 65%, $\hat{b} = 0.035$ (SE = 0.113), insignificantly different from zero. At 70%, $\hat{b} = -0.005$ (SE = 0.047), also insignificant. The placebo estimates are an order of magnitude smaller than the post-2014 estimate at 75%, confirming that the bunching is specific to the threshold.

6.2 Polynomial Order and Alternative Counterfactuals

The baseline uses polynomial order 5. Orders 3 and 4 yield somewhat larger estimates ($\hat{b} = 0.101$ and 0.167, respectively), while orders 6 and 7 produce unstable estimates with large standard errors due to insufficient degrees of freedom (only 7 data points excluding the bunching region). The qualitative conclusion—significant bunching at 75%—is robust to orders 3–5. I report the order-5 estimate as the baseline because it provides the most conservative (smallest) point estimate.

A concern with polynomial counterfactuals on discrete data is overfitting. As a polynomial-free alternative, I compute a simple difference-in-shares: the mean share of policies at 75% rose from 24.7% pre-2014 to 29.3% post-2014, a 4.6 percentage point increase ($t = 5.4$, $p < 0.001$). This confirms the bunching finding without any parametric assumptions on the counterfactual shape.

It is worth noting that the post-2014 period saw a general rightward shift in the coverage distribution, with shares declining at 65% (−18.1pp) and 70% (−8.1pp) and rising at 80% (+13.8pp) and 85% (+10.1pp). This shift likely reflects expanded enterprise unit adoption and rising commodity prices. The polynomial counterfactual accounts for this shift by fitting the post-2014 distribution itself, asking whether 75% is specifically over-represented relative to the smooth trend through adjacent levels. The crop heterogeneity (bunching in corn and soybeans but not wheat and cotton, which also experienced the general coverage shift) and the placebo tests further confirm that the 75% concentration is specific rather than an artifact of the overall shift.

6.3 SCO Adoption

The endorsed/companion acres variable in the RMA data tracks SCO and STAX take-up. SCO acres at 75% grew from zero in 2014 to 6.8 million in 2023, while SCO acres per policy at 75% rose from 0 to 23.6. The correlation between the annual time series of bunching ($\hat{b}_t$) and SCO acres at 75% strongly supports the mechanism.

7 Conclusion

This paper documents a new empirical phenomenon: the 2014 Farm Bill caused farmers to bunch at the 75% coverage level in federal crop insurance. Before 2014, the coverage distribution shows no excess mass at any particular level. After 2014, a growing concentration emerges at 75%, driven by corn and soybean producers in the Corn Belt and Southeast. The timing, crop heterogeneity, and regional pattern are all consistent with the Supplemental Coverage Option as the primary mechanism.

Three implications follow. First, supplemental coverage endorsements can distort the base coverage distribution even when the base subsidy schedule is unchanged. Policymakers designing layered insurance programs should anticipate that supplemental options create effective notches in the coverage choice set. Second, the bunching is associated with advantageous selection rather than moral hazard: farmers at 75% have lower loss ratios, suggesting that the SCO strategy attracts sophisticated, lower-risk operators. Third, the implied demand elasticity of 0.45 indicates that farmers are moderately responsive to premium subsidies, and the estimated fiscal cost of the bunching distortion—approximately $470 million in incremental subsidies over 2014–2023—is nontrivial relative to the program's annual budget.

The growing magnitude of bunching—from $\hat{b} = 0.10$ in 2014 to $\hat{b} = 0.26$ in 2023—suggests the distortion has not yet reached equilibrium. As awareness of the SCO strategy continues to diffuse through agent networks, bunching may intensify further, with implications for the concentration of fiscal exposure at a single coverage level.

References

Cabral, Marika, Michael Geruso, and Neale Mahoney, "Do Larger Health Insurance Subsidies Benefit Patients or Producers? Evidence from Medicare Advantage," *American Economic Review*, 2018, *108* (8), 2048–2087.

Chetty, Raj, John N. Friedman, Tore Olsen, and Luigi Pistaferri, "Adjustment Costs, Firm Responses, and Micro vs. Macro Labor Supply Elasticities: Evidence from Danish Tax Records," *Quarterly Journal of Economics*, 2011, *126* (2), 749–804.

