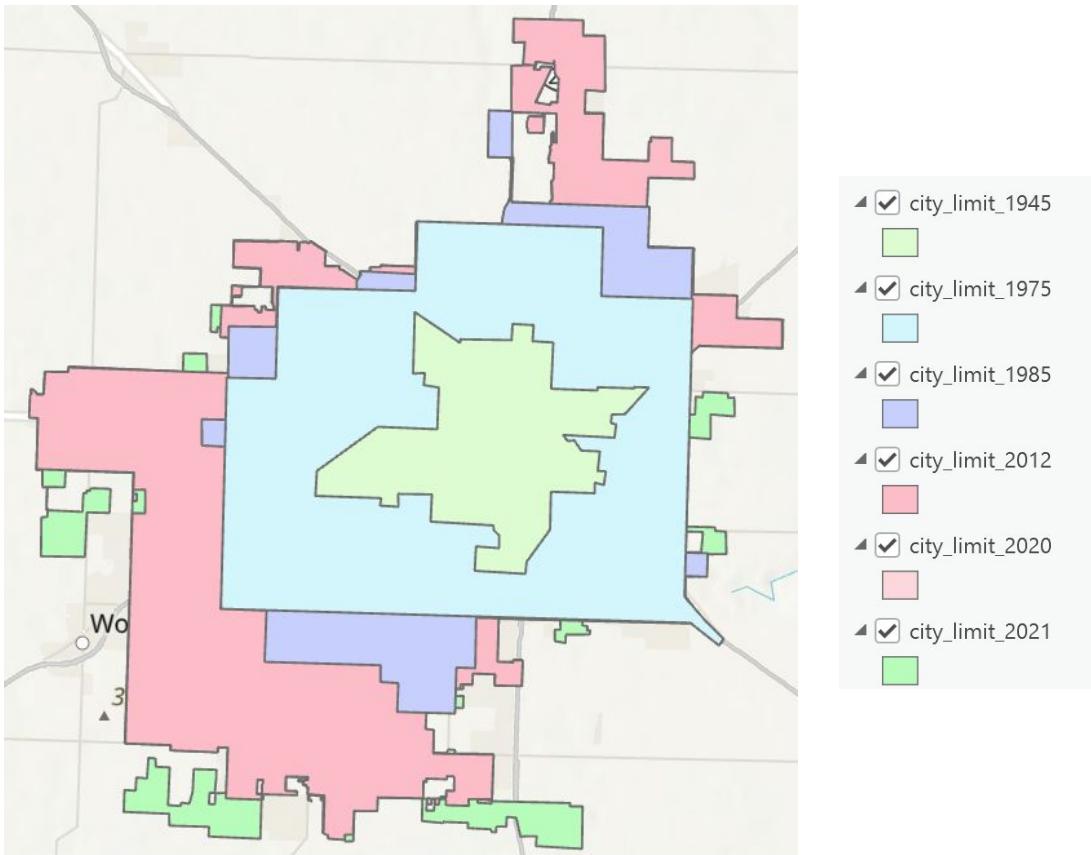


Persistent Effects of Jim Crow-Era Redlining on Lubbock Property Values

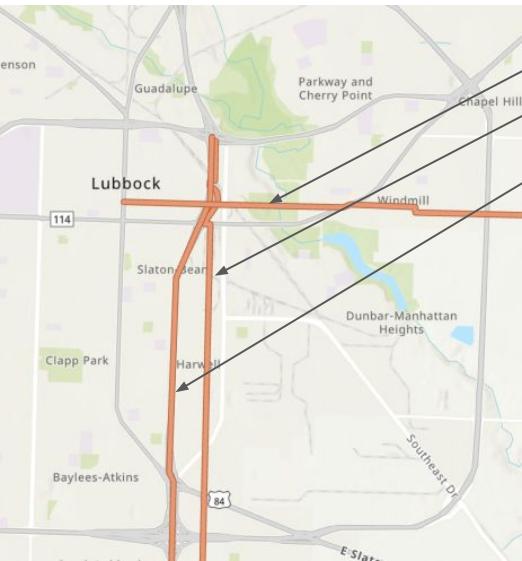
Asheer Mogal

City Limits Considered



- Collected from the official Lubbock website.
- Reference:
https://ewebmap.ci.lubbock.tx.us/currentData/Maps/AnnexDecade_letter.pdf
- *Each zone was overlaid with four concentric rings to study distance-decay effects.*
 - 0-0.5 mi,
 - 0.5-1 mi,
 - 1-1.5 mi, and
 - “outside”

1923 Lubbock Ordinance - Area of Black Residents



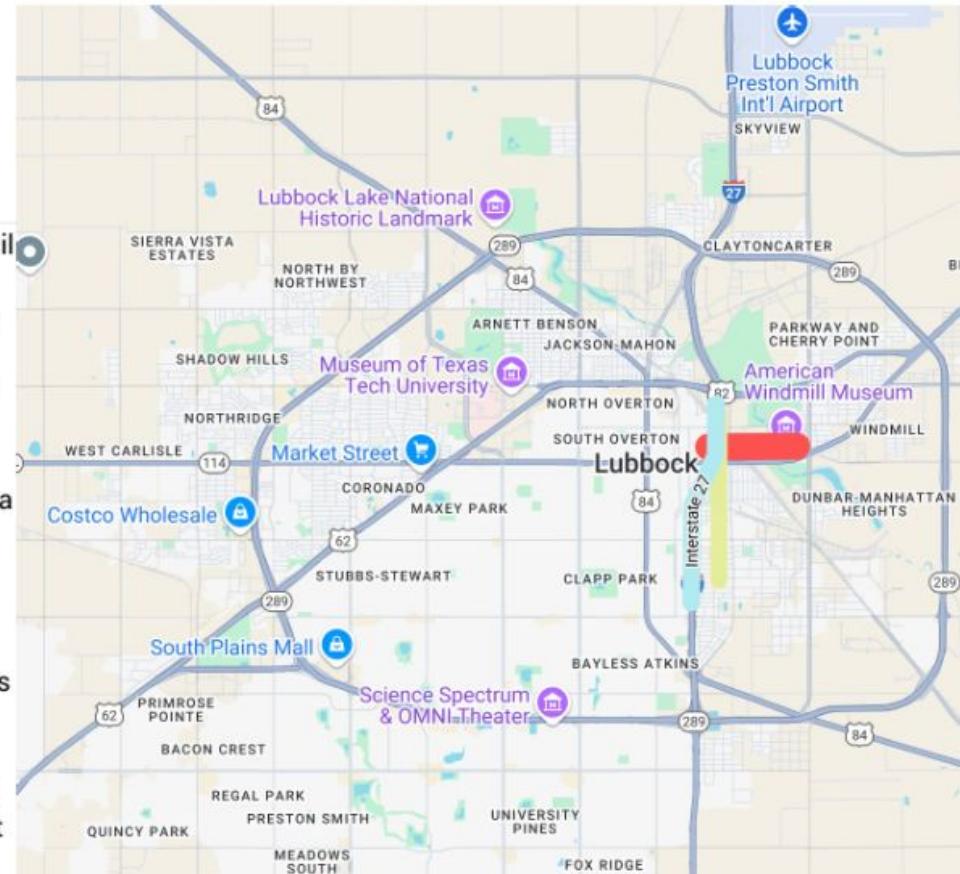
Black People Residence - 1923
Lubbock Ordinance

- 16th ST, Lubbock, TX
- Avenue C, Lubbock, TX
- Interstate 27

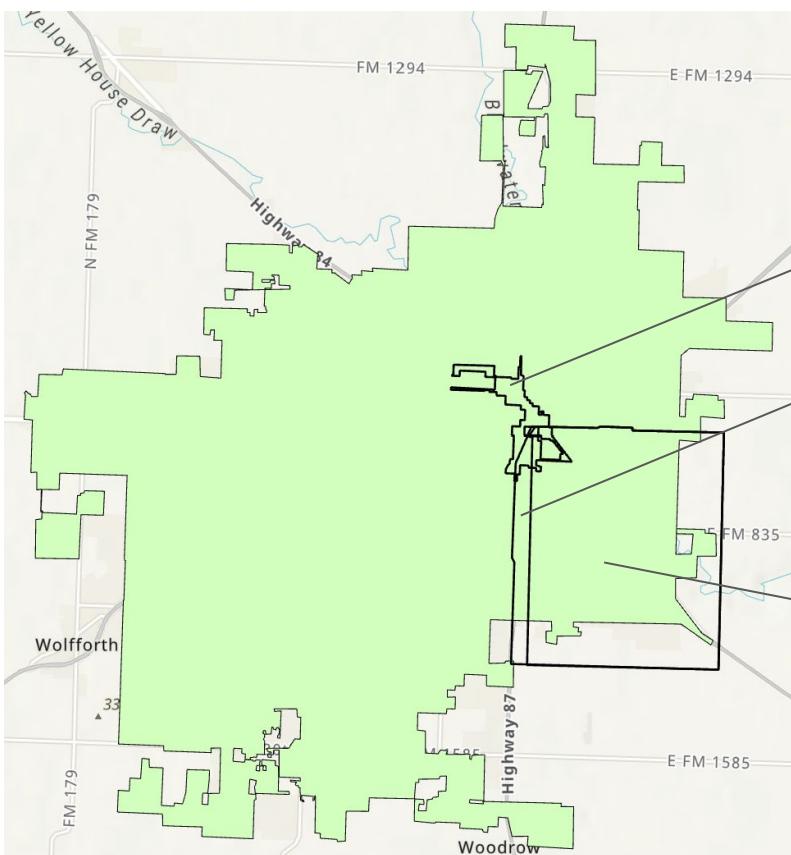
- In 1923, Lubbock City Council passed an ordinance forcing Black residents to live only in the east side of town, specifically east of Avenue C and south of 16th Street.

- Interstate 27 now serves as a physical barrier, effectively isolating East Lubbock from the rest of the city

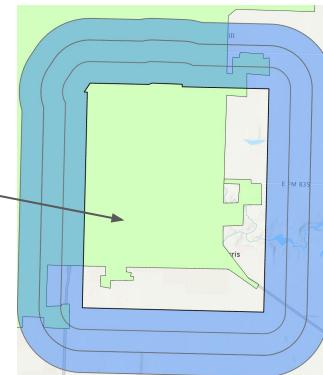
- The city's development focus has shifted to the predominantly white Southwest area, leaving East Lubbock with less investment and attention



Possible Redlining Zones Considered



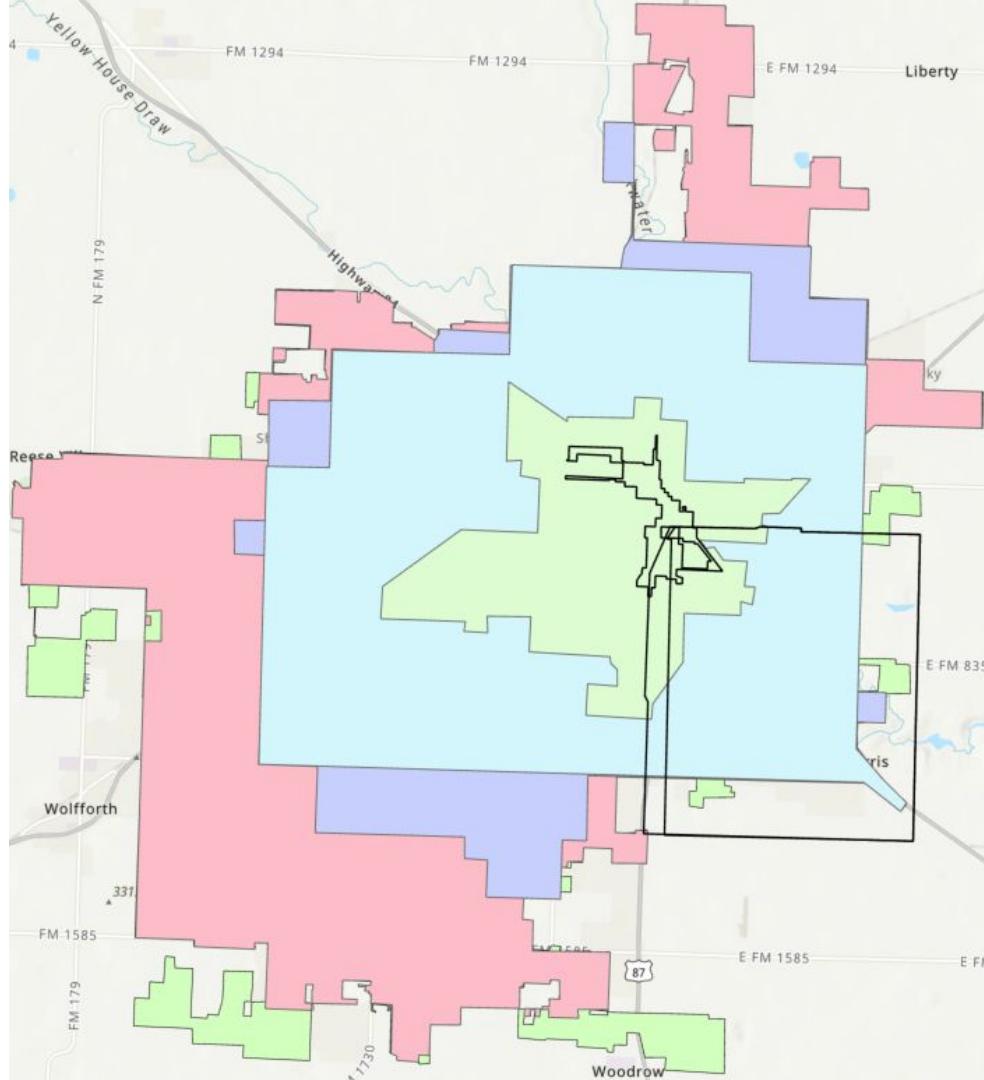
RL3>RL3_buf1>RL3_buf2>RL3_buf3



- RL1: from 1923 Lubbock ordinance
- RL2: from Texas Tribune website
- RL3: from expert consultation

RL1>RL1_buf1>RL1_buf2>RL1_buf3

All City Limits and Redlining Zones together



Assumptions

- Area column is not available for 1945, 1975 and 1985. To calculate /sqft values, it is assumed that the area of the parcels has not been changed until 2012.
- Area columns of 1945, 1975 and 1985 has been imputed with 2012 area values with a fall back of 2020 and 2021.

