For Online Publication

A Appendix Tables

Table A.1: Construction of 701 Adopter and Main Analysis Samples

Sample Restriction	Total Munis	701 Adopters	Adoption Rate
All zoning jurisdictions in CBSAs	20,956	3,093	14.8%
Municipalities with historical population	15,222	2,968	19.5%
+ between [1000, 50000] 1960 residents	7,441	2,579	34.7%
Balanced panel of municipalities since 1970	2,551	1,259	49.4%
+ distance to CBD filter	1,866	937	50.2%

Notes: This table overviews the data processing steps we take to process the universe of U.S. zoning jurisdictions into the samples we use for 701 assistance statistics and regression analysis. We report the number of adopters at each successive sample restriction, based on if they are matched in our 701 project directories, as well as total municipalities. The balanced panel of municipalities includes municipalities above 50,000 residents that are ineligible for 701 assistance.

Table A.2: Overall covariate means between adopters and non-adopters

	Mean Values			
Variable	Adopter	Non-adopt	Difference	p-value
Distance to metro CBD (m)	29305.633	28987.201	318.432	0.624
Population Growth Rate 1950-1960	0.537	0.479	0.058	0.115
Highway Intersects Municipality	0.318	0.201	0.116***	0.000
Distance to Highway (km)	17.396	19.206	-1.810**	0.023
Number of Households (1940)	1815.153	1273.490	541.663***	0.000
Total Income per Household (1940 $)	1516.372	1461.267	55.105***	0.000
Average Home Value (1940 $)	3445.462	3116.748	328.713***	0.000
College Graduate Share	0.093	0.084	0.009***	0.000
Blue Collar Worker Share	0.442	0.427	0.016***	0.000
Agricultural Worker Share	0.140	0.184	-0.044***	0.000
Manufacturing Worker Share	0.209	0.204	0.005*	0.068

Significance levels: $^{*} = 10\%$; $^{**} = 5\%$; $^{***} = 1\%$.

Notes: Following the tabulation of 1940 covariates as described in Section 4.1, this table compares means tabulated based on 701 adoption status, as recorded in the HUD/HHFA project directories. Municipalities analyzed have 1960 Census populations of at least 1,000 and at most 50,000; ineligible municipalities are excluded in this Table. Units of the variable are reported in the leftmost column. All covariates tested in this table are also used in the covariate balance tests of Table 1.

Table A.3: Table 2 results under different bandwidths

	(1)	(2)	(3)	(4)	(5)
	(Log) New Units - Full sample				
Coefficient	-0.733**	-0.619**	-0.892***	-0.767***	-0.743***
	(0.287)	(0.294)	(0.288)	(0.277)	(0.259)
Implied ATT	-0.217	-0.183	-0.264	-0.227	-0.220
Observations	15,022	14,119	14,112	14,112	14,112
R^2 (within)	0.035	0.116	0.055	0.055	0.056
	(Log) New Units - More Restricted (7.5k–160k)				
Coefficient	-0.733**	-0.681*	-0.772**	-0.649*	-0.557*
	(0.356)	(0.360)	(0.359)	(0.345)	(0.317)
Implied ATT	-0.217	-0.202	-0.228	-0.192	-0.165
Observations	8,225	7,833	7,833	7,833	7,833
R^2 (within)	0.016	0.035	0.033	0.028	0.030
	(Log) New Units - Donut hole around 50k				
Coefficient	-0.663*	-0.662**	-0.742**	-0.685**	-0.617**
	(0.340)	(0.332)	(0.340)	(0.323)	(0.308)
Implied ATT	-0.196	-0.196	-0.220	-0.203	-0.182
Observations	9,275	8,799	8,792	8,792	8,792
R^2 (within)	0.017	0.055	0.036	0.035	0.035
Pop. Controls		✓	✓	✓	✓
Location Controls			✓	✓	✓
Region × Year FE				✓	
Division × Year FE					✓

Significance levels: * = 10%; ** = 5%; *** = 1%.

Table A.4: Primary outcome results over placebo eligibility threshold

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcomes - Restricted w/ 20K threshold					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	0.004	0.009	0.020	0.087	-0.108	0.800
	(0.310)	(0.033)	(0.037)	(0.154)	(0.066)	(2.529)
Observations	8,190	8,190	8,190	7,279	5,866	8,190
R^2 (within)	0.046	0.048	0.020	0.068	0.092	0.015

Significance levels: * = 10%; ** = 5%; *** = 1%.

Table A.5: Primary outcome results using 701 adoption treatment

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcomes - One side restricted ($\leq 200K$)					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	0.188***	0.007*	-0.012**	0.096***	-0.035***	1.257***
	(0.042)	(0.004)	(0.005)	(0.020)	(0.010)	(0.288)
Observations	13,720	13,720	13,720	12,322	9,890	13,720
R^2 (within)	0.028	0.038	0.013	0.025	0.058	0.007
	Outcomes - Restricted ($5K - 200K$)					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	0.296***	0.001	-0.005	0.114***	-0.056***	1.359***
	(0.046)	(0.005)	(0.005)	(0.022)	(0.011)	(0.333)
Observations	9,674	9,674	9,674	8,890	7,076	9,674
R^2 (within)	0.036	0.019	0.010	0.026	0.067	0.008

Significance levels: $^{*} = 10\%$; $^{**} = 5\%$; $^{***} = 1\%$.

Table A.6: Primary outcome results controlling for workforce confounders

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcomes - Restricted w/ state-level workforce composition					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	-0.664**	-0.078**	0.080**	0.260*	-0.108	4.148**
	(0.317)	(0.036)	(0.037)	(0.135)	(0.080)	(1.892)
Observations	9,674	9,674	9,674	8,890	7,076	9,674
R^2 (within)	0.043	0.029	0.022	0.070	0.087	0.015

Significance levels: * = 10%; ** = 5%; *** = 1%.