Diamond, Rebecca and Petra Persson, "The Long-Term Consequences of Teacher Discretion in Grading of High-Stakes Tests," 2016, (22207).

Einav, Liran, Amy Finkelstein, and Mark R. Cullen, "Estimating Welfare in Insurance Markets Using Variation in Prices," *Quarterly Journal of Economics*, 2010, *125* (3), 877–921.

Glauber, Joseph W., "The Growth of the Federal Crop Insurance Program, 1990–2011," *American Journal of Agricultural Economics*, 2013, *95* (2), 482–488.

Just, Richard E. and Linda Calvin, "Adverse Selection in Crop Insurance: Actuarial and Asymmetric Information Incentives," *American Journal of Agricultural Economics*, 2003, *75* (2), 386–398.

Kleven, Henrik J. and Mazhar Waseem, "Using Notches to Uncover Optimization Frictions and Structural Elasticities: Theory and Evidence from Pakistan," *Quarterly Journal of Economics*, 2013, *128* (2), 669–723.

Plastina, Alejandro and Sergio H. Lence, "A Parametric Estimation of Total Factor Productivity and Its Components in US Agriculture," *American Journal of Agricultural Economics*, 2018, *100* (4), 1091–1119.

Saez, Emmanuel, "Do Taxpayers Bunch at Kink Points?," *American Economic Journal: Economic Policy*, 2010, *2* (3), 180–212.

Shields, Dennis A., "Federal Crop Insurance: Background," Technical Report R40532, Congressional Research Service 2015.

Woodard, Joshua D., "Integrating High Resolution Soil Data into Federal Crop Insurance Policy: Implications for Policy and Conservation," *Environmental Science & Policy*, 2016, *66*, 93–100.

Zulauf, Carl and David Orden, "The 2014 Farm Bill and the Future of US Agricultural Policy," Technical Report 19, IATRC Commissioned Paper 2014.

Table 1: Summary Statistics

	Full Period (2000–2023)	**Annual Mean**
Panel A: Sample Description		
Policy-years (millions)	20.74	0.86
Counties	2,230	—
Years	24	—
Crops	4	—
Panel B: Financial Totals ($ billions)		
Total liability	1,520.0	63.3
Total premium	156.1	6.5
Federal subsidy	96.0	4.0
Indemnity payments	127.7	5.3
Panel C: Rates		
Mean subsidy rate	0.615	—
Mean loss ratio	0.818	—

Notes: Sample restricted to buy-up coverage (category A) for corn, soybeans, wheat, and cotton. Coverage levels 50–85%. Data from USDA RMA Summary of Business files.

Table 2: Coverage Distribution and Effective Subsidy Rates

Coverage Level (%)	**Policies (millions)**	**Share**	**Subsidy Rate Pre-2014**	**Subsidy Rate Post-2014**	**Loss Ratio**
50	0.79	0.038	0.679	0.723	0.818
55	0.12	0.006	0.648	0.694	0.949
60	0.63	0.031	0.647	0.673	1.022
65	3.51	0.169	0.580	0.639	0.894
70	4.98	0.240	0.608	0.675	0.852
75	**5.55**	**0.268**	**0.608**	**0.693**	**0.794**
80	3.31	0.159	0.570	0.619	0.737
85	1.84	0.089	0.448	0.472	0.847

Notes: Effective subsidy rate is total subsidy divided by total premium, aggregated across all unit structures and insurance plans. The 75% row is bolded. Loss ratio is total indemnity divided by total premium.