Dimensions

Dimension Group	Specific Dimension	Possible Values / Levels	Description / Role in Analysis
Temporal	Year	1945, 1975, 1985, 2012, 2020, 2021	The city-limit boundary year in which parcels are evaluated
Spatial Scheme	Redlining Map Source	<ul style="list-style-type: none"> • RL1 (Lubbock Ordinance 1923) • RL2 (Texas Tribune) • RL3 (Provided by Adam) 	Three alternative historic redlining delineations to compare patterns
Spatial Band	Zone & Buffer Category	<ul style="list-style-type: none"> • Core (zone) • 0–0.5 mi (buf1) • 0.5–1 mi (buf2) • 1–1.5 mi (buf3) • ≥1.5 mi (buf4) 	Concentric distance bands around each RL polygon to measure “decay” of values with distance
Measurement Metric	Value Type	<ul style="list-style-type: none"> • NominalValue (TotalValue_{year}) • InflationAdjustedValue (F2025DollarValueTotalValue_{year}) • NominalValue_perSqFt (TotalValue_perSqFt_{year}) • InflationAdjustedValue_perSqFt (F2025DollarValueTotalValue_perSqFt_{year}) 	Four ways to express parcel value, raw vs. 2025-adjusted, and absolute vs. per-sq-ft
Comparison Group	Sample Type	<ul style="list-style-type: none"> • Baseline (all parcels in a particular boundary) • Longitudinal Subset (parcels with non-null in all 6 years) (values available across 6 years) 	Distinguishes the full dataset from the smaller panel used for truly longitudinal analysis

Parcel
Counts in
different
categories

Slide 9

Total Parcels within City Limits (Baseline vs Longitudinal):		
	Baseline_Total	Longitudinal_Total
1945	26265	276
1975	65771	282
1985	77529	282
2012	96742	282
2020	96742	282
2021	96535	282

Raw Value Metrics Parcel Counts - Baseline Sample:		
ValueType	NominalValue	InflationAdjustedValue
CityLimitYear		
1945	2027	2027
1975	25245	25245
1985	11970	11970
2012	82158	82158
2020	90824	90824
2021	92333	92333

Raw Value Metrics Parcel Counts - Longitudinal Subset:		
ValueType	NominalValue	InflationAdjustedValue
CityLimitYear		
1945	276	276
1975	282	282
1985	282	282
2012	282	282
2020	282	282
2021	282	282

Slide 10

Per-SqFt Metrics Parcel Counts - Baseline Sample:		
ValueType	NominalValue_perSqFt	InflationAdjustedValue_perSqFt
CityLimitYear		
1945	1500	1500
1975	23051	23051
1985	11432	11432
2012	80465	80465
2020	89253	89253
2021	90704	90704

Per-SqFt Metrics Parcel Counts - Longitudinal Subset:		
ValueType	NominalValue_perSqFt	InflationAdjustedValue_perSqFt
CityLimitYear		
1945	275	275
1975	281	281
1985	281	281
2012	281	281
2020	281	281
2021	281	281

Slide 11

Baseline Sample Parcel Counts (Year × Zone)

RL/Year	RL1	RL1_bu_f1	RL1_bu_f2	RL1_bu_f3	RL1_bu_f4	RL2	RL2_bu_f1	RL2_bu_f2	RL2_bu_f3	RL2_bu_f4	RL3	RL3_bu_f1	RL3_bu_f2	RL3_bu_f3	RL3_bu_f4
1945	1862	3109	4090	3944	13260	3217	3767	3984	3513	11784	1151	5940	5301	4423	9450
1975	4361	3904	5399	7302	44805	5949	4689	5955	6841	42337	1151	5959	5843	5555	47263
1985	4560	3923	5403	7738	55905	6163	4705	5982	8241	52438	1151	5959	5843	5555	59021
2012	4567	3923	5463	8202	74587	6170	4711	6414	8578	70869	1151	5959	5843	5555	78234
2020	4567	3923	5463	8202	74587	6170	4711	6414	8578	70869	1151	5959	5843	5555	78234
2021	4565	3923	5462	8201	74384	6168	4711	6413	8577	70666	1151	5959	5843	5555	78027

Longitudinal Subset Parcel Counts (Year × Zone)

	RL1	RL1_bu_f1	RL1_bu_f2	RL1_bu_f3	RL1_bu_f4	RL2	RL2_bu_f1	RL2_bu_f2	RL2_bu_f3	RL2_bu_f4	RL3	RL3_bu_f1	RL3_bu_f2	RL3_bu_f3	RL3_bu_f4
1945	1	3	53	103	116	1	41	62	92	80	1	52	87	68	68
1975	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73
1985	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73
2012	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73
2020	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73
2021	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73

NominalValue, InflationAdjustedValue – Baseline Sample Parcel Counts (Year × Zone):																
Zone	RL1	RL1_bu_f1	RL1_bu_f2	RL1_bu_f3	RL1_bu_f4	RL2	RL2_bu_f1	RL2_bu_f2	RL2_bu_f3	RL2_bu_f4	RL3	RL3_bu_f1	RL3_bu_f2	RL3_bu_f3	RL3_bu_f4	
CityLimitYear																
1945	38	159	476	646	708	43	359	497	671	457	83	654	518	534	238	
1975	1342	1174	1978	3156	17595	1853	1630	2398	3024	16340	270	1834	2217	2421	18503	
1985	392	301	1223	1512	8542	524	1003	973	1975	7495	85	835	1335	905	8810	
2012	3942	3445	4825	7472	62474	5421	4228	5683	7726	59100	924	5037	5369	5107	65721	
2020	3949	3477	4843	7571	70984	5466	4218	5802	7915	67423	875	4892	5344	5113	74600	
2021	3958	3479	4847	7575	72474	5471	4219	5814	7930	68899	876	4887	5349	5149	76072	

Slide 12

NominalValue, InflationAdjustedValue – Longitudinal Subset Parcel Counts (Year × Zone):																
Zone	RL1	RL1_bu_f1	RL1_bu_f2	RL1_bu_f3	RL1_bu_f4	RL2	RL2_bu_f1	RL2_bu_f2	RL2_bu_f3	RL2_bu_f4	RL3	RL3_bu_f1	RL3_bu_f2	RL3_bu_f3	RL3_bu_f4	
CityLimitYear																
1945	1	3	53	103	116	1	41	62	92	80	1	52	87	68	68	
1975	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73	
1985	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73	
2012	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73	
2020	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73	
2021	3	3	53	104	119	3	41	62	96	80	1	52	87	69	73	

NominalValue_perSqFt, InflationAdjustedValue_perSqFt – Baseline Sample Parcel Counts (Year × Zone):

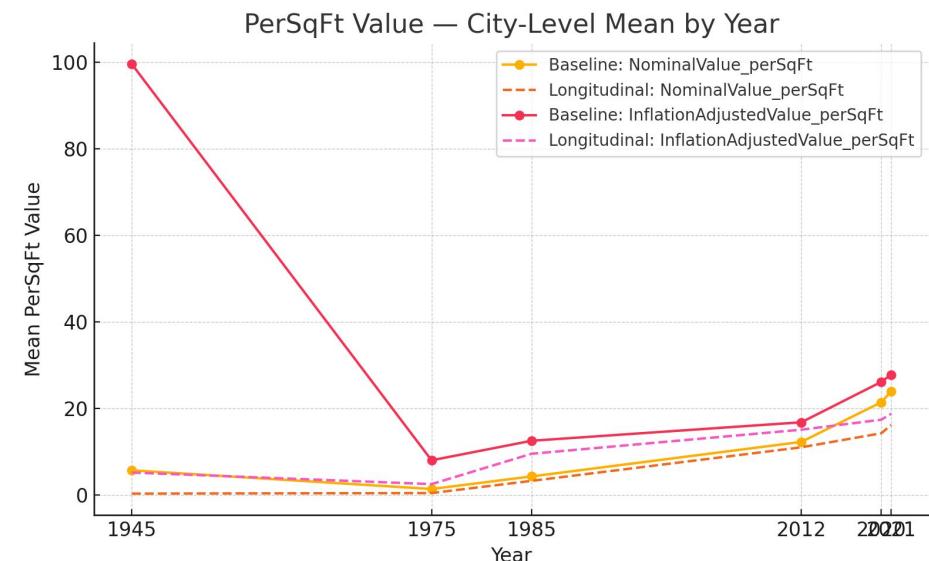
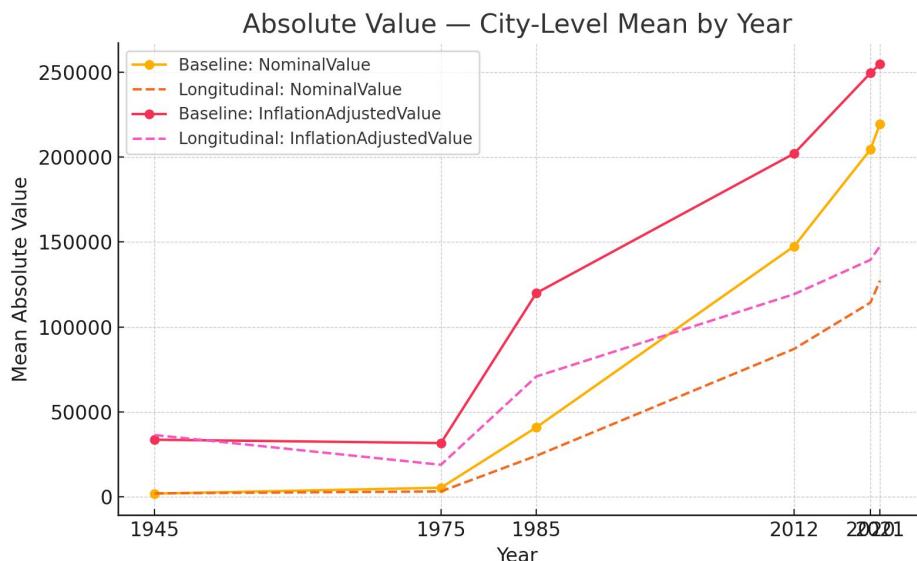
Zone	RL1	RL1_buf_1	RL1_buf_2	RL1_buf_3	RL1_buf_4	RL2	RL2_buf_1	RL2_buf_2	RL2_buf_3	RL2_buf_4	RL3	RL3_buf_1	RL3_buf_2	RL3_buf_3	RL3_buf_4
CityLimitYear															
1945	20	57	303	512	608	21	235	331	526	387	29	340	439	463	229
1975	890	957	1690	2827	16687	1373	1383	2095	2712	15488	162	1388	1931	2142	17428
1985	357	255	1152	1419	8249	472	953	907	1883	7217	42	668	1288	876	8558
2012	3865	3383	4652	7387	61178	5337	4054	5619	7638	57817	899	4936	5259	5056	64315
2020	3874	3422	4686	7494	69777	5381	4057	5754	7837	66224	855	4805	5245	5069	73279
2021	3884	3425	4690	7499	71206	5388	4058	5766	7853	67639	856	4800	5252	5106	74690

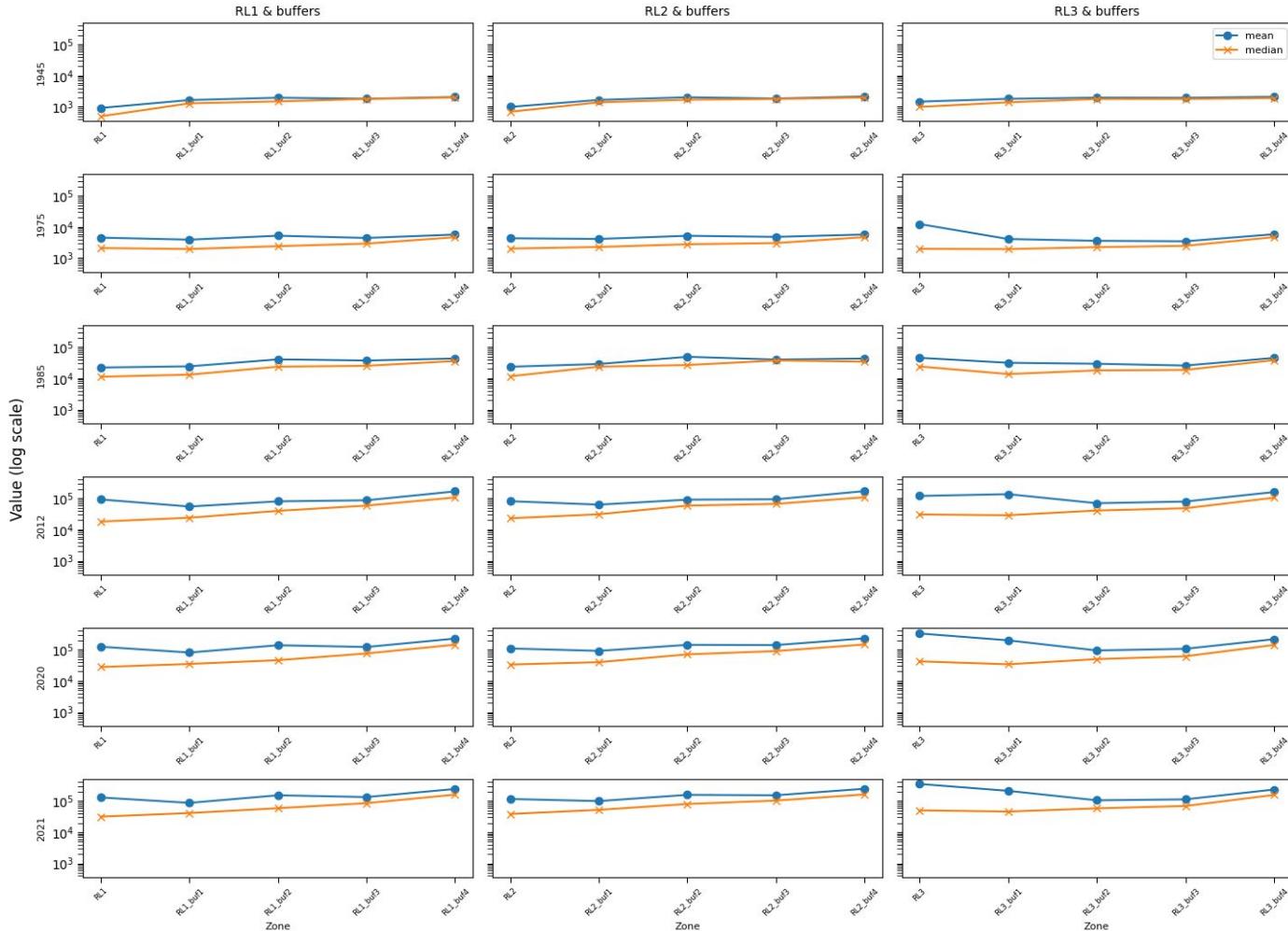
Slide 13

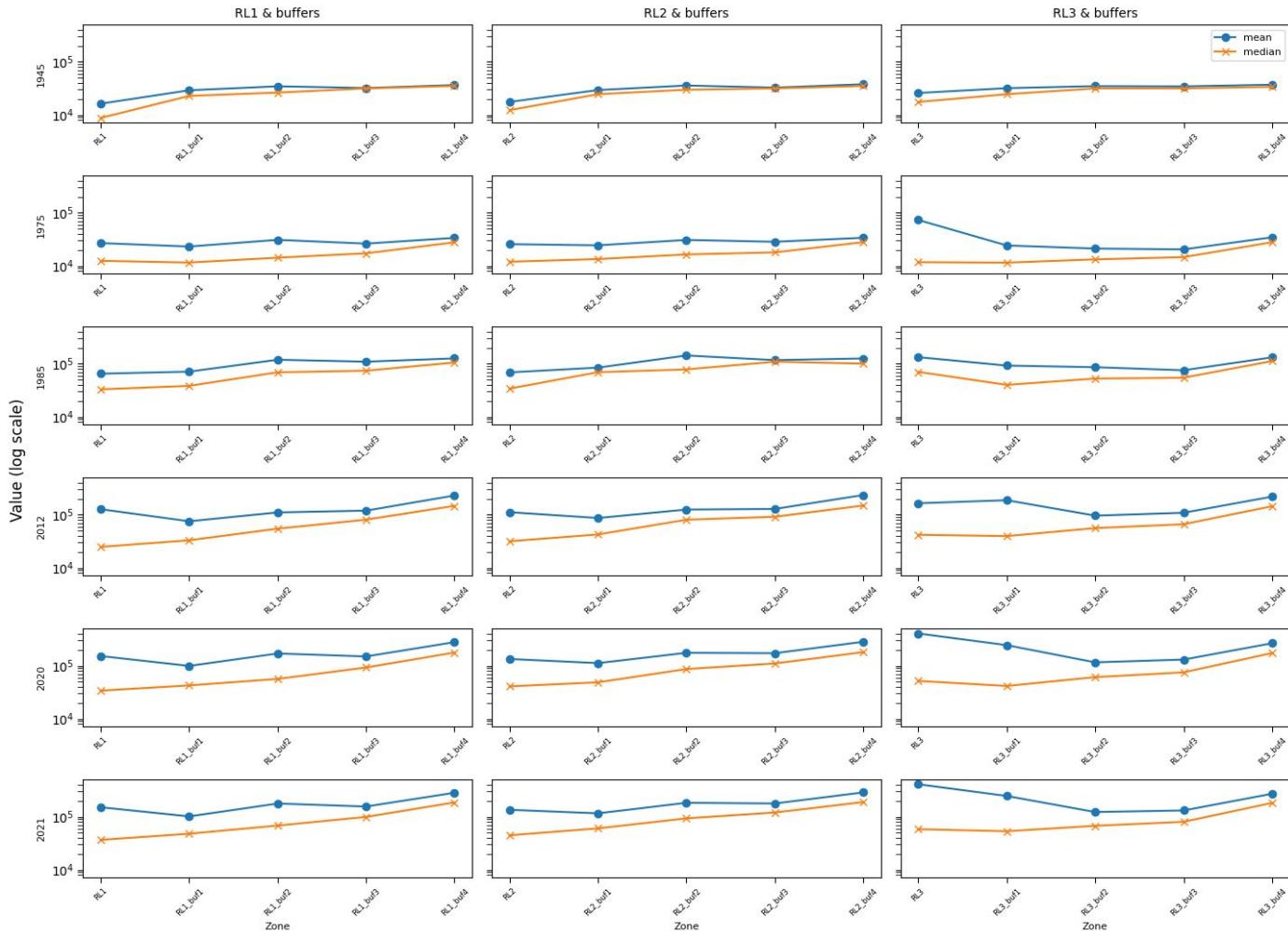
NominalValue_perSqFt, InflationAdjustedValue_perSqFt – Longitudinal Subset Parcel Counts (Year × Zone):