Table A.7: Primary outcome results controlling for state environmental protection

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcomes - Restricted w/ SEPA adoption dummy					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	-0.662**	-0.078**	0.085**	0.209	-0.102	5.133***
	(0.318)	(0.037)	(0.037)	(0.130)	(0.080)	(1.885)
Observations	9,674	9,674	9,674	8,890	7,076	9,674
R^2 (within)	0.042	0.027	0.017	0.078	0.087	0.012
	Outcomes - Restricted w/out SEPA states					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	-0.594*	-0.072**	0.054	0.209	-0.111	4.552**
	(0.327)	(0.036)	(0.038)	(0.127)	(0.081)	(1.937)
Observations	7,679	7,679	7,679	7,083	5,640	7,679
R^2 (within)	0.039	0.029	0.027	0.065	0.098	0.012

Significance levels: * = 10%; ** = 5%; *** = 1%.

Table A.8: Primary outcome results controlling for statewide planning legislation

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcomes - Restricted w/ planning index controls					
	(Log) New Units	% Apt Units (Cumul. to 2010)	% SF Units (Cumul. to 2010)	Med. Home Values	Share Below 1st Qtile Values	MLS Requirement Restrictiveness
Coefficient	-0.823***	-0.090**	0.094***	0.293**	-0.136*	3.869**
	(0.316)	(0.036)	(0.036)	(0.133)	(0.079)	(1.895)
Observations	9,674	9,674	9,674	8,890	7,076	9,674
R^2 (within)	0.062	0.042	0.034	0.078	0.094	0.022

Significance levels: * = 10%; ** = 5%; *** = 1%.

Table A.9: Persistent associations of MLS restrictiveness with market outcomes

Outcome		Pre-1960s Variation		Post-1960s Variation		
		1 Lag	2 Lags	0 Lags	1 Lag	2 Lags
MLS Requirement Restrictiveness	Coefficient	0.884***	0.676***	—	0.657***	0.484***
		(0.071)	(0.050)		(0.028)	(0.044)
	R^2 (within)	0.366	0.177	NA	0.531	0.370
% Apartment Units (Cumulated)	Coefficient	-0.192***	-0.199***	-0.329***	-0.271***	-0.182***
		(0.048)	(0.053)	(0.029)	(0.034)	(0.042)
	R^2 (within)	0.052	0.054	0.074	0.065	0.054
% SF Units (Cumulated)	Coefficient	0.369**	0.287**	0.578***	0.508***	0.425***
		(0.126)	(0.113)	(0.047)	(0.056)	(0.072)
	R^2 (within)	0.072	0.068	0.103	0.093	0.077
(Log) Median Home Values	Coefficient	0.048	0.184	0.769***	0.871***	1.005***
		(0.395)	(0.326)	(0.097)	(0.138)	(0.176)
	R^2 (within)	0.043	0.045	0.060	0.061	0.064
Share Below Metro's 1st Quartile Home Values	Coefficient	0.056	-0.001	-0.319***	-0.386***	-0.423***
		(0.139)	(0.119)	(0.038)	(0.036)	(0.037)
	R^2 (within)	0.008	0.014	0.054	0.064	0.075

Significance levels: * = 10%; ** = 5%; *** = 1%.