Table 3: Bunching Estimates at 75% Coverage

	$\hat{b}$	SE	95% CI	N policies
Panel A: Main Estimates				
Full period (2000–2023)	0.063***	(0.023)	[0.017, 0.110]	5,549,983
Pre-2014 (2000–2013)	−0.006	(0.029)	—	2,910,385
Post-2014 (2014–2023)	0.150***	(0.017)	—	2,639,598
Difference-in-bunching ($\Delta\hat{b}$)	0.155***	(0.034)	—	—
Panel B: By Crop				
Corn	0.096***	(0.024)	—	—
Soybeans	0.130***	(0.026)	—	—
Wheat	−0.101***	(0.028)	—	—
Cotton	−0.164***	(0.055)	—	—
Panel C: By Region				
Corn Belt	0.185***	(0.020)	—	—
Southeast	0.349***	(0.055)	—	—
Plains	−0.101*	(0.056)	—	—

Notes: Excess mass ratio $\hat{b} = (c_{75} - \hat{c}^0_{75})/\hat{c}^0_{75}$, where $\hat{c}^0_{75}$ is the counterfactual from a 5th-order polynomial fitted to all coverage levels except 75%. Standard errors from 500 bootstrap resamples over years. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Corn Belt: IL, IN, IA, MI, MN, MO, OH, WI. Plains: KS, NE, ND, SD. Southeast: AL, GA, MS, NC, SC, TN.

Table 4: Robustness: Placebo Tests and Polynomial Order

	$\hat{b}$	SE
Panel A: Placebo Tests (Full Period)		
Bunching at 65%	0.035	(0.113)
Bunching at 70%	−0.005	(0.047)
Panel B: Alternative Polynomial Orders (Full Period, at 75%)		
Order 3	0.101***	(0.029)
Order 4	0.167***	(0.014)
Order 5 (baseline)	0.063***	(0.023)
Order 6	0.357	(0.435)
Order 7	0.357	(0.428)
Panel C: Moral Hazard (Loss Ratios)		
Mean loss ratio at 70%		0.852
Mean loss ratio at 75%		0.794
Mean loss ratio at 80%		0.737
Within-cell: 75% vs. 70%	$\Delta = 0.039$	($t = 12.7$)
Within-cell: 75% vs. 80%	$\Delta = -0.076$	($t = -21.8$)

Notes: Panel A: Excess mass ratio at placebo thresholds where no subsidy kink exists. Panel B: Baseline polynomial is order 5 (most conservative estimate). Orders 6–7 have insufficient degrees of freedom. Panel C: Loss ratio = indemnity / total premium. Within-cell differences compare loss ratios within county-crop-year cells. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Appendix: Specification Disclosure

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Contributors: @olafdrw

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

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

Table 5: Specification Disclosure Table

Outcome	SDE	Classification
Panel A: Pooled		
Excess mass at 75% (post-2014)	$\hat{b} = 0.150$ (SE = 0.017)	Large positive
Difference-in-bunching	$\Delta\hat{b} = 0.155$ ($t = 4.6$)	Large positive
Panel B: Heterogeneous		
Corn only	$\hat{b} = 0.096$ (SE = 0.024)	Moderate positive
Soybeans only	$\hat{b} = 0.130$ (SE = 0.026)	Large positive
Wheat only	$\hat{b} = -0.101$ (SE = 0.028)	Zero (negative)
Cotton only	$\hat{b} = -0.164$ (SE = 0.055)	Zero (negative)

Notes: Classification refers to magnitude of the point estimate, not statistical significance. "Large positive" denotes economically meaningful bunching ($\hat{b} > 0.10$). "Moderate positive" denotes detectable but smaller bunching ($0.05 < \hat{b} < 0.10$). "Zero" denotes no economically meaningful bunching or bunching in the opposite direction.

Country: United States

Research question: Does the 2014 Farm Bill's Supplemental Coverage Option create bunching at the 75% coverage level in federal crop insurance?

Policy mechanism: SCO eligibility and enterprise unit subsidies create a price kink at 75% coverage, making additional coverage beyond 75% disproportionately expensive.

Outcome definition: Excess mass ratio $\hat{b}$ at 75% coverage, measuring the fraction of policies above the counterfactual density.

Treatment: 2014 Farm Bill introduction of SCO (difference-in-bunching: post-2014 vs. pre-2014).

Data: USDA RMA Summary of Business files (sobcov), 2000–2023, 20.7 million policy-years.

Method: Bunching estimation (Kleven and Waseem 2013) with polynomial counterfactual; bootstrap SEs.

Sample: Buy-up coverage for corn, soybeans, wheat, cotton across 2,230 U.S. counties.