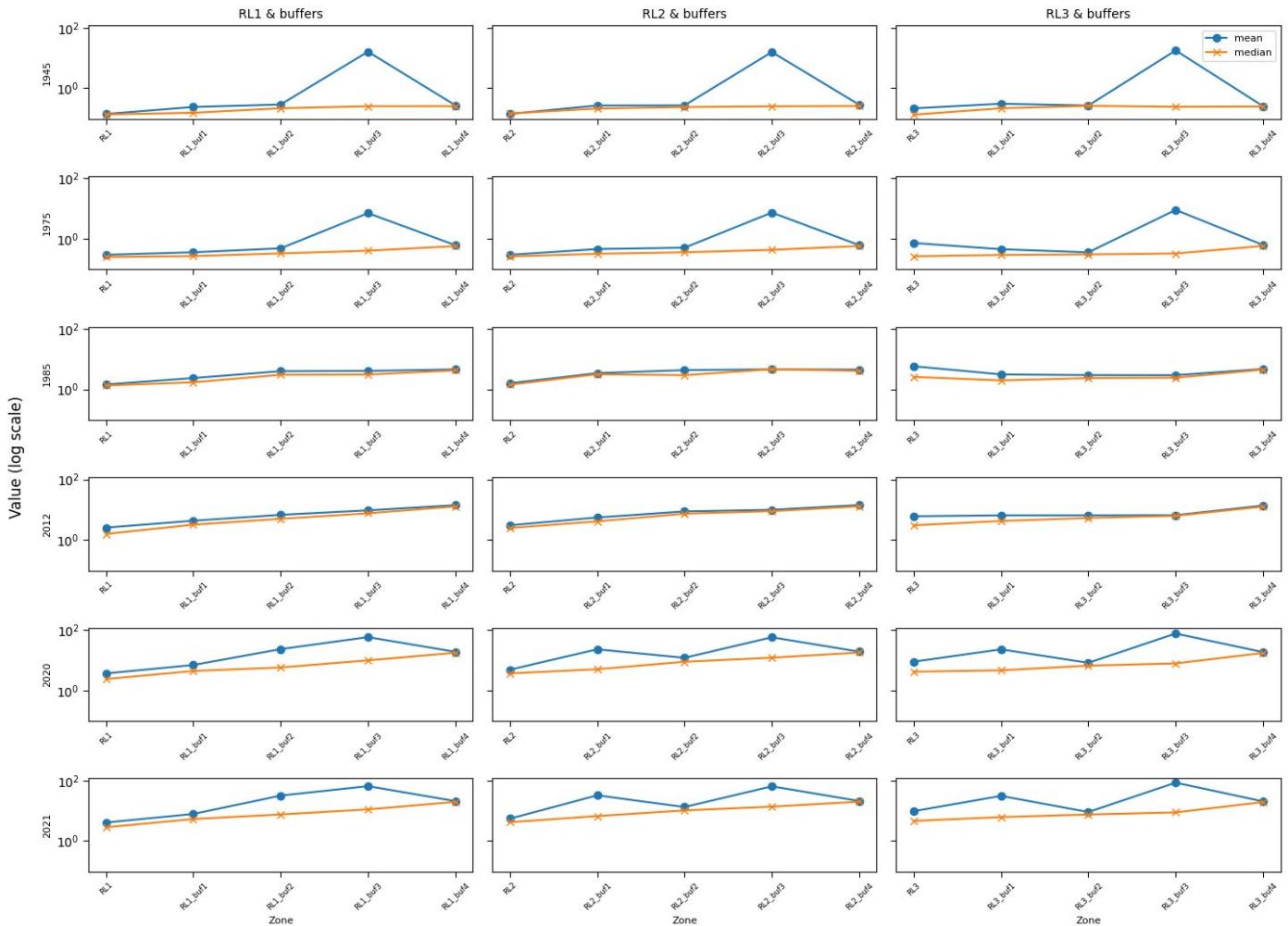
Zone	RL1	RL1_buf_1	RL1_buf_2	RL1_buf_3	RL1_buf_4	RL2	RL2_buf_1	RL2_buf_2	RL2_buf_3	RL2_buf_4	RL3	RL3_buf_1	RL3_buf_2	RL3_buf_3	RL3_buf_4
CityLimitYear															
1945	1	3	53	102	116	1	41	62	91	80	1	52	87	67	68
1975	3	3	53	103	119	3	41	62	95	80	1	52	87	68	73
1985	3	3	53	103	119	3	41	62	95	80	1	52	87	68	73
2012	3	3	53	103	119	3	41	62	95	80	1	52	87	68	73
2020	3	3	53	103	119	3	41	62	95	80	1	52	87	68	73
2021	3	3	53	103	119	3	41	62	95	80	1	52	87	68	73

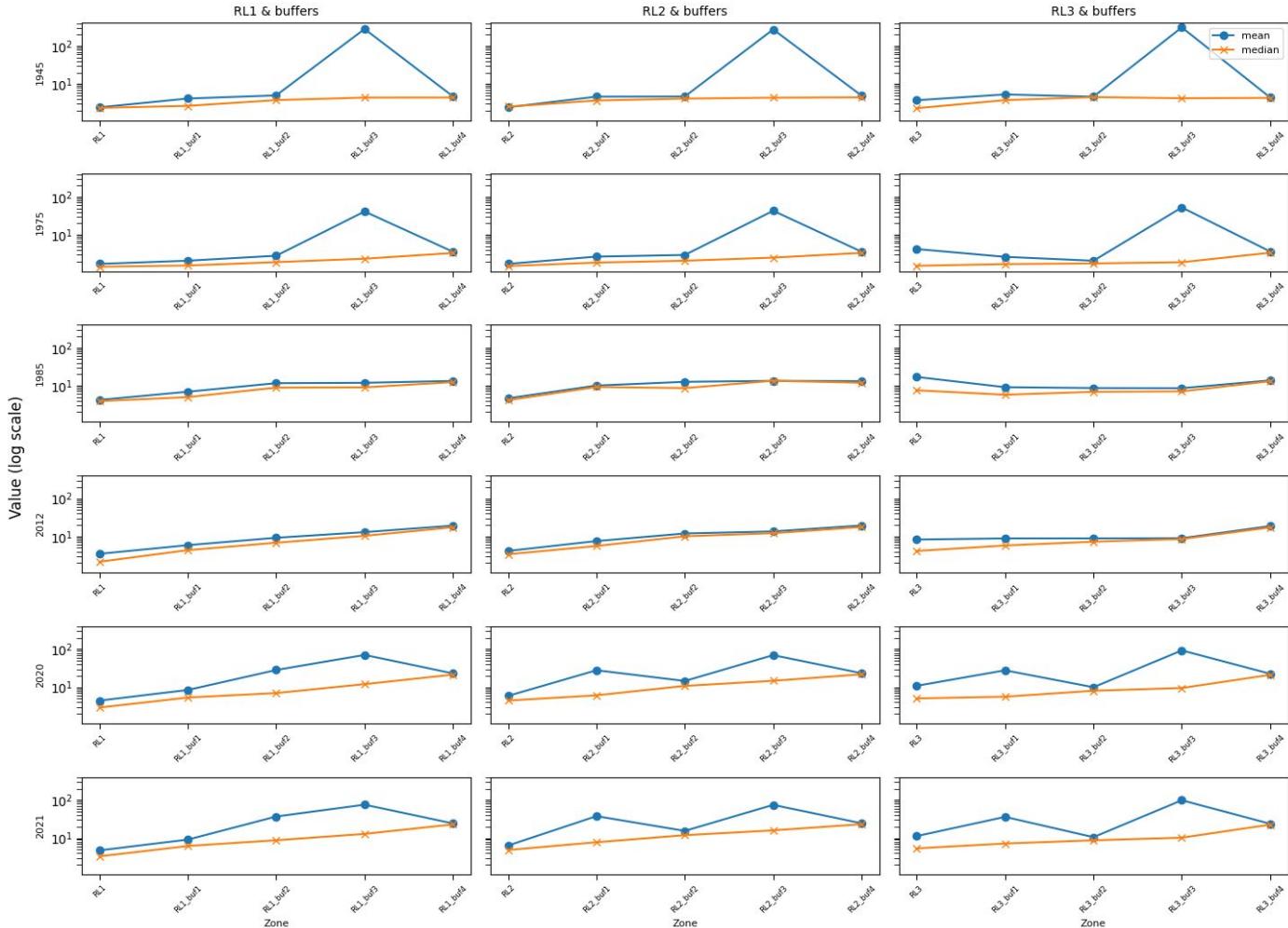
Mean and Median Variations





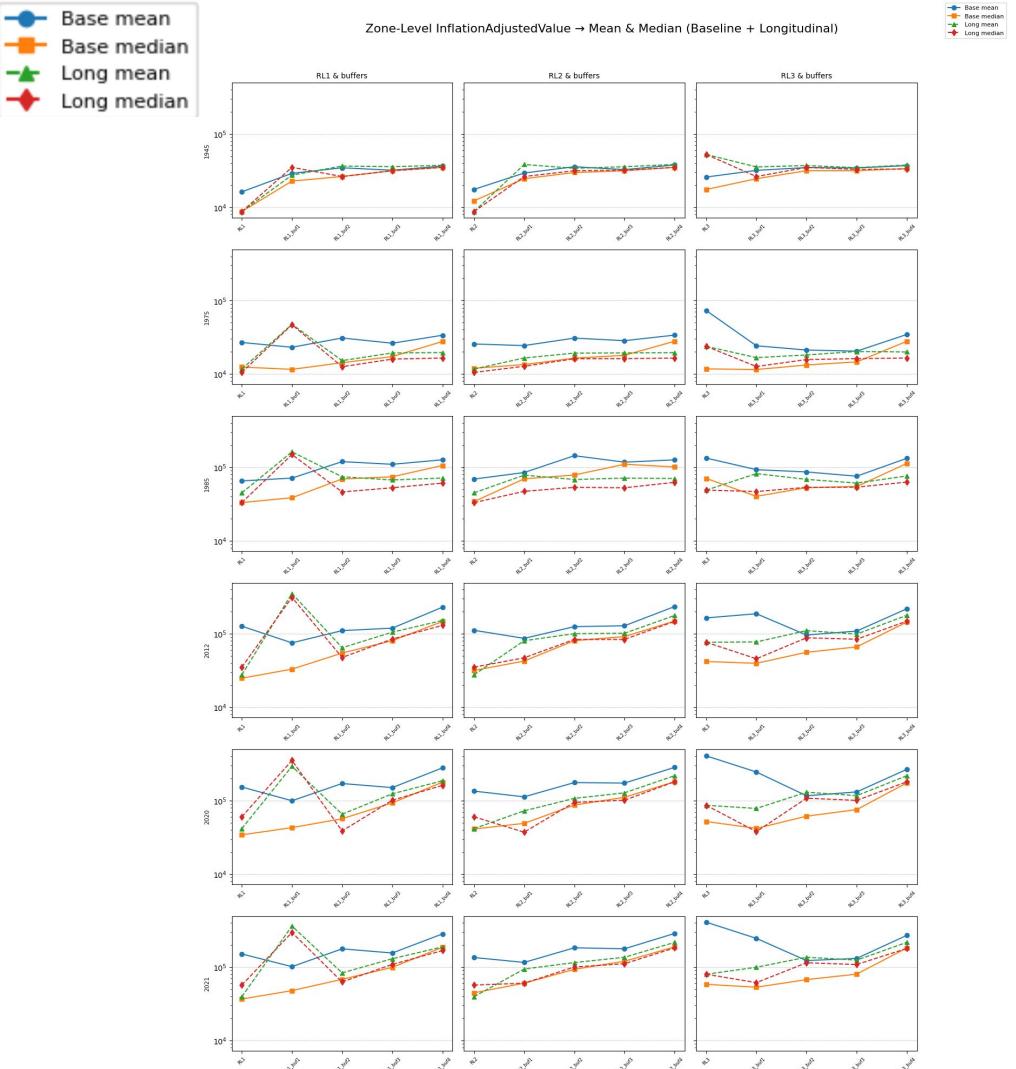
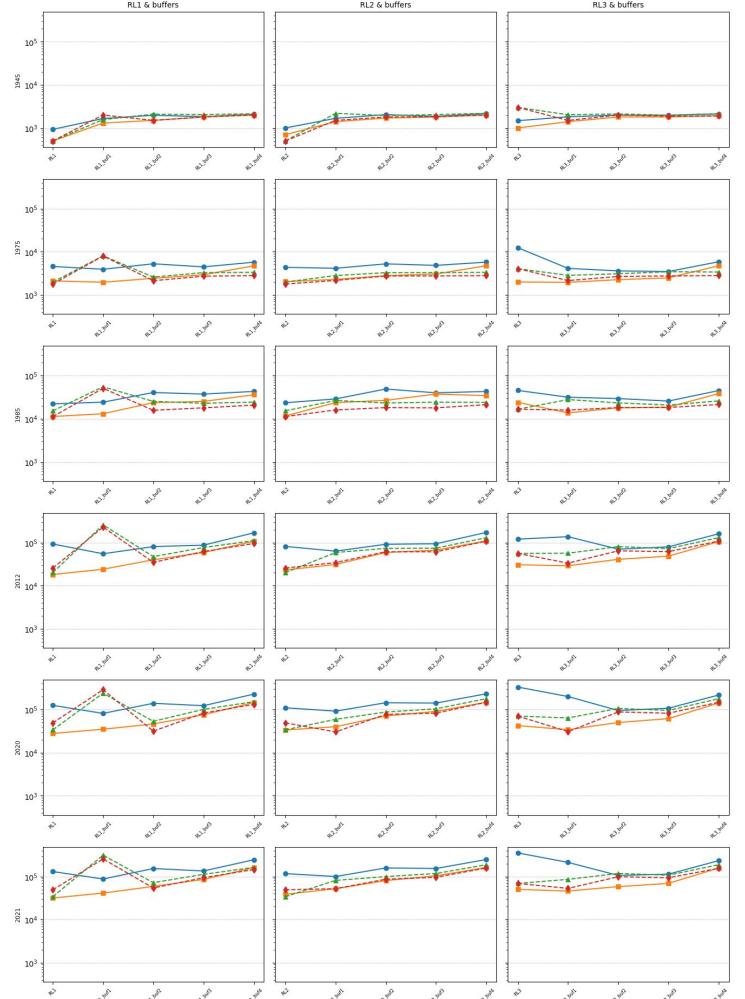






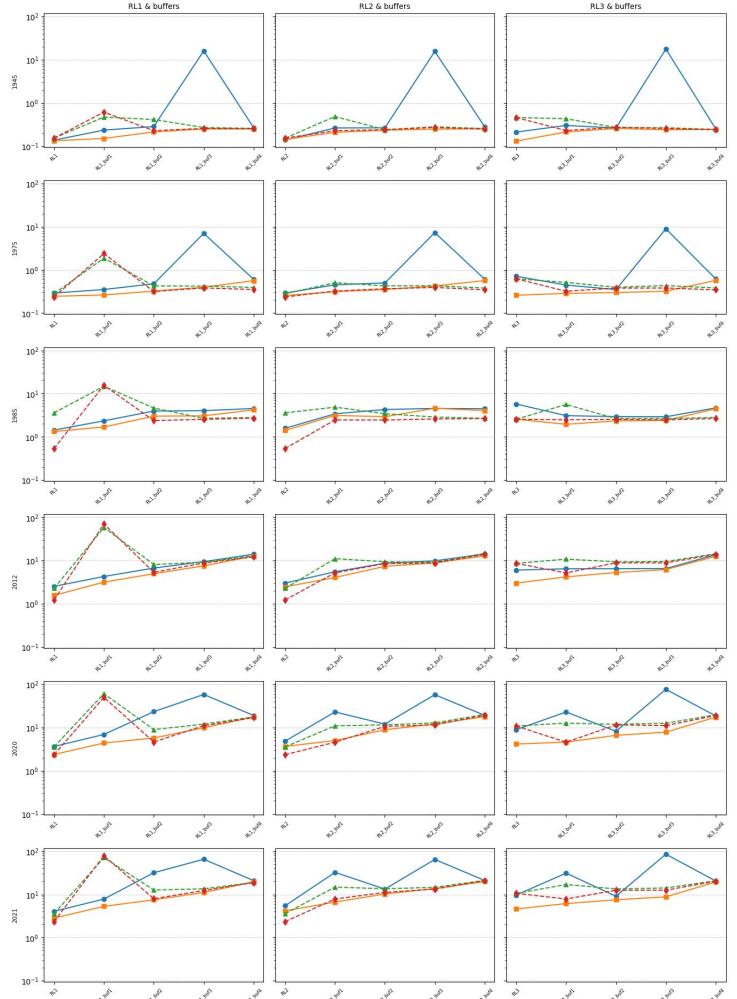
Slide 20

Zone-Level NominalValue → Mean & Median (Baseline + Longitudinal)