B Appendix Exhibits

Figure B.1: The scaling up of 701 applications and expenditures

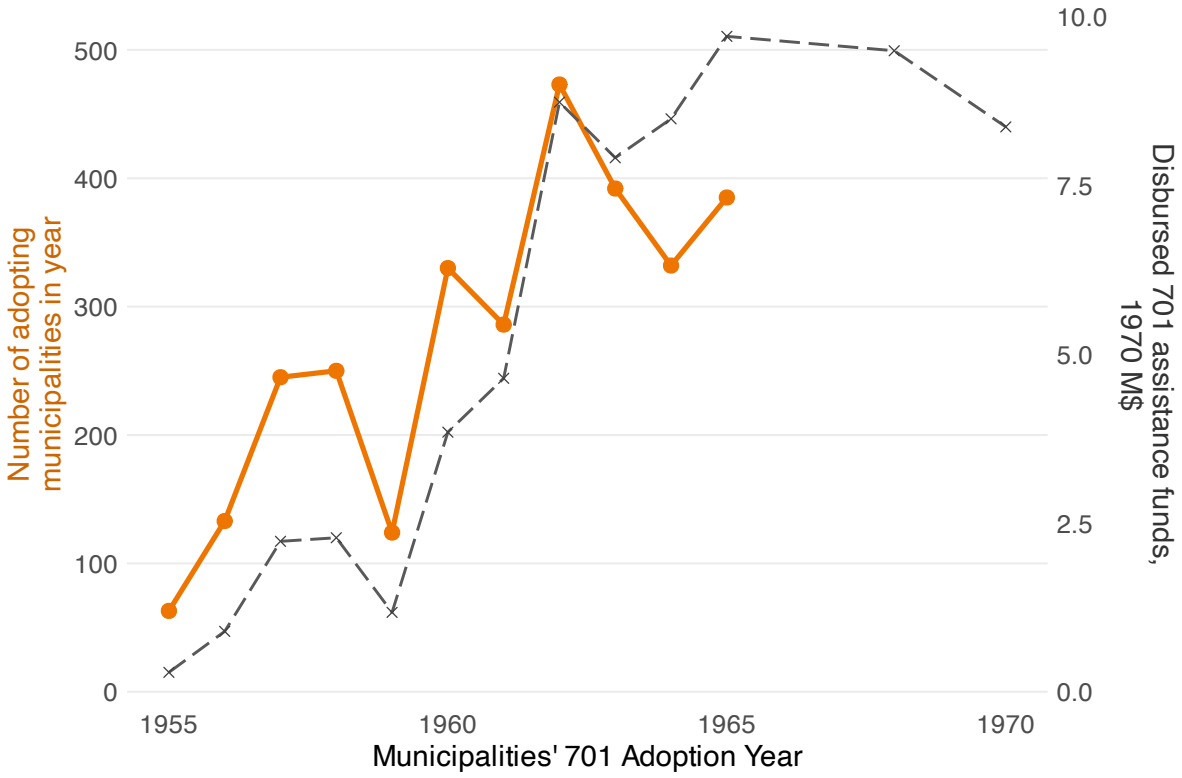


Figure B.2: Two tiers of state-level 701 adoption rates, as of 1962

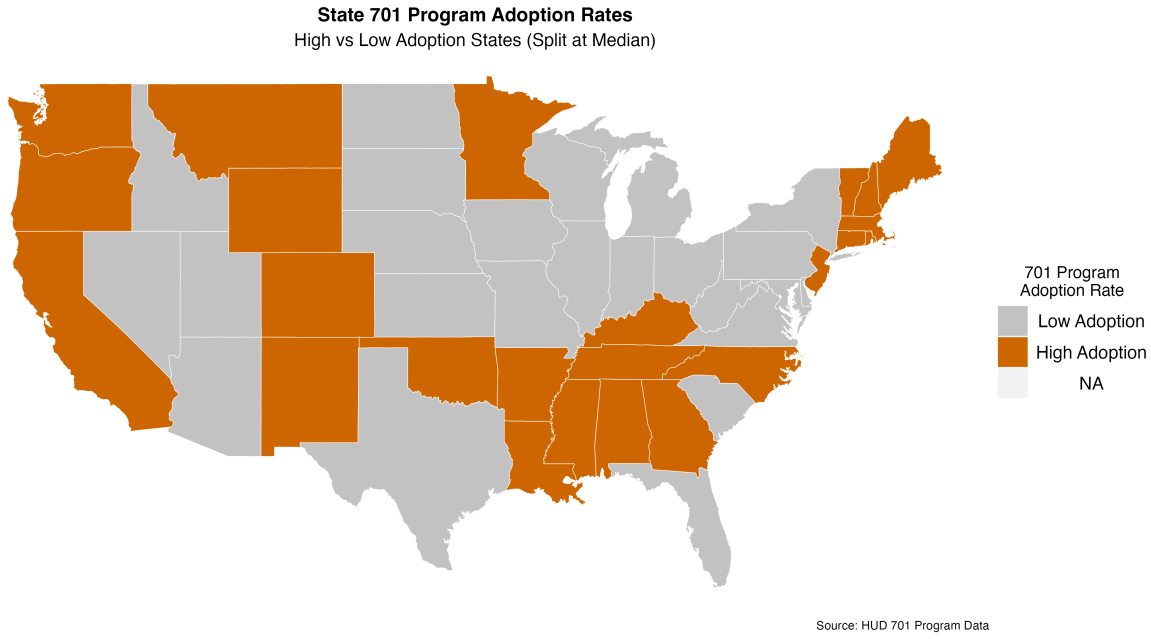


Figure B.3: Parallel trends comparisons for Lin and Peri (2025), Assumption I

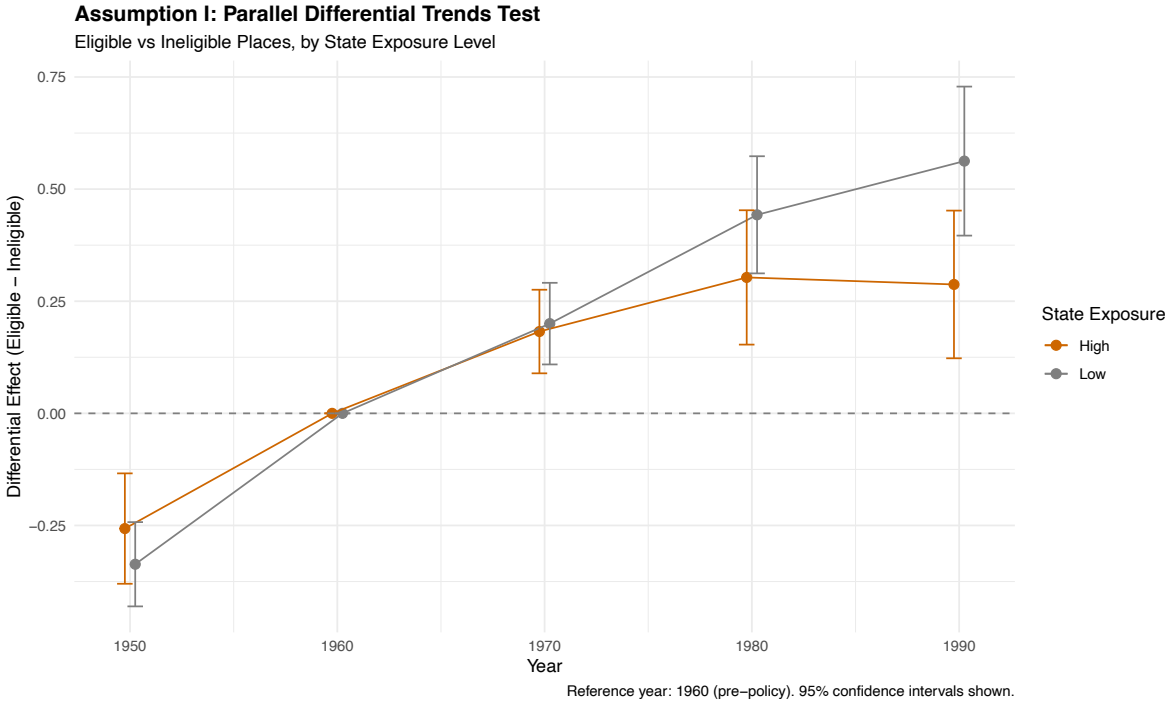