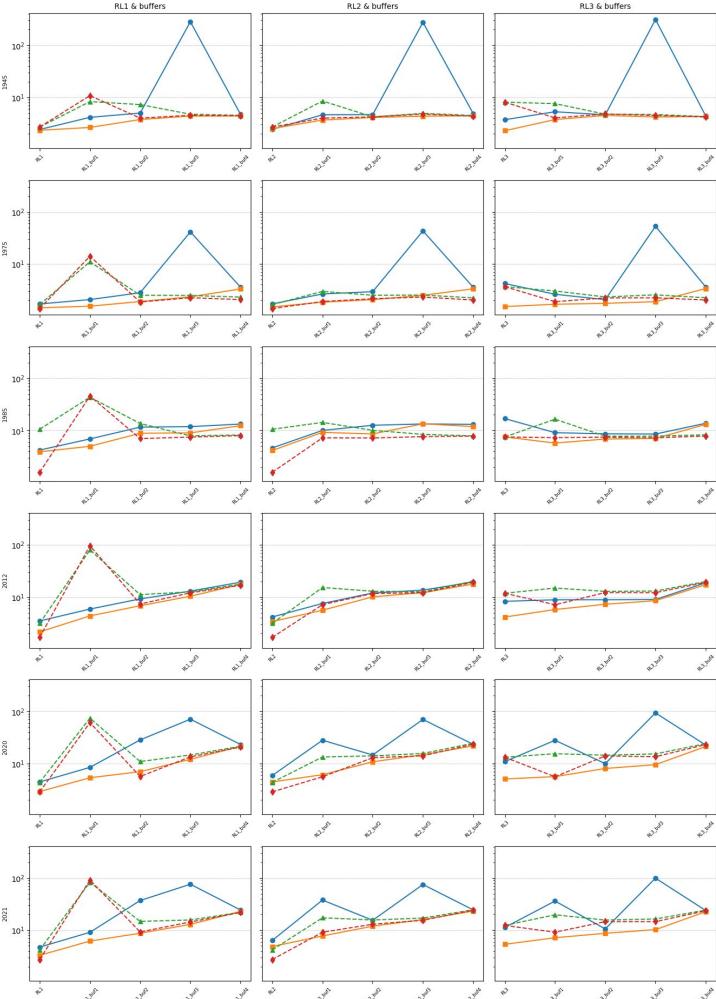
Slide 21

Zone-Level NominalValue_perSqFt → Mean & Median (Baseline + Longitudinal)



- Base mean
- Base median
- ▲ Long mean
- ◆ Long median

Zone-Level InflationAdjustedValue_perSqFt → Mean & Median (Baseline + Longitudinal)

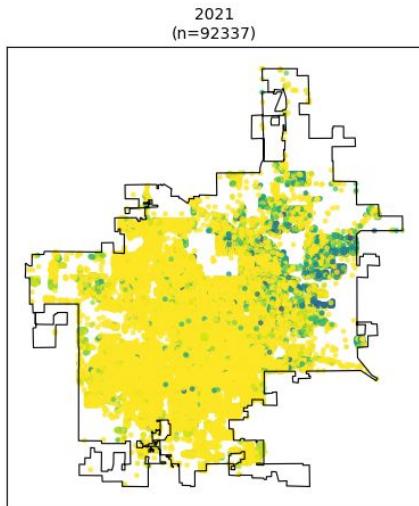
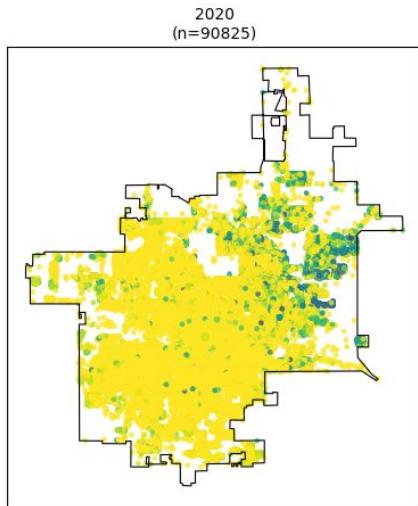
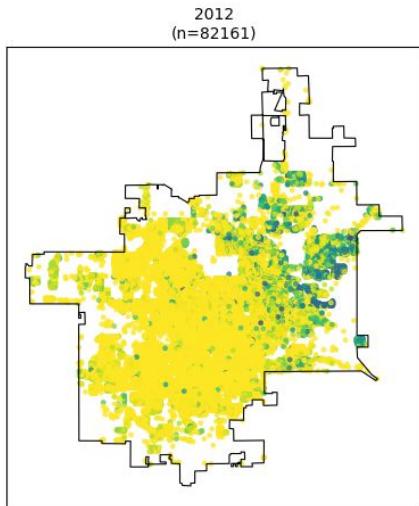
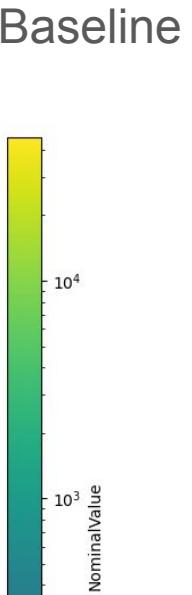
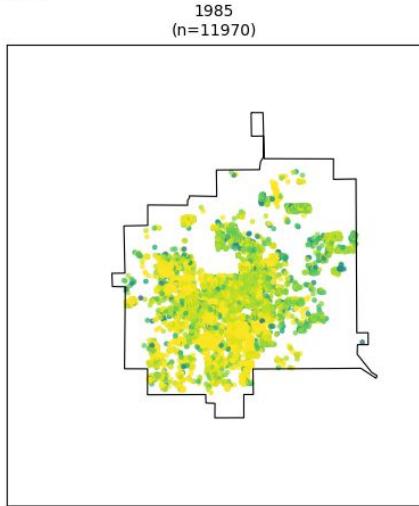
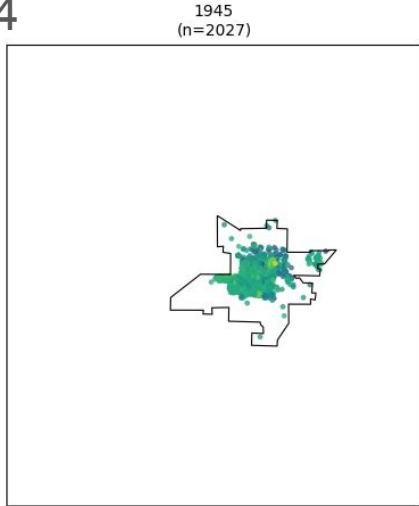


Box Plots

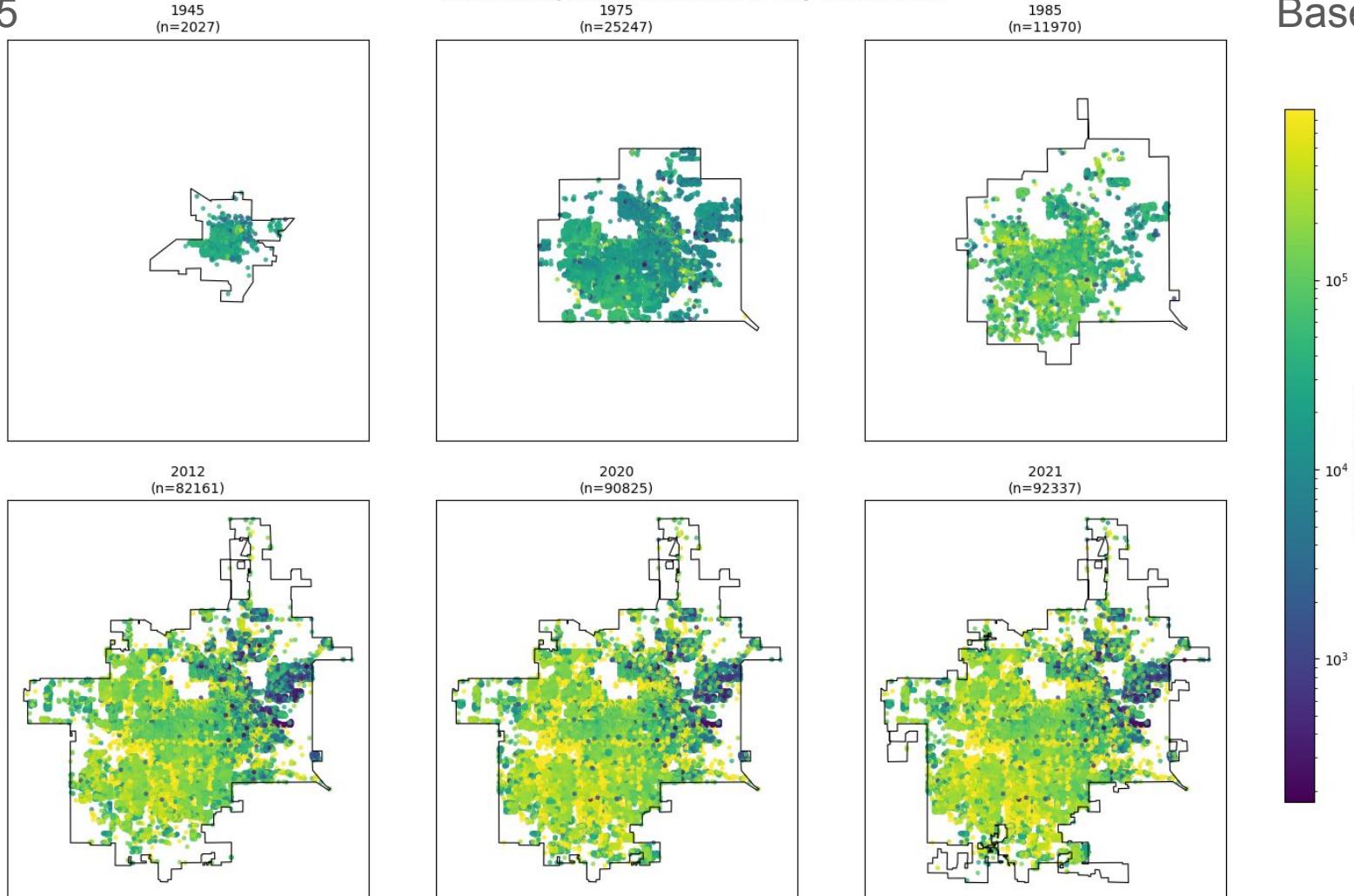
- HTML file

Evolution of Lubbock over the years

NominalValue Across City-Limit Years

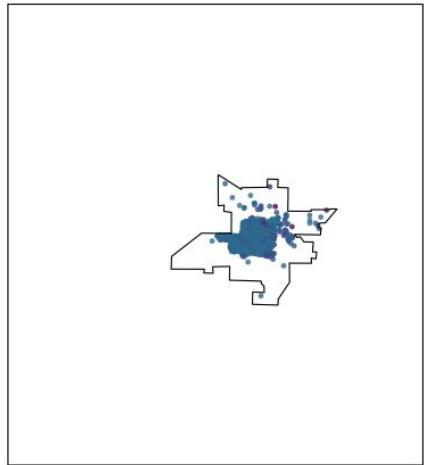
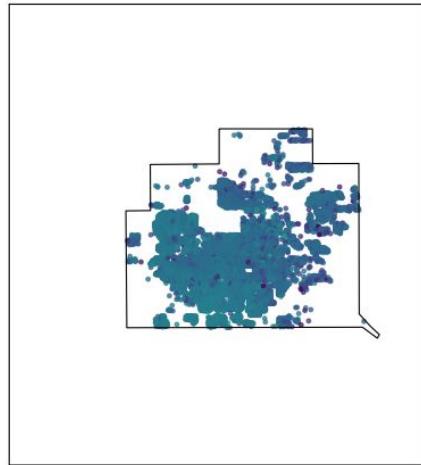
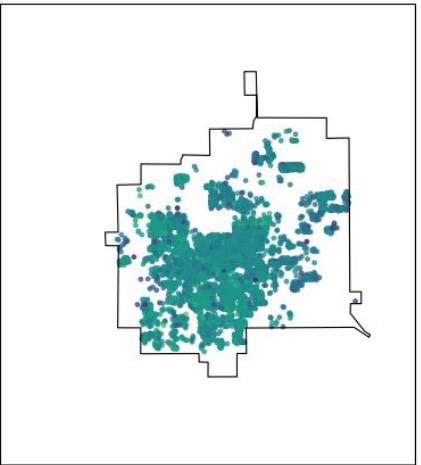
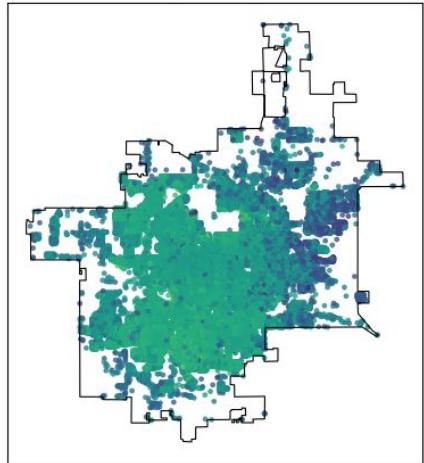
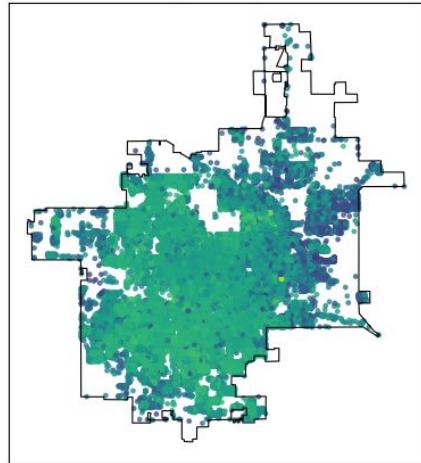
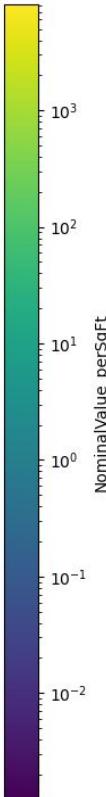
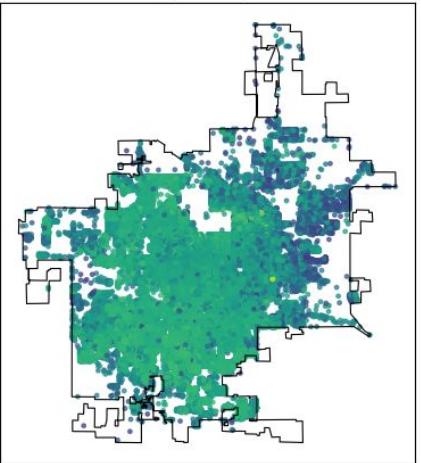


InflationAdjustedValue Across City-Limit Years

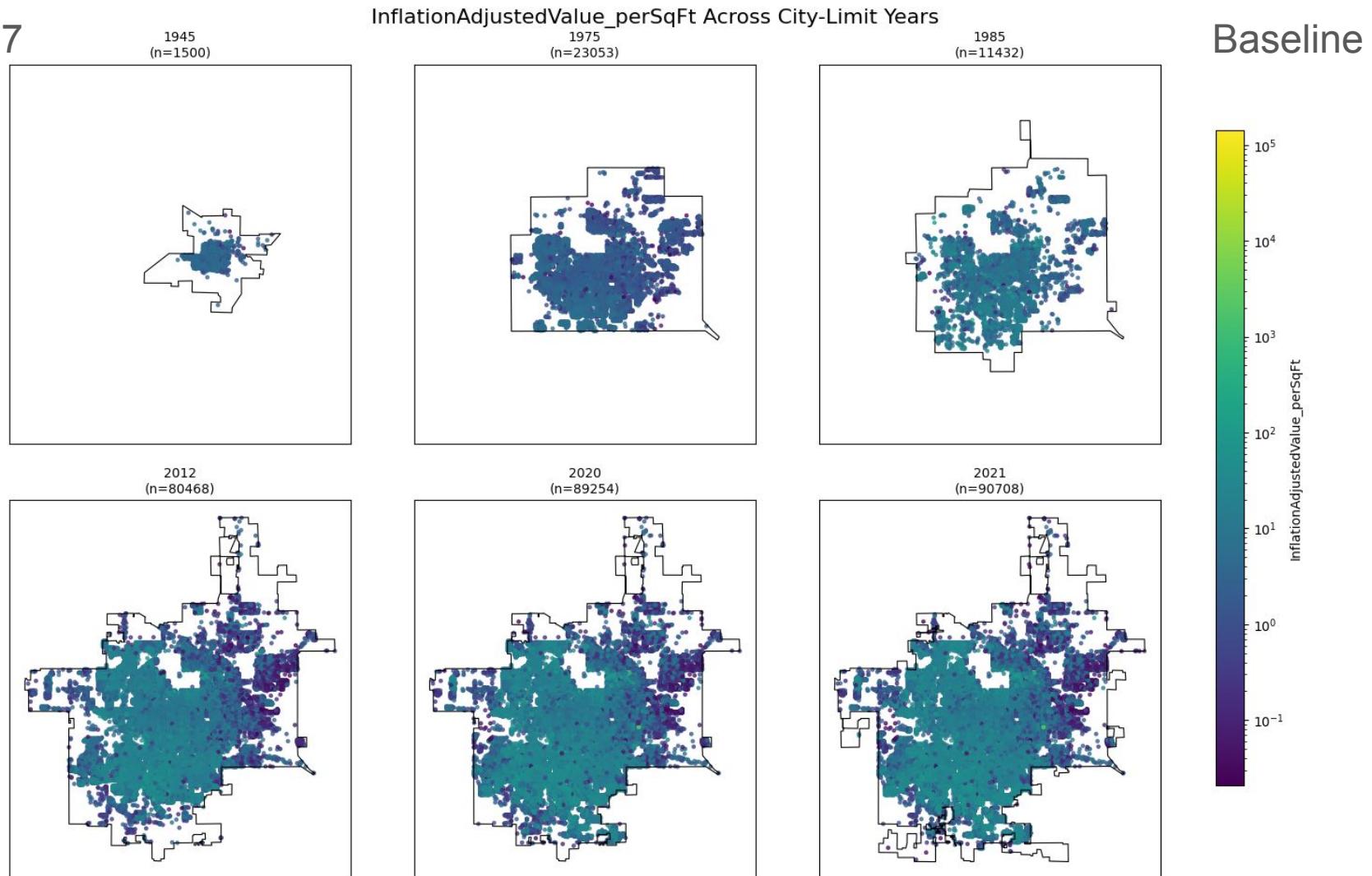


NominalValue_perSqFt Across City-Limit Years

Baseline

1945
(n=1500)1975
(n=23053)1985
(n=11432)2012
(n=80468)2020
(n=89254)2021
(n=90708)

Slide 27

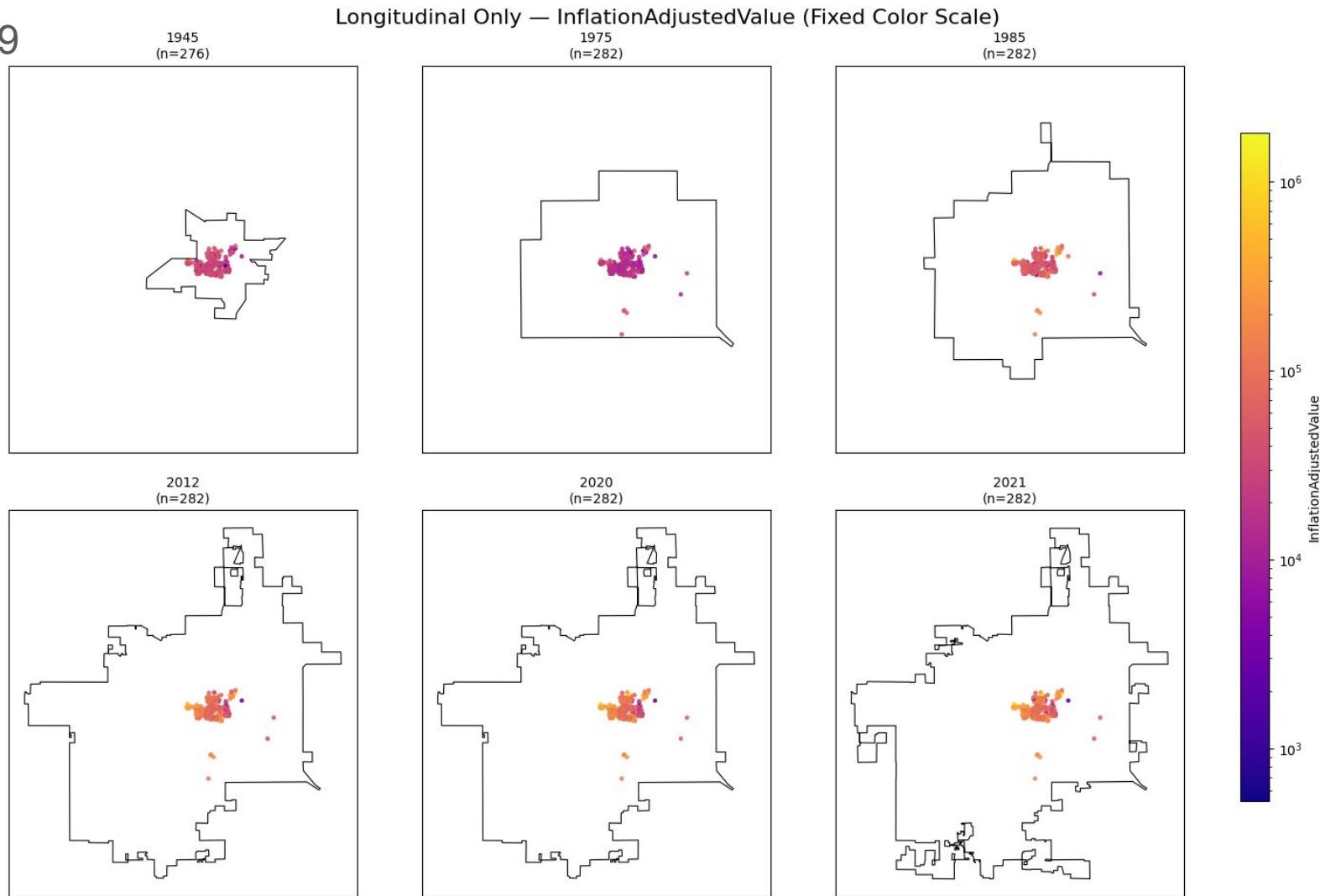


Slide 28

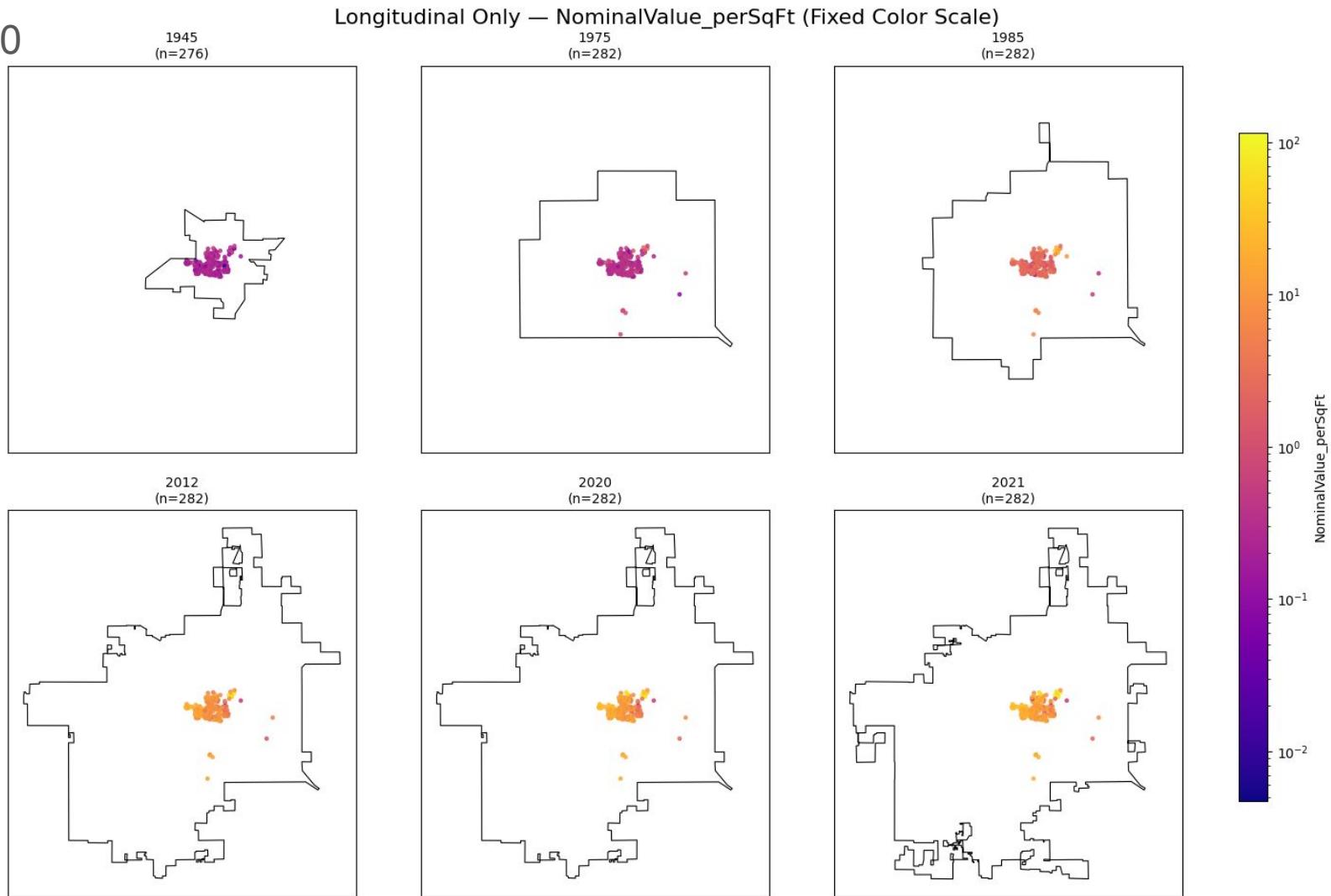
Longitudinal Only — NominalValue (Fixed Color Scale)