Figure B.4: Parallel trends comparisons for Lin and Peri (2025), Assumption II

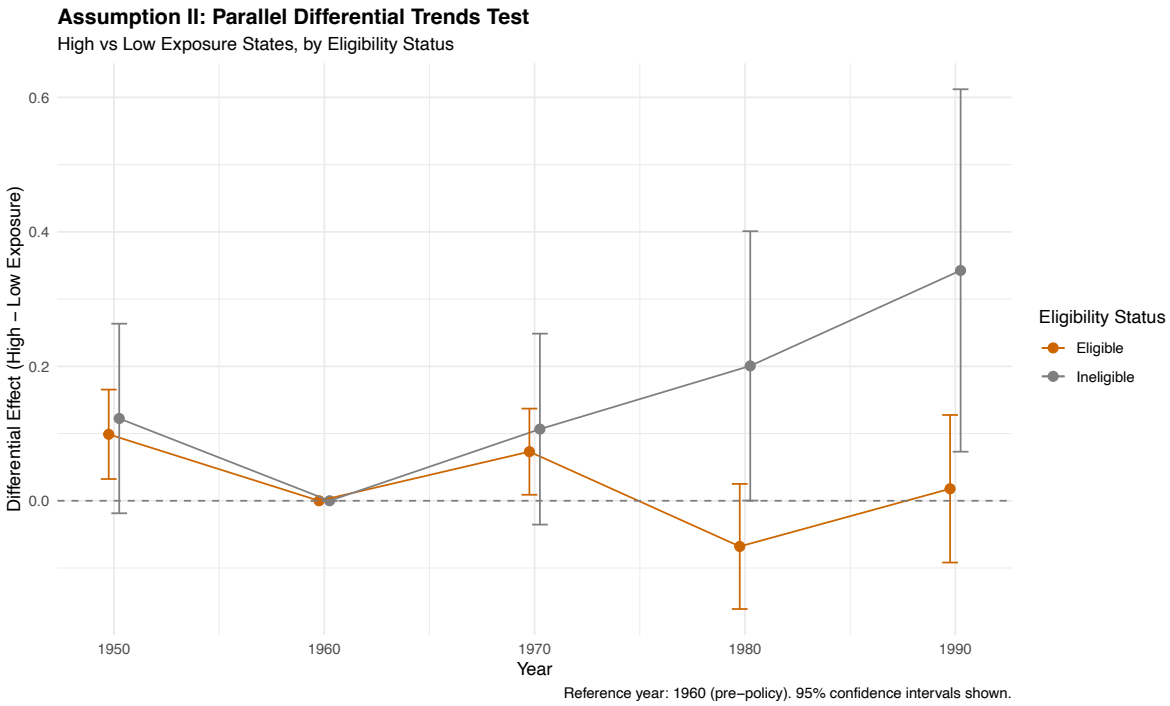


Figure B.5: Pre-period conditional independence over analysis sample thresholds

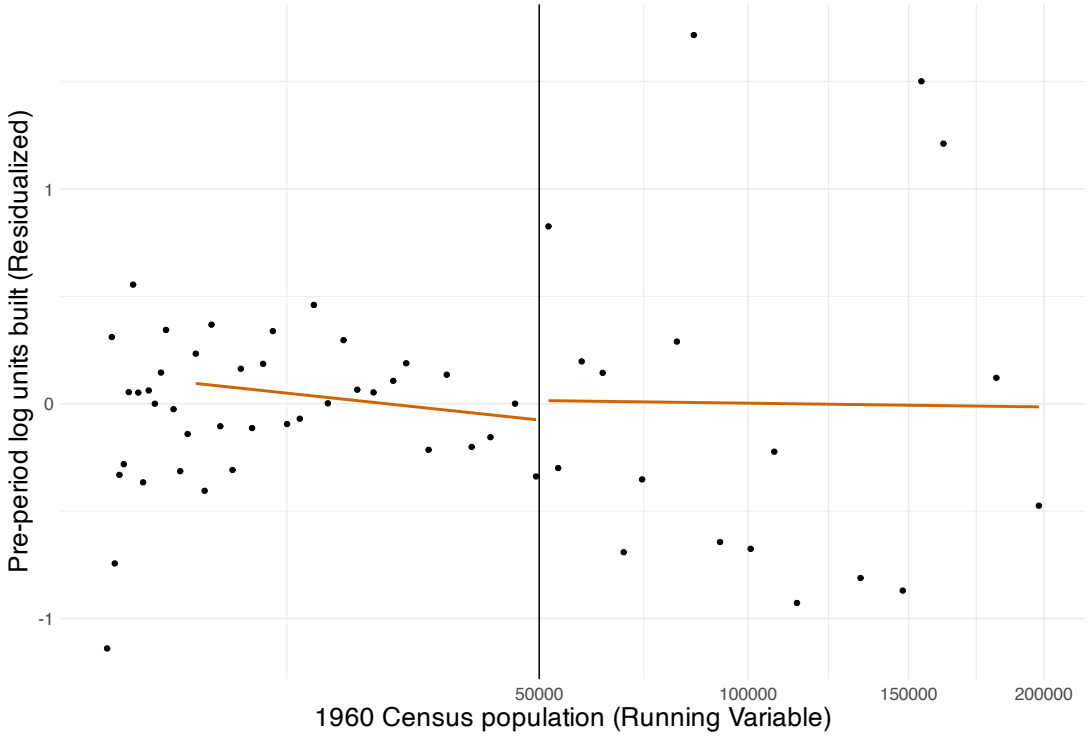


Figure B.6: Triple difference event studies for non-supply outcomes

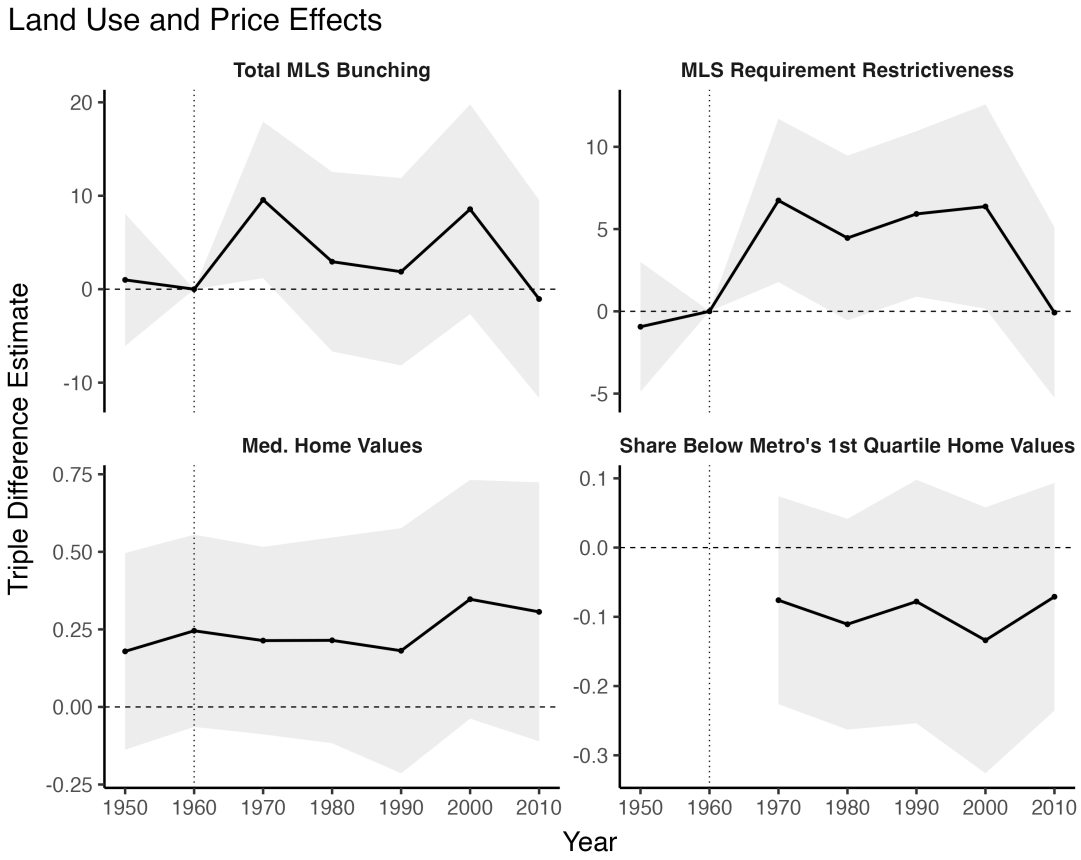