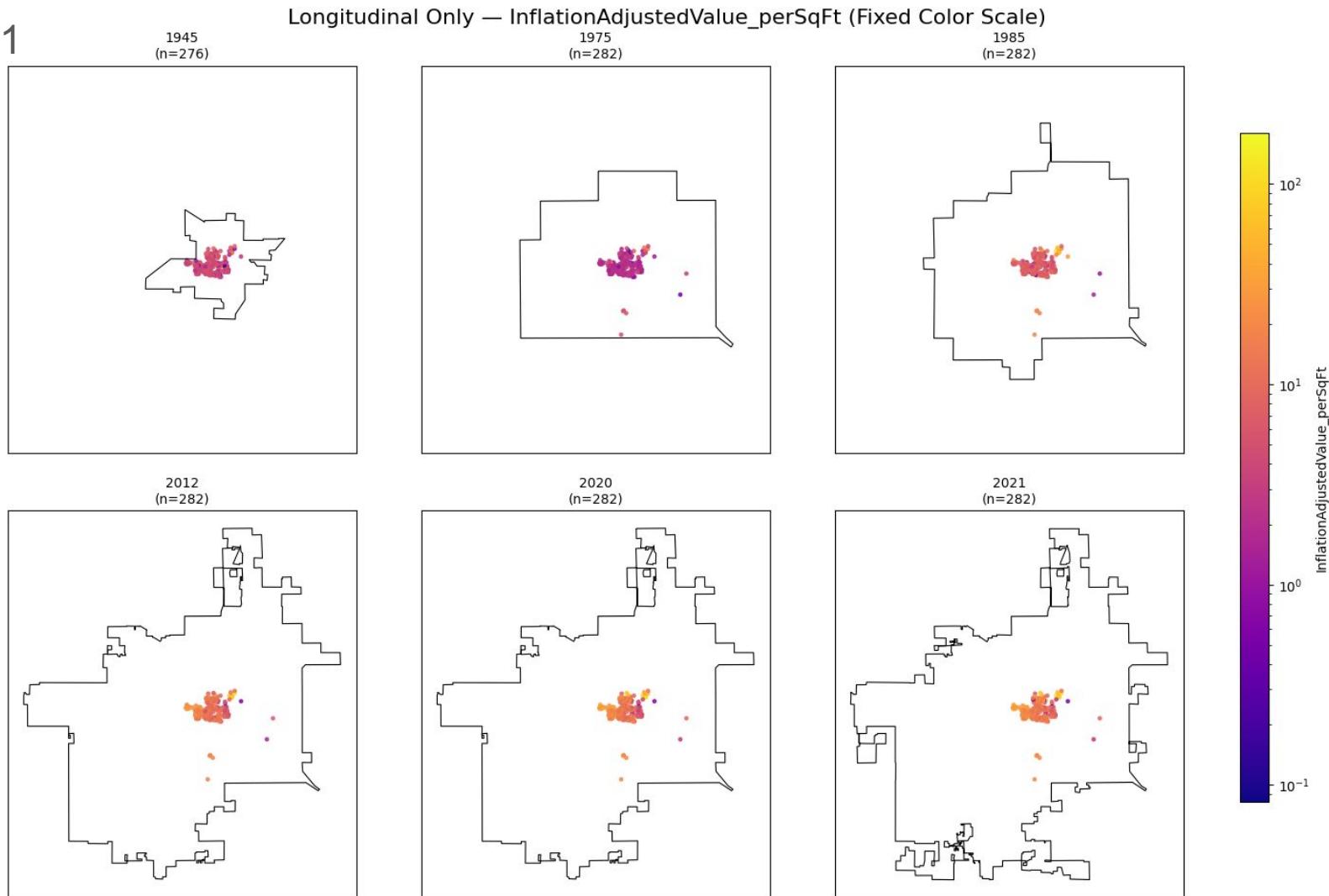
Slide 29



Slide 30

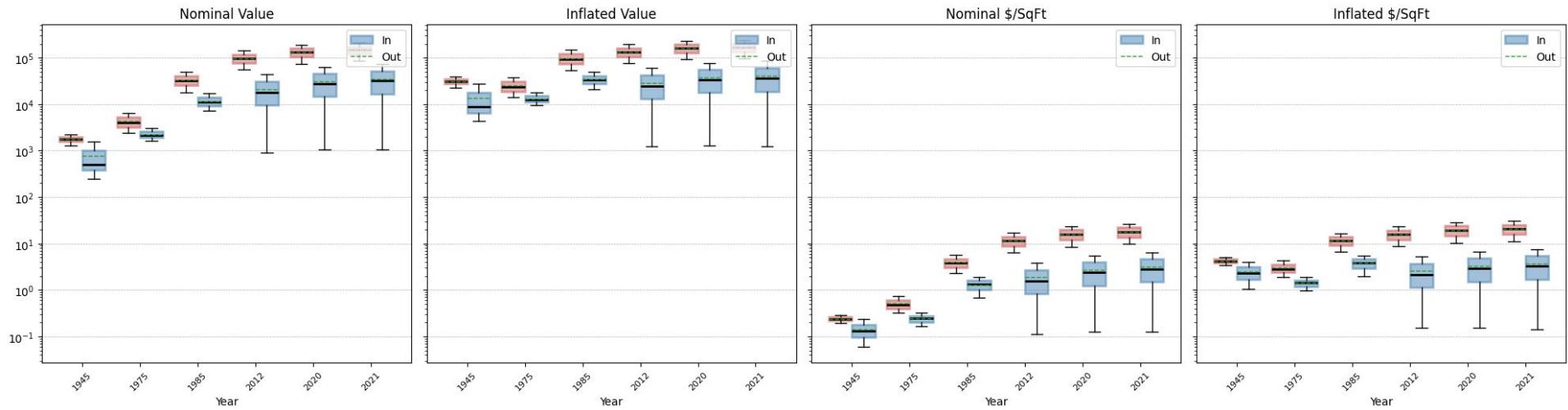


Slide 31

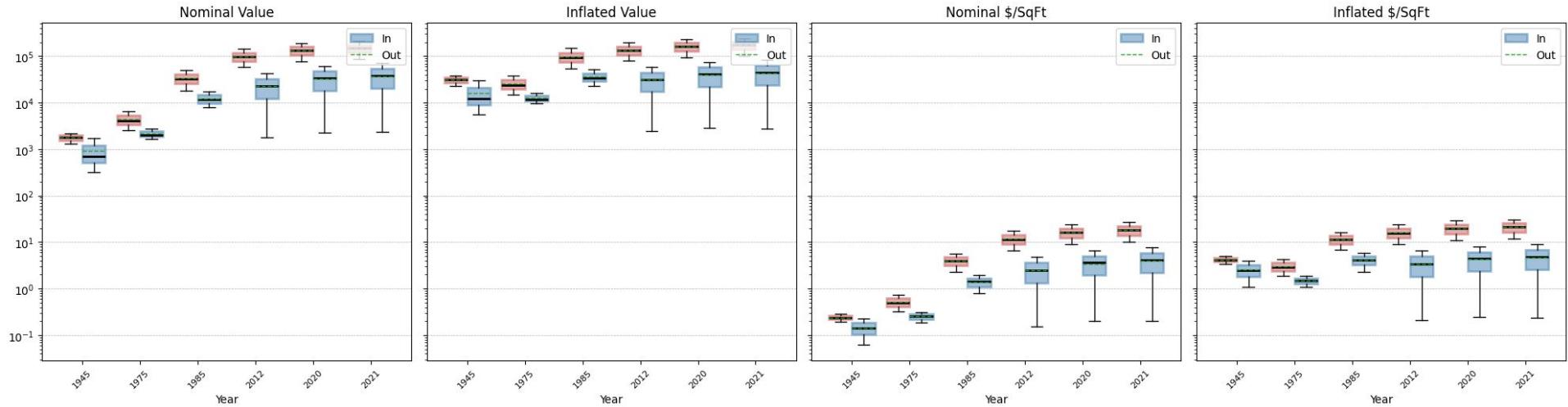


THANK YOU

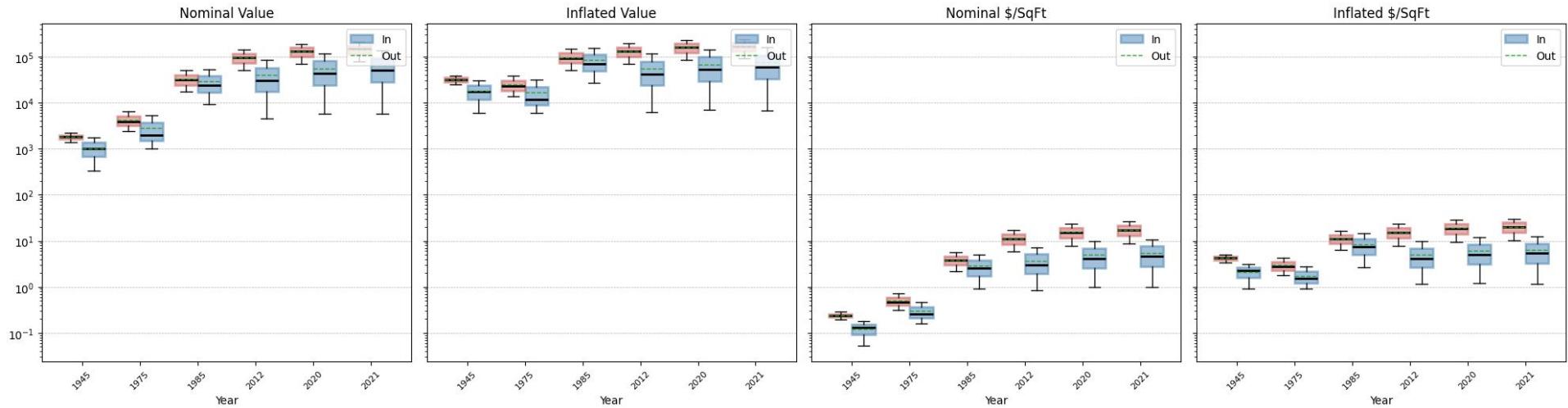
RL1 - In vs Out (Overlay Boxplots)



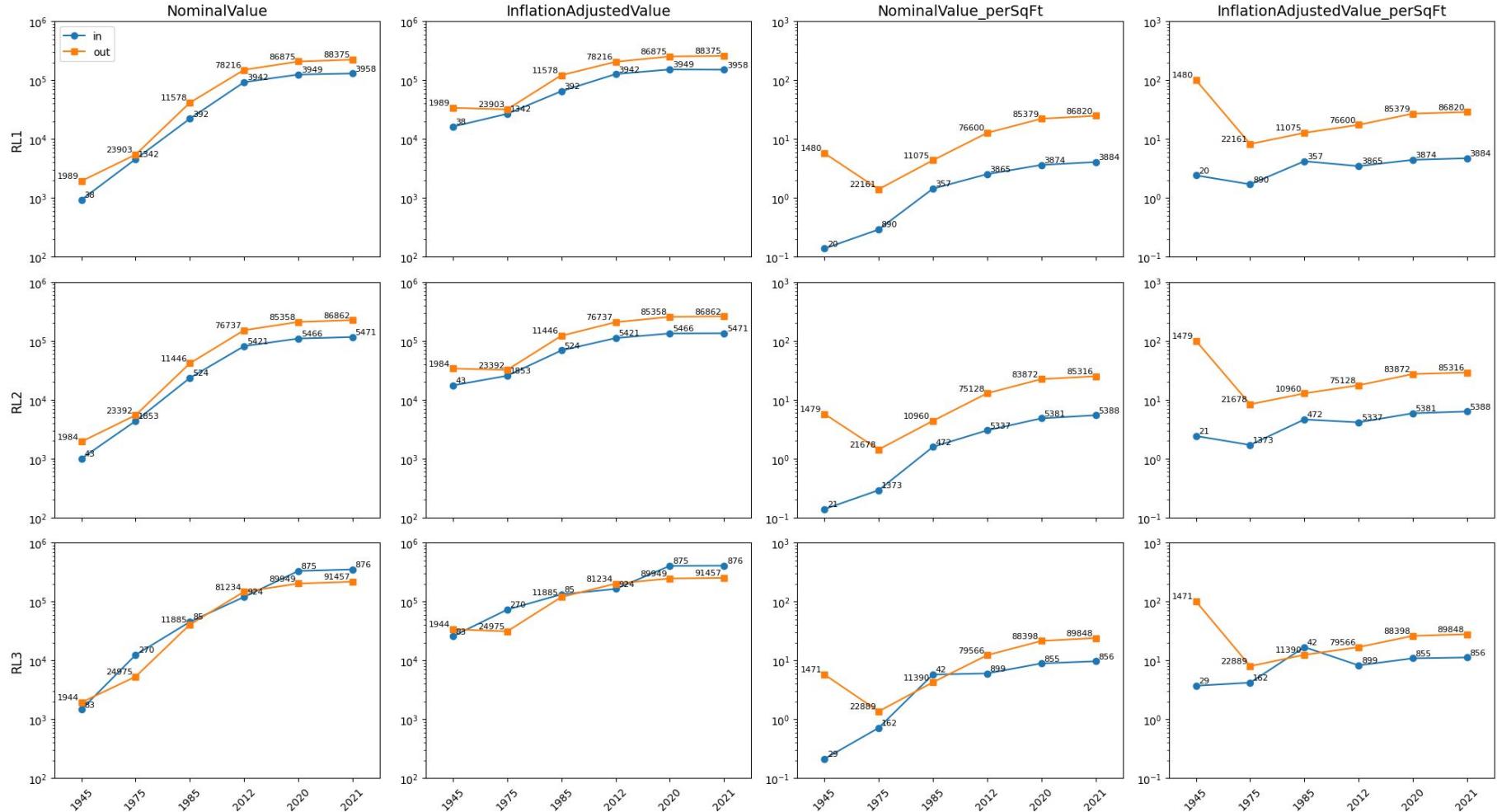
RL2 – In vs Out (Overlay Boxplots)



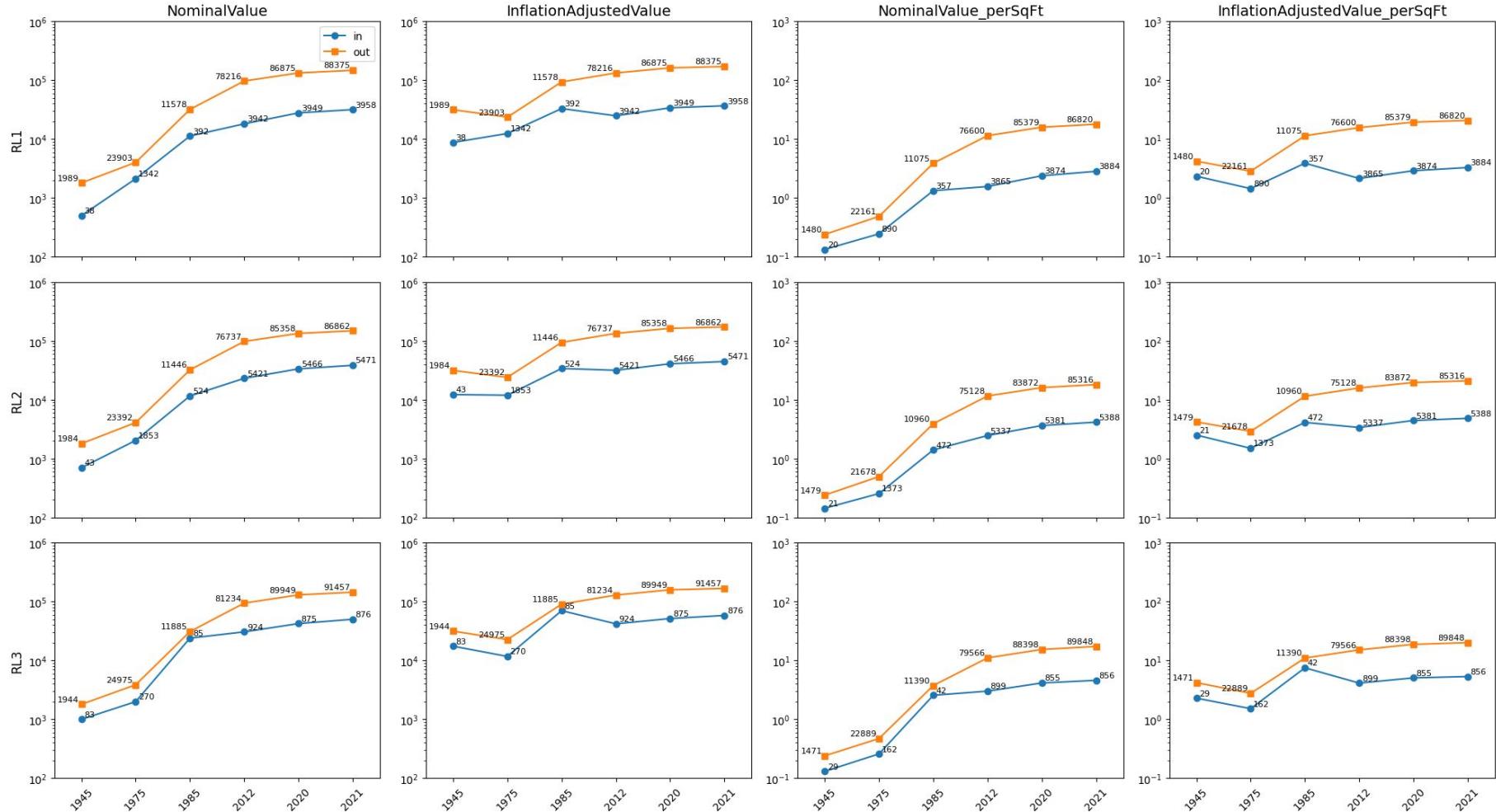
RL3 – In vs Out (Overlay Boxplots)