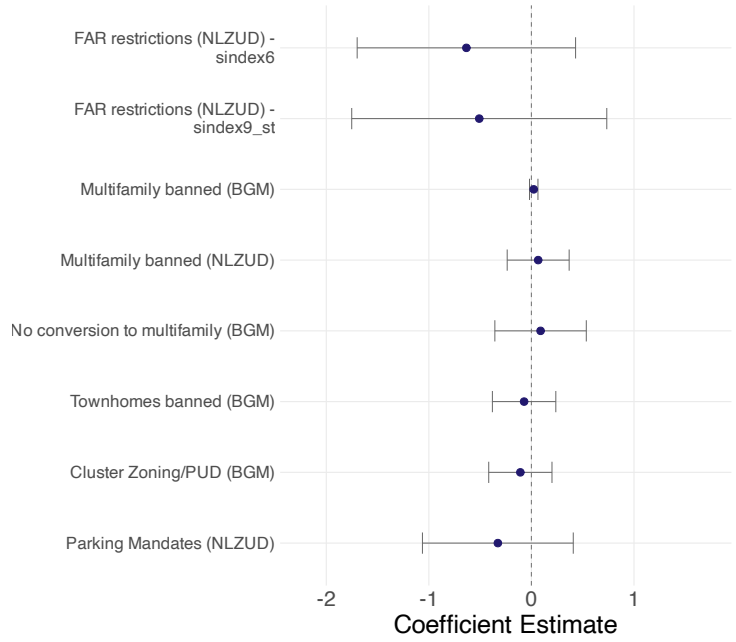


Figure B.7: Triple difference event studies for available annexation outcome

Figure B.8: Path Dependence In Specific Growth Controls and Land Use Regulations

(a) Changes to regulations generally adopted pre-701



(b) Regulations generally adopted post-701

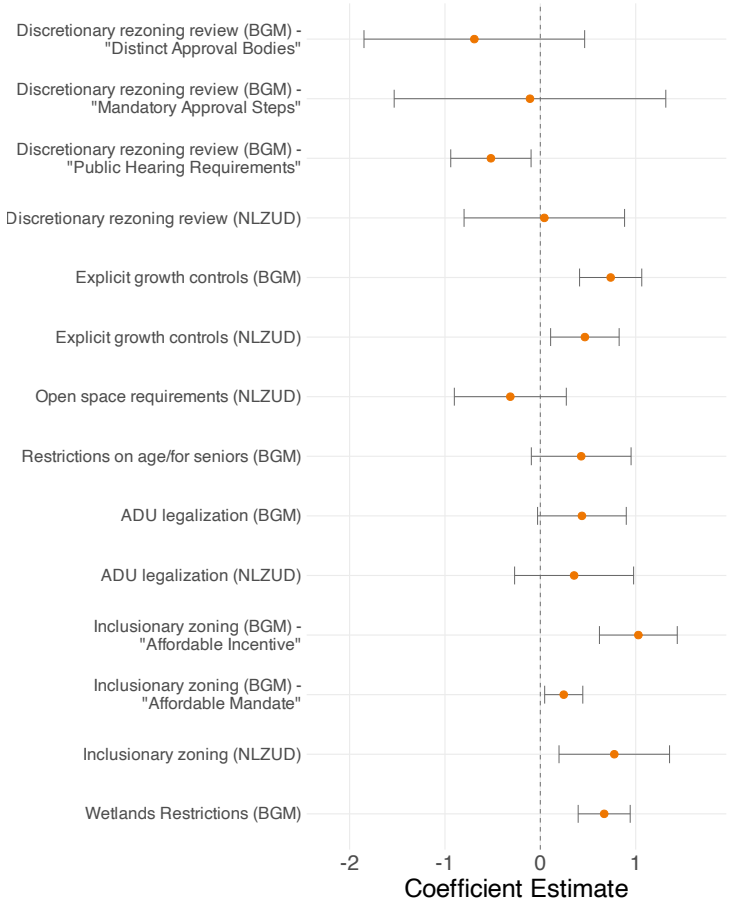
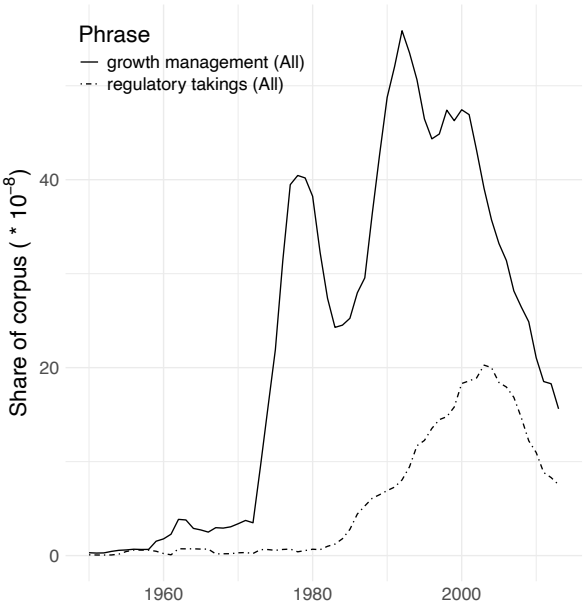