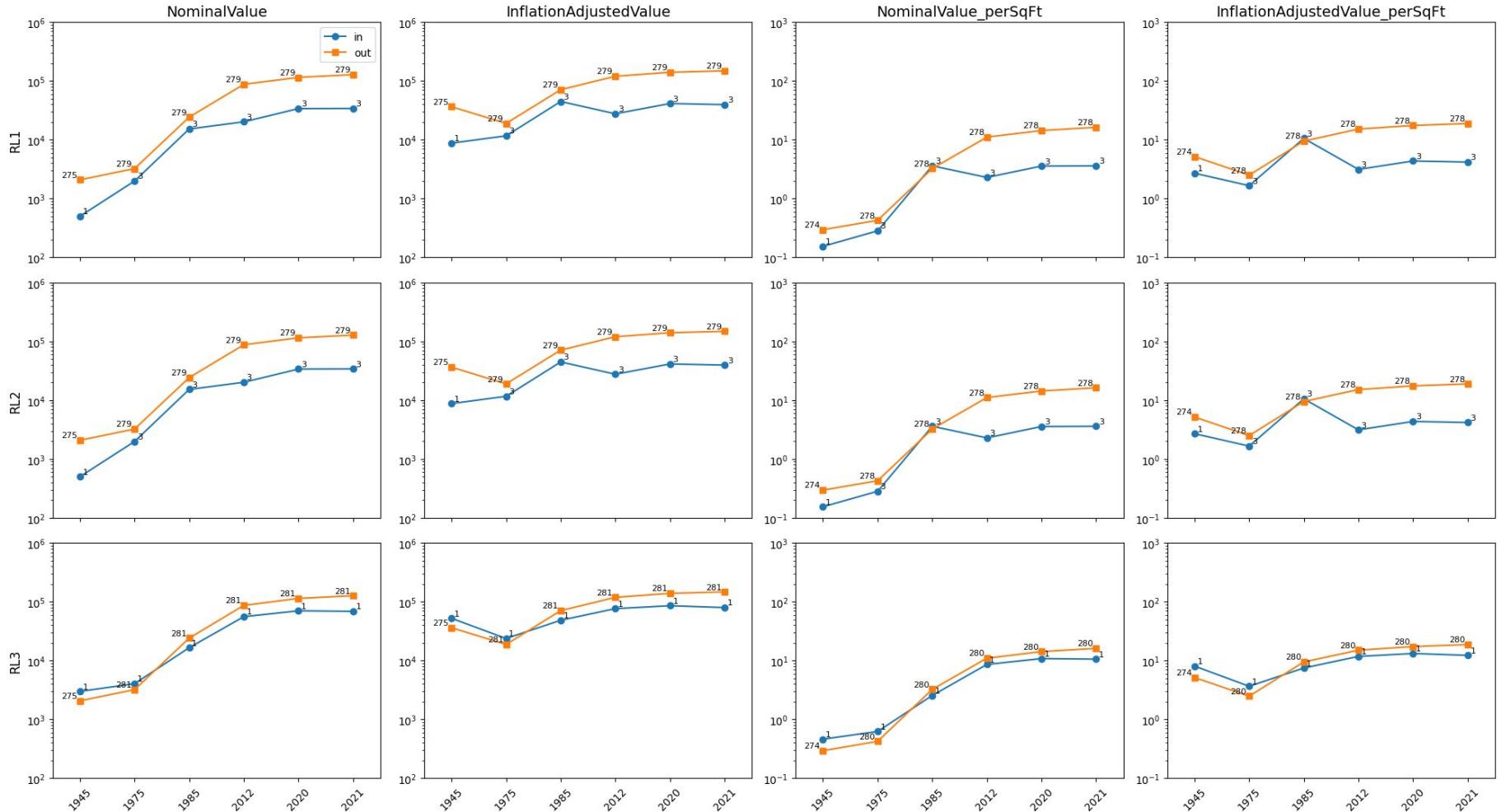
Baseline — Mean



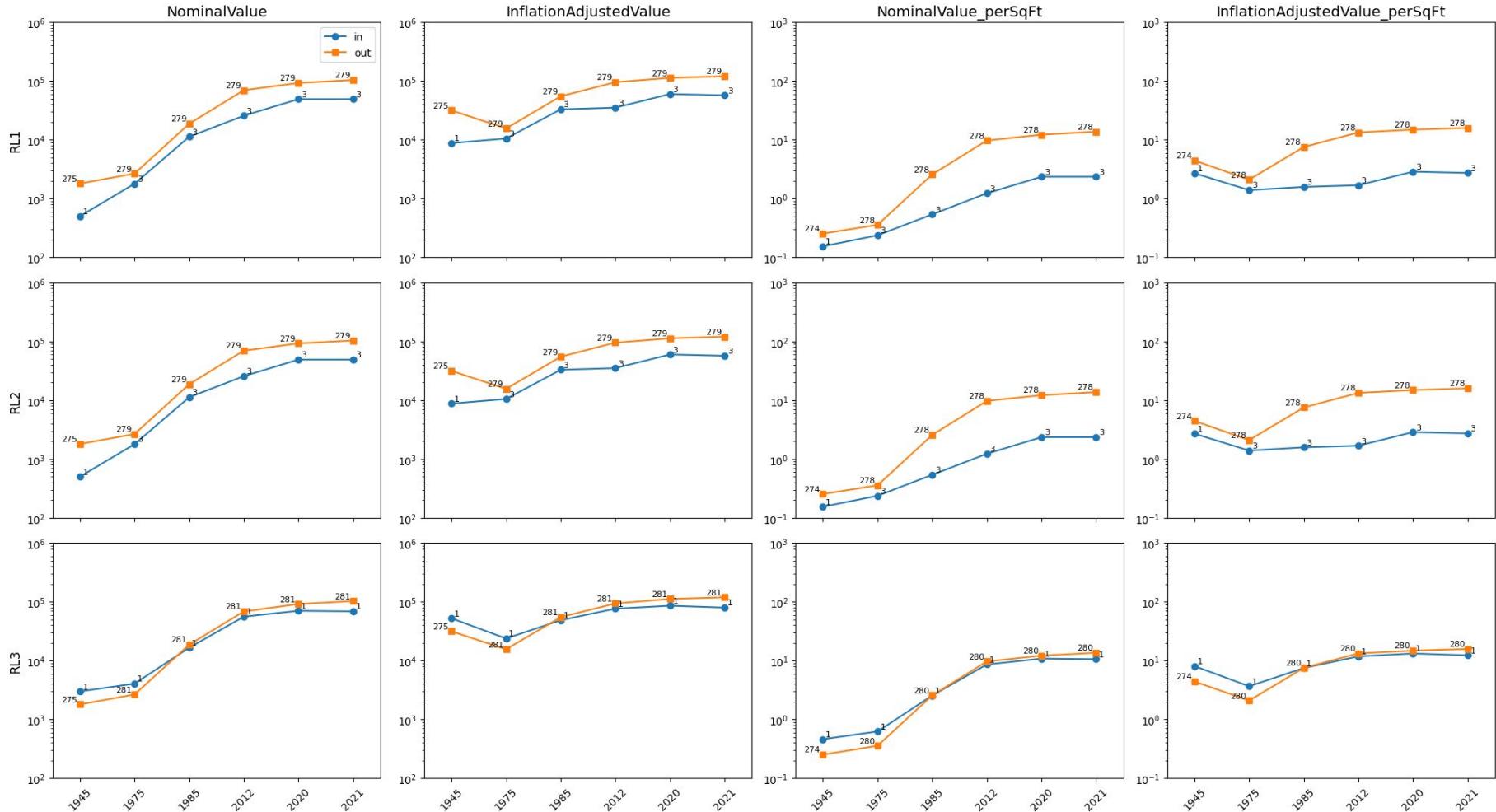
Baseline — Median



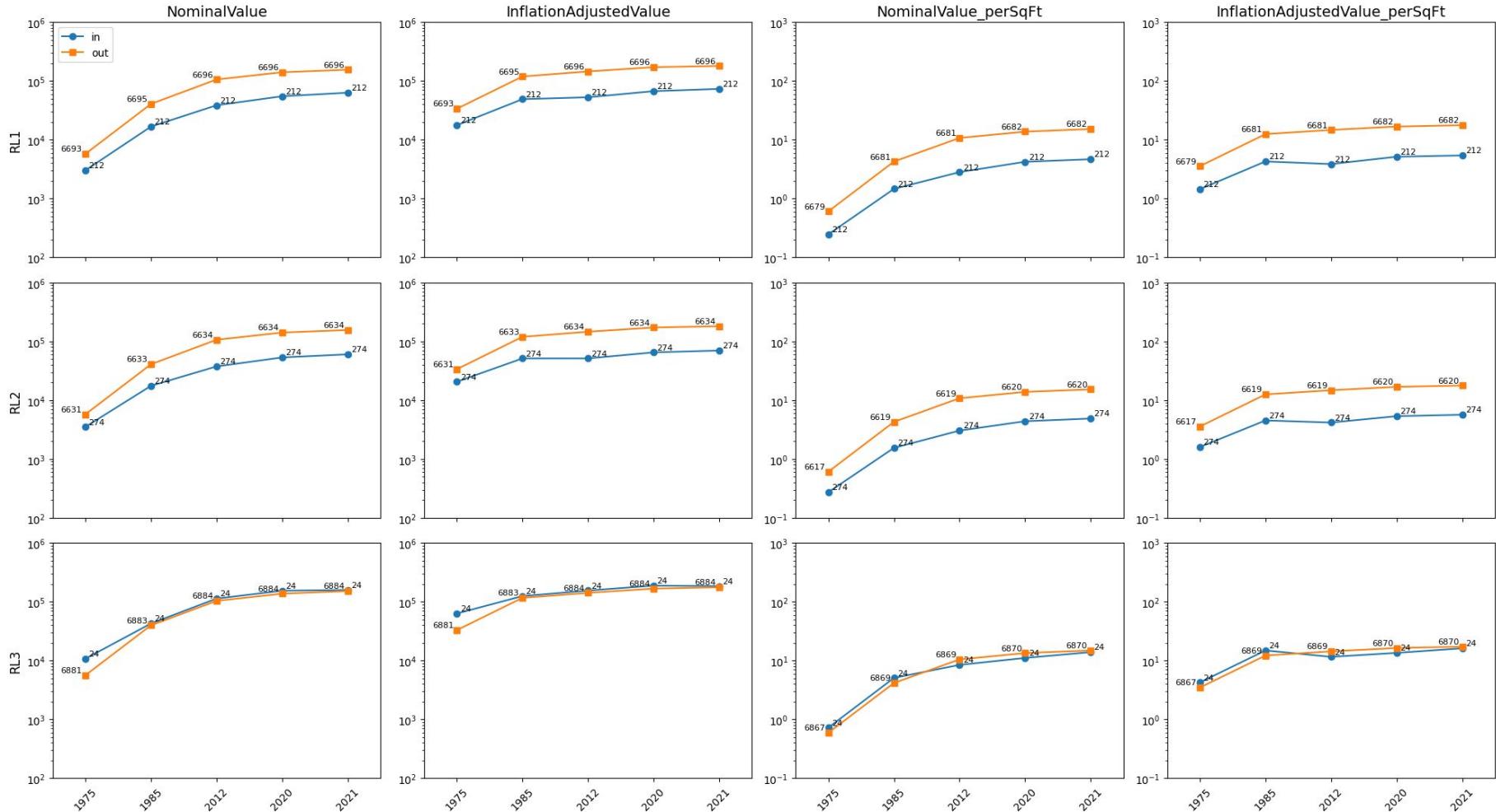
Longitudinal6 — Mean



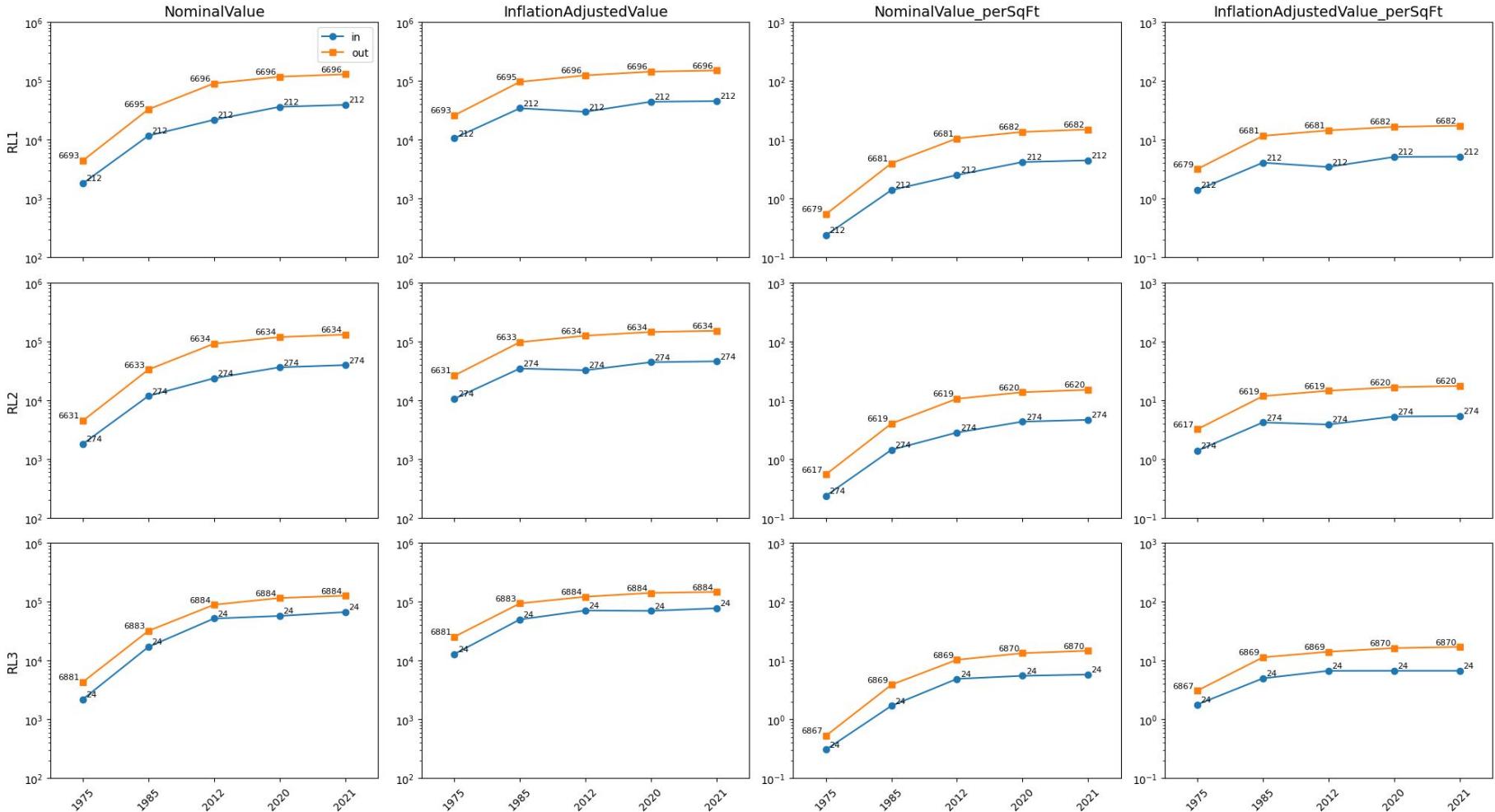
Longitudinal6 — Median



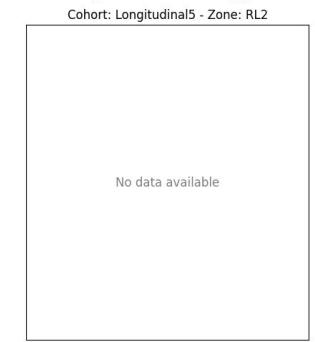
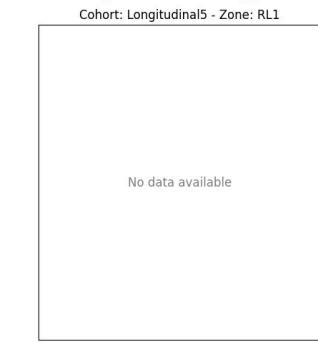
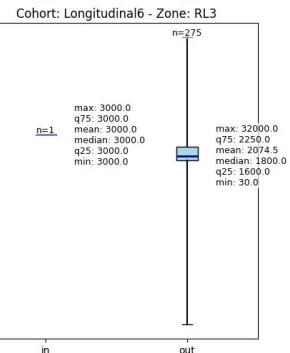
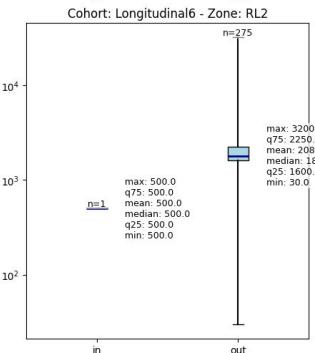
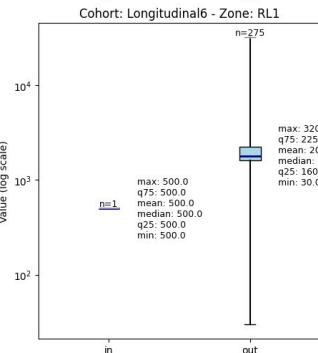
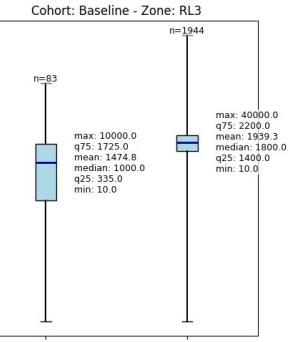
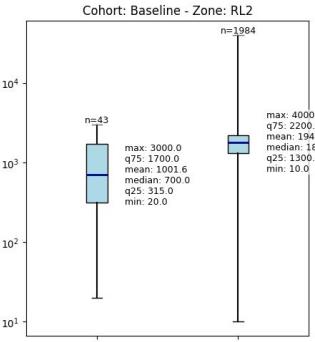
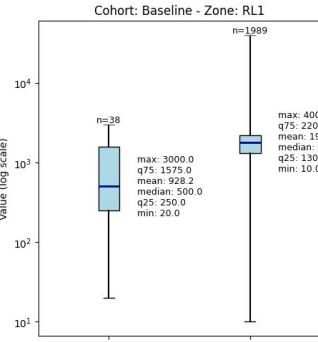
Longitudinal5 — Mean



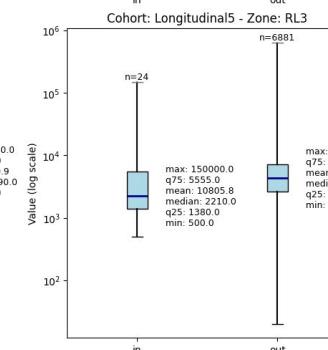
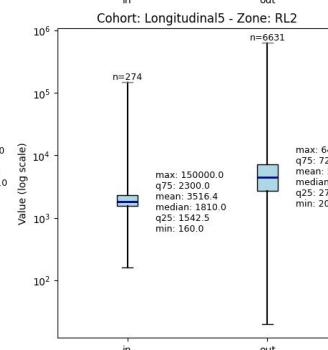
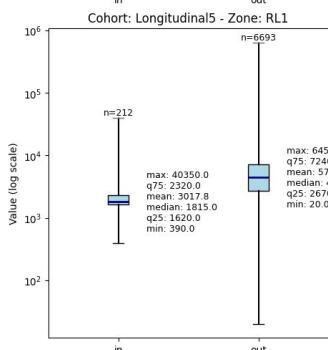
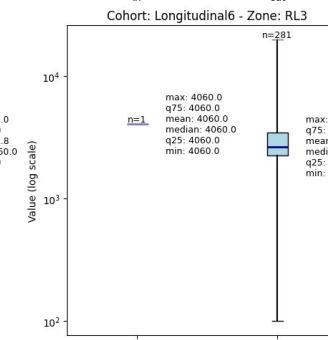
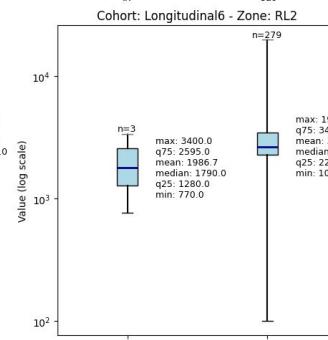
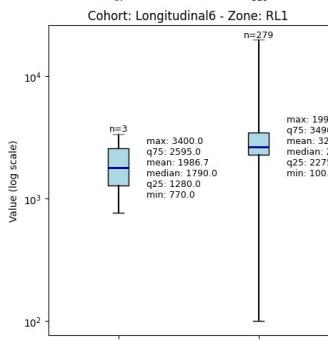
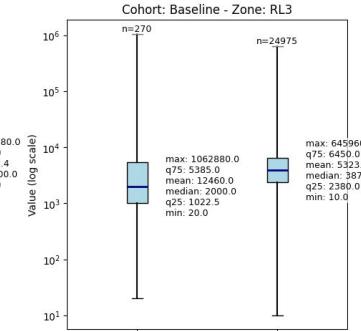
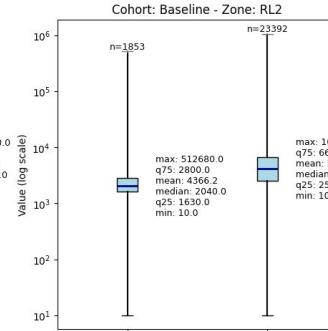
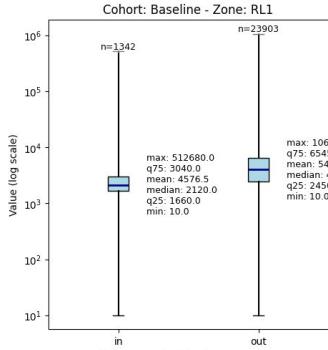
Longitudinal5 — Median



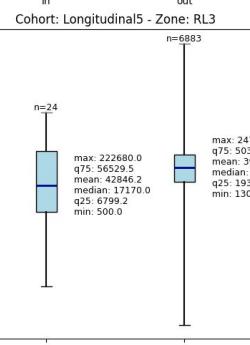
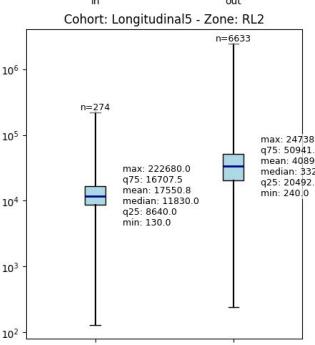
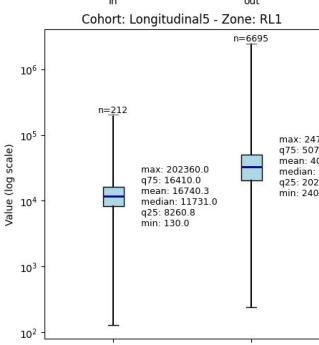
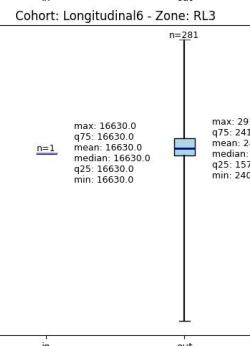
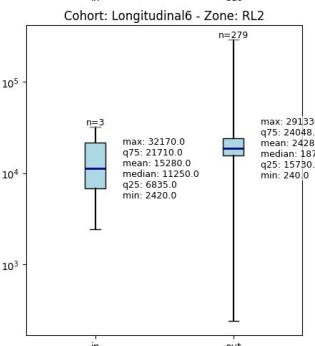
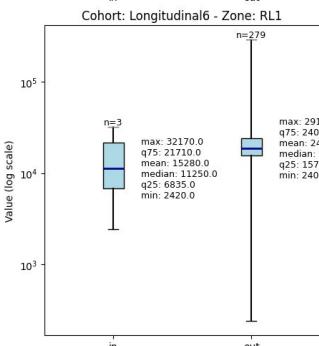
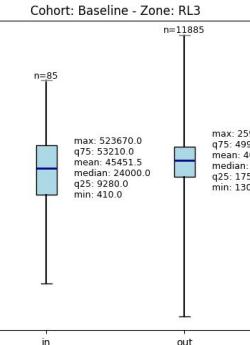
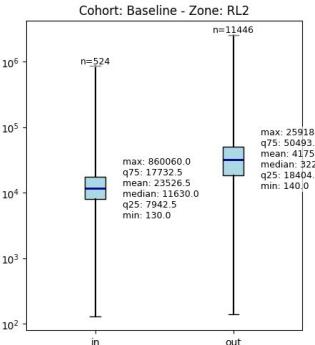
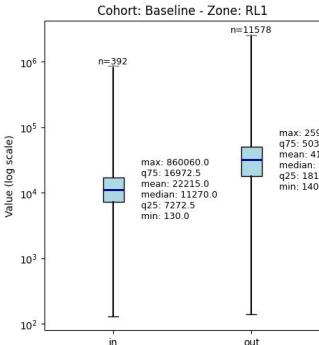
Nominal Value for Year 1945



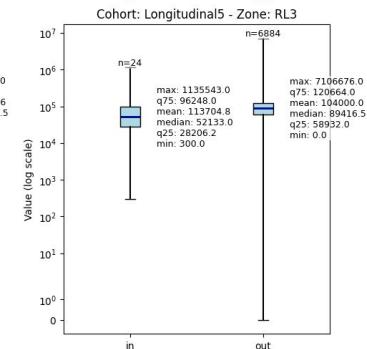
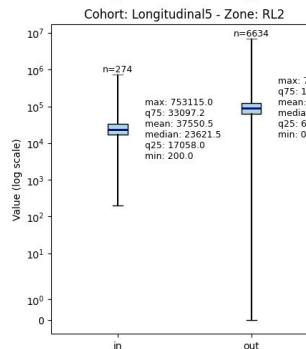
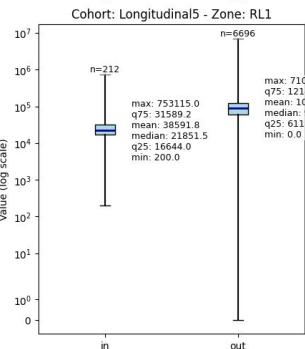
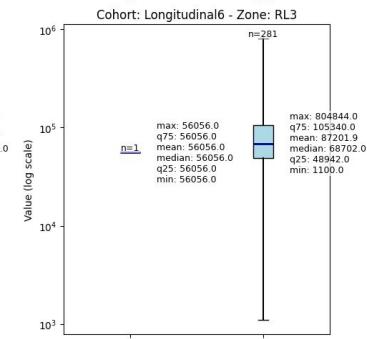
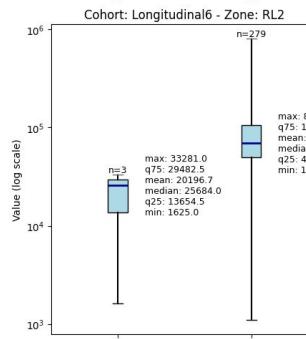
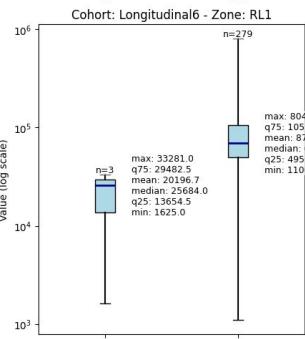
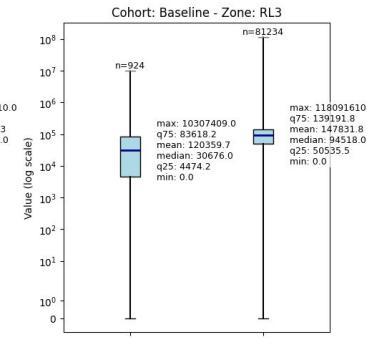
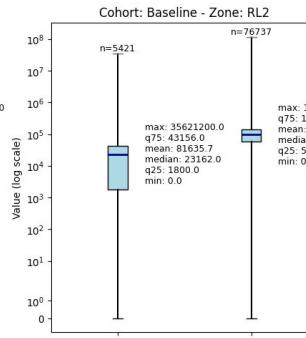
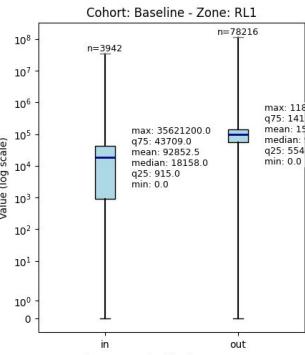
Nominal Value for Year 1975



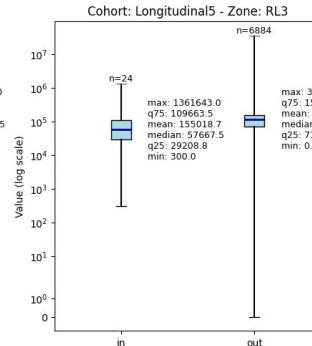
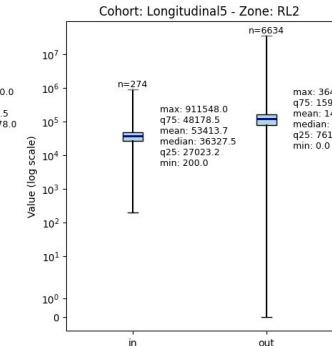
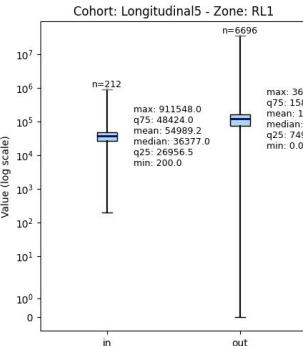
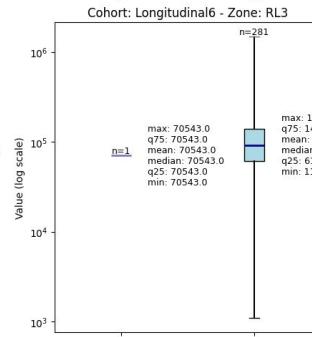
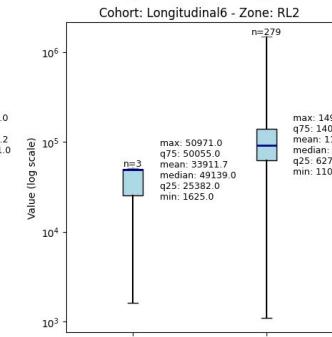
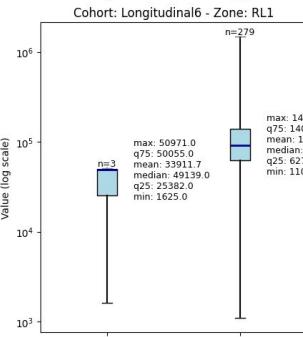
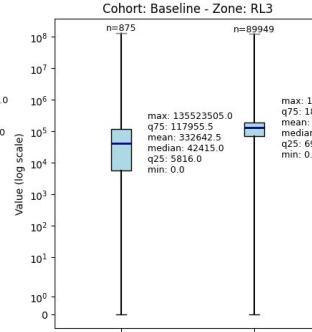
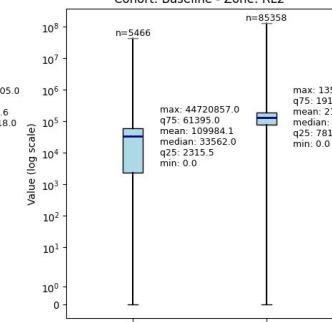
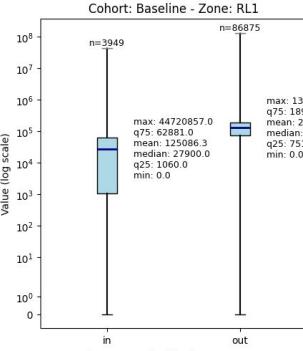
Nominal Value for Year 1985



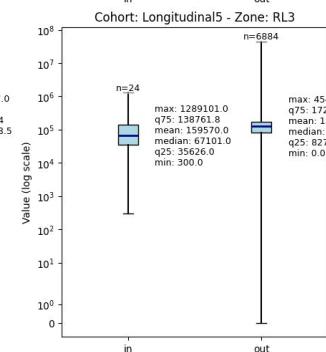
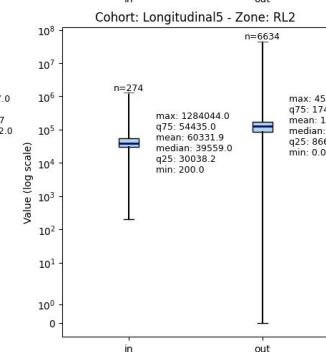
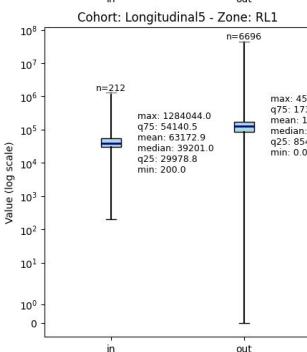
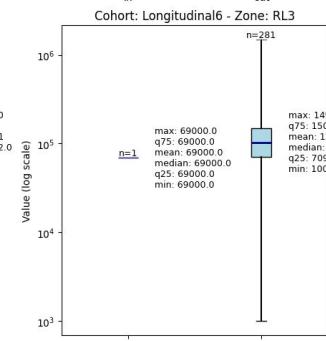
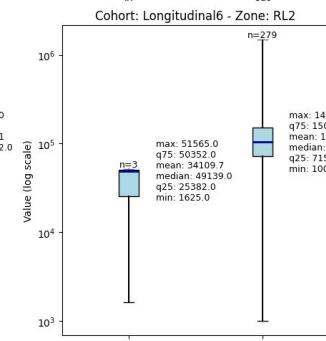
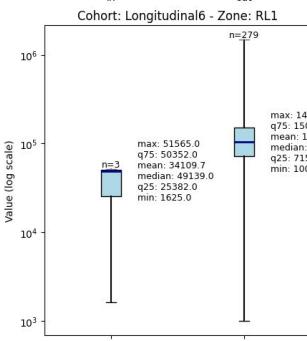
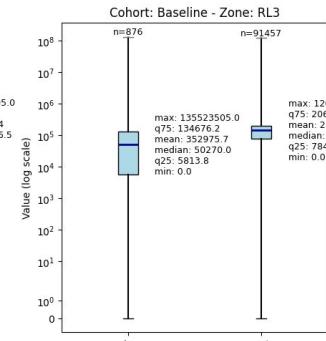
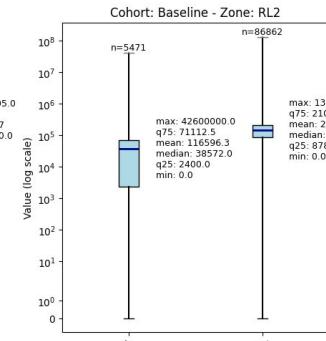
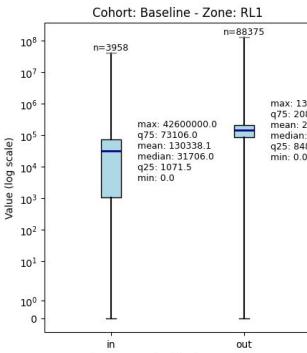
Nominal Value for Year 2012



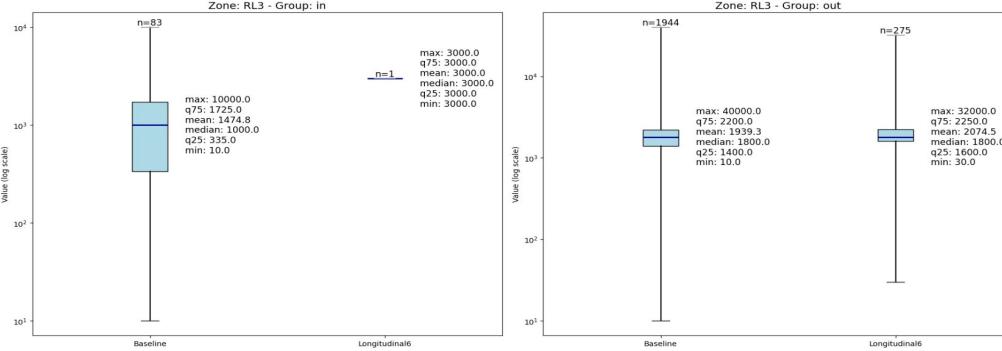
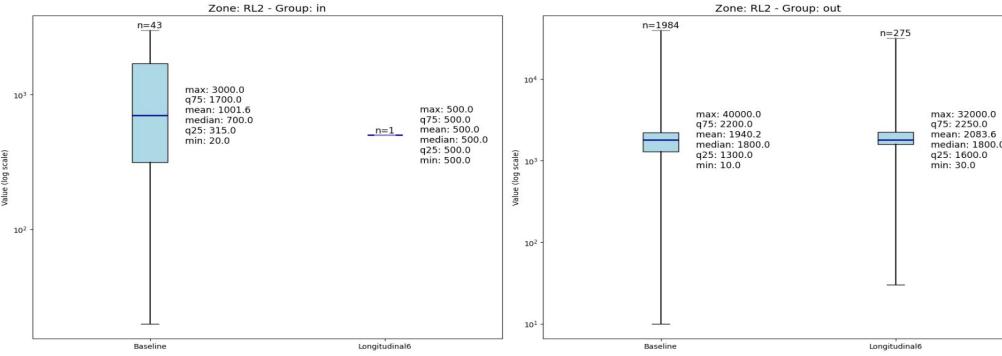