Figure B.9: Google Ngram analysis of planning practices

(a) Growth control practices



(b) Value capture practices

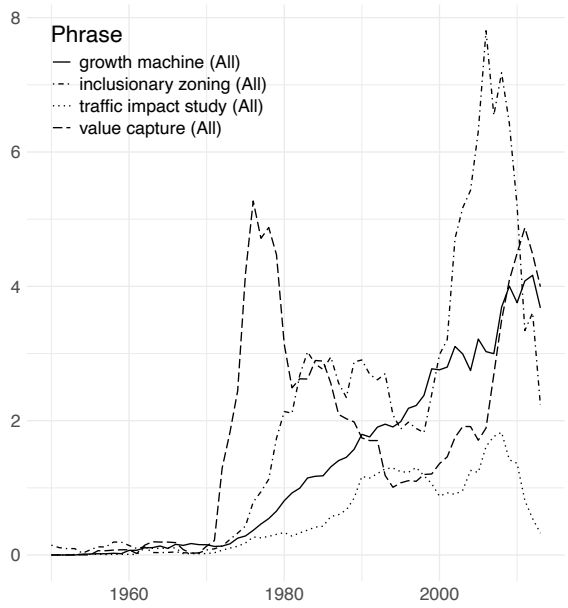
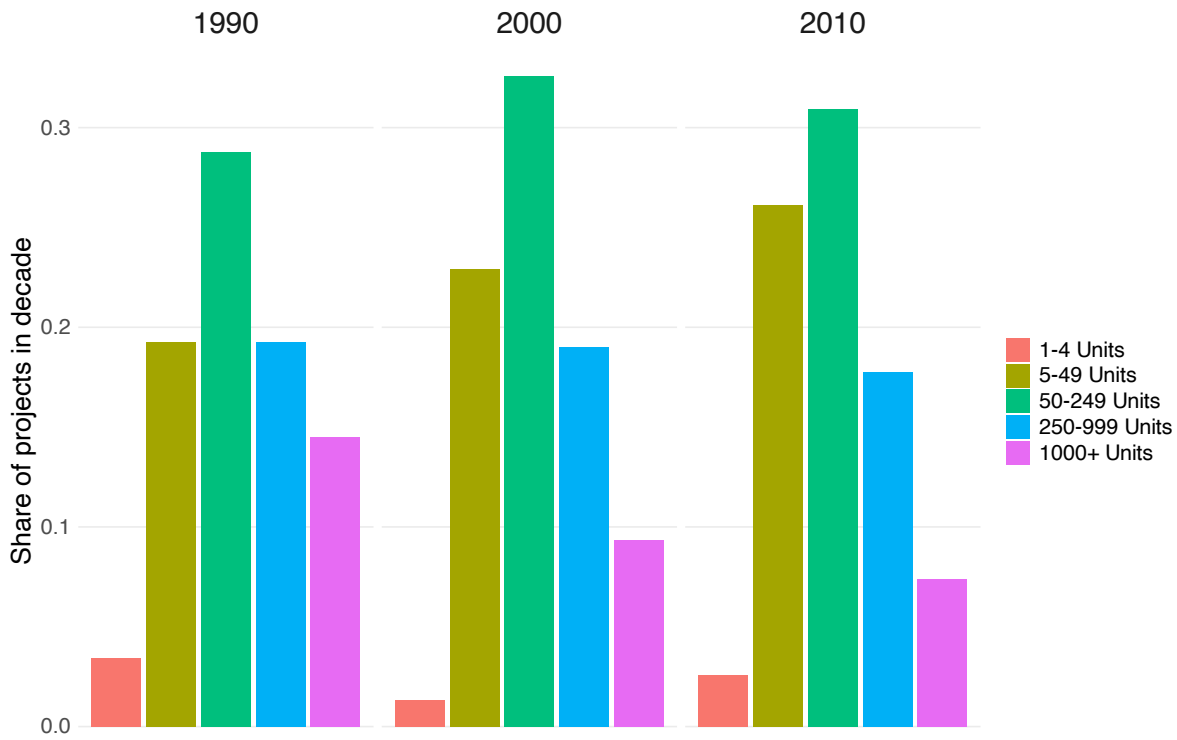


Figure B.10: Development-level distribution of unit counts



C Details on textual evidence and parsing

C.1 Classification of HUD index

After loading in the 62,314 separate titles recorded in the HUD document index, we first clean and standardize the "geographic place names" (GPNs) assigned to every title. Planning documents produced under the Section 701 program may both refer to municipalities (the focus of the small areas urban planning assistance program), or other geographies like planning areas, counties and metropolitan areas. From the roughly 15,000 unique GPNs in the index, we conduct a fuzzy string match of GPNs to a directory of zoning jurisdictions.

After the match and filtering only to the incorporated municipalities and townships in our analysis sample, we retain approximately 6,000 municipalities. Around 2,800 of the remaining municipalities were also found in the HUD/HHFA project directories for 701 planning assistance (i.e. the link to the project directory municipalities is not perfect, but has high coverage).

Over the municipalities linked to both the index file and the project directories, we classify documents associated to each municipality by keywords occurring in the document titles. A flexible keyword to capture if a document is related to zoning, for example, not only checks for the string 'ZONING ORDINANCE' but also related terms like 'ZONING RESOLUTION', 'ZONING MAP' and so forth. Below, we list the exact regular expressions used as the keyword to classify titles.

- Development plan: "`(COMPREHENSIVE|MASTER|GENERAL|LAND USE) .*PLAN`"
- Capital budget: "`(CAPITAL|PUBLIC) IMP`"
- Zoning-related: "`ZONING (ORDI|REGUL|RESOLUT|STANDARD|MAP)`"
- Subdivision regulation-related: "`SUBDIVISION `"
- Further land use: "`^LAND USE`"
- Floodplain-related: "`FLOOD |WATERSHED | STORM `"
- General environmental: "`ENVIRONME`"
- Open space-related: "`OPEN SPACE |RECREATION'`"

We allow for the same document title to be classified into multiple groups, though the deliberate usage of spaces is aimed at limiting misclassification based on the keyword matching to parts of longer words. Then, as long as a document linked to a municipality is classified to be in one of the eight types, the municipality is classified to have that type present, which is the outcome we illustrate in Figure 2.

C.2 Details of state agency practices around 701 assistance

We cite specific documents that justify our claim that: "agencies varied greatly in where they were situated in a larger bureaucracy; the number of employees and planners on staff; and

the funding states allocated to support the processing of 701 applications." Our documents reference policy memos issued by federal agencies (HUD and the Housing and Home Finance Agency, the Department's predecessor) and by planners engaged with state agencies.

In terms of agency independence in a larger bureaucracy, we can contrast Texas — who placed their agency under the Department of Health without hiring any planners on staff — with Alabama's State Planning Board, which dates back to at least 1938 and was given funding to hire their own in-house planning consultants for 701 assistance.

We can also consider three states in the North that had varying levels of agency staff capacity: Michigan, Washington and Rhode Island. The first two states, as of 1966, each had three planners on staff. Using our project directory data, we calculate that each state's planner that year dealt with a caseload of 26 and 14 municipalities at one time, respectively. To the extent that Michigan's caseload ratio exceeds the threshold of 16 suggested by HUD, federal staffers even warned that the state may be blocked from 701 funds altogether.[1]. Rhode Island's staffing looks more favorable in contrast, as it had five professional planners as early as 1960 (Simha, 1957). For the first wave of towns receiving 701 assistance there, the caseload would average at most to 5 towns per state planner. Finally, we know New Hampshire and Virginia were particularly selective in screening applications for 701 assistance from municipalities. To pursue assistance only for localities with "concrete commitments to planning,", they screen out applications from municipalities with inexperienced planning commissions or where no full-time planner were hired (Hammer Greene Siler Associates, 1969).[2]

We point out state-level details not to discuss the merits of each state's approach, but to focus on how adoption rates were affected by institutional details that did not reform due to increased demand for 701 assistance.

C.3 LLM parsing of developments awaiting discretionary approval

We detail the procedure we used to code a novel sample of newspaper articles that describe specific developments that had to be approved for a building permit or land entitlement. The source of our local newspaper data is the Newsbank Access World News database, which is licensed for non-commercial use to New York University. We processed newspapers between the years of 1983 to 2009 throughout the United States.

We first retrieve a sample of articles specifically about developments that satisfy two qualities: the article mentions it is not yet approved or permitted, and the article mentions some form of opposition to a developer's plans. To do so, we used the Newsbank platform to search for articles with the following three terms in the article body: "housing units", "developer*" and "neighbor* oppos*". The asterisks are wildcard terms, so i.e. both "developer" and "developers" would be searched for in this search. We also require the article to either have the term "approv*" or "permit."

About 4,500 articles are returned from the search, a sample that is biased towards recent years due to data availability. We undersample articles in recent years while processing nearly

[1] Details of the Michigan case are in Gillings (1967), in which the author also argue the state legislature refused to fund 701 assistance administration due to "philosophical distaste."

[2] In an extreme case, South Carolina did not appear to allow localities to implement a comprehensive plan until 1968.

all available articles in early years. The sample thus includes around 180 articles prior to 1990, up to 360 articles in the 2003-5 3-year period.

For the final sample of around 2,000 articles, we process each article through three separate LLM prompts to verify their relevance and extract details of the permitting process. We leverage the `gpt-5-mini` model from OpenAI and iteratively execute the prompts through the `DocETL` data processing platform. The tasks we prompt the LLM model to do are either retrieval of specific terms from the text, or annotation tasks that asks if the article describes a certain trait or practice; the LLM then returns a binary yes/no answer and potentially a "N/A". Our process thus closely resembles the tasks instructed to the LLM in Bartik, Gupta and Milo (2024) and Djourelova et. al. (2024). To ensure accuracy, we also execute our prompts in a "few-shot" manner by including examples of the tasks at hand.

We produce the three prompts verbatim below. The first prompt works to filter the article out of later processing, if the LLM decides the article does not concern a residential development at all. The second prompt extracts characteristics of the development, while the third prompt asks for any description of specific processes. Variables embedded in curly brackets reflect variables referenced through the `DocETL` interface.

Relevance prompt:

> Analyze the following news article:
> Title: "{{ input.title }}"
> Content: "{{ input.body }}"
>
> Determine if this article is relevant based on the following criteria:
> Does the article concern the opposition to approving, or process of approving, a residential building in a city?
>
> Some examples of articles that do not concern the approval process:
> (1) An article that just describes the character of a city or neighborhood.
> (2) An article about a developer's biography, without reference to a specific building under the approval/entitlement process.
>
> Respond with 'true' if the article satisfies the criteria, otherwise respond with 'false'.

Project characteristics prompt:

> Analyze the following news articles that involve some sort of local government body approving or opposing residential buildings:
> Title: "{{ input.title }}"
> Content: "{{ input.body }}"
>
> Most of each article should refer to the city in which a building is to be built. Another possible case is if the local government unit is a County, in which case there should be reference to bodies named, e.g. the "county planning commission."

DO NOT confuse a reference to the city or county with a reference to an area or neighborhood. If you cannot find an unambiguous reference to the city in question, check the field in JSON: input.city and that value where it is available.

DO NOT include references to projects unrelated to residential buildings, such as malls, streets, infrastructure and so forth.

Respond with blank or NA values if information is unavailable.

With that knowledge, answer the following questions for every building reported on in the article:
(1) In which municipality or general local government unit did the reported event takes place? If the local body is a county, always add "County" to the end of the field. Otherwise, ignore indicators like "City of," "Town of," etc.
(2) What was the originally proposed number of housing units in the building which might be approved? This column should consist of a single number.
(3) Only if the article discusses a final number of housing units in question: what is the agreed upon number of housing units that are permitted in the approved project?

Process characteristics prompt:

Analyze the following news articles that involve some sort of local government body approving or opposing residential buildings:
Title: "{{ input.title }}"
Content: "{{ input.body }}"

Most of each article should refer to the city in which a building is to be built. Another possible case is if the local government unit is a County, in which case there should be reference to bodies named, e.g. the "county planning commission."

We will ask you about citizen interest groups, examples of which include "neighbors" and "neighborhood associations." We will also ask you about "local planning staff", examples of which include "city planners," "city planning commission" or any governmental body other than the city council voting on approving a project.

By "low-income housing", we mean housing units deed restricted to be sold at below market rents. Articles will generally refer to a specific number or share of units as allocated to "low-income residents/households," and these projects may also be mentioned as being financed by housing tax credits at the federal or state/local agency level.

Respond with blank or NA values if information is unavailable.

With that knowledge, answer the set of binary questions for every building reported on in the article, where 1=Yes, 0=No;
(1) Are citizen interest groups quoted to have spoken out in opposition of the project?
(2) Have local planning staff, up to now, delayed or rejected the project?

(3) Has the residential building reduced in size as part of deliberations to get a permit to build?
(4) Has the developer of the building offered to provide additional community benefits, or impact fees?
(5) Are a share of the building's housing unit intended to provide low-income housing?
(6) Is the entirety of the building intended to provide low-income housing?

Mapping of prompt questions to outcomes. As with other text-based datasets in this Appendix, we use only the developments whose municipality (from Question (1) of the project prompt) can be fuzzy matched to a directory of zoning jurisdictions. In our analysis, the distribution of development unit counts shown in Appendix Figure B.10 reflect the output of Question (2) of the project prompt.

The main value capture outcome we analyze — the presence of additional community benefits or impact fees — comes from Question (4) of the process prompt. We have manually checked 11 developments classified as "1" by the LLM, noting that all but one had an article that describes a common value capture practice. Examples of correctly identified practices include developer commitments to finance any roads or infrastructure around the development; provision of public amenities, like sound barriers next to the highway and a community center; in-lieu fees to support the maintenance of affordable housing in the municipality; and leaving up to half of the acquired parcel as public open space.

Table 7 also reports two other outcomes. The low-income housing outcome maps to Question (5) in the process prompt, while the local staff opposition outcome maps to Question (2) in the process prompt. We have ran our cross-sectional design on the opposition outcomes related to Questions (1), (3) and (6), all of which outputs null results similar to the local staff opposition outcome.

D Technical proofs

Proof of Proposition in Section 4.

Assumption CI directly implies, for $z, z' \in \text{supp}(\tilde{Z})$,

$$\mathbb{E}\left[Y_t^0 - Y_{t-1}^0 \middle| \tilde{Z} = z, \text{Pop}_{1960} \in (\underline{P}, 50K], X\right] - \mathbb{E}\left[Y_t^0 - Y_{t-1}^0 \middle| \tilde{Z} = z, \text{Pop}_{1960} \in (50K, \overline{P}], X\right]$$
$$=$$
$$\mathbb{E}\left[Y_t^0 - Y_{t-1}^0 \middle| \tilde{Z} = z', \text{Pop}_{1960} \in (\underline{P}, 50K], X\right] - \mathbb{E}\left[Y_t^0 - Y_{t-1}^0 \middle| \tilde{Z} = z', \text{Pop}_{1960} \in (50K, \overline{P}], X\right],$$

which is analogous to Assumption DDD-CPT in Ortiz-Villavicencio and Sant'Anna (2025), but in a simpler environment than theirs, without staggered adoption of our treatment of interest. We employ their results on how Assumption DDD-CPT, in combination with using a state never approving the treatment, can identify the conditional ATTs (CATT). Regression adjustment is then sufficient to aggregate the CATTs and identify the ATT:

$$ATT(z,t) = \mathbb{E}\left[Y_t - Y_t^0 \middle| \tilde{Z} = z, Pop_{1960} \in (\underline{P}, 50K]\right].$$

Applying the LIE, it follows that

$$\mathbb{E}\left[Y_t - Y_t^0 \middle| Pop_{1960} \in (\underline{P}, 50K]\right] = \int \mathbb{E}\left[Y_t - Y_t^0 \middle| \tilde{Z} = z, Pop_{1960} \in (\underline{P}, 50K]\right] dP_{Pop}(z),$$

with all the terms on the RHS identified, i.e. $dP(z)$ is directly observed in the data by tabulating across states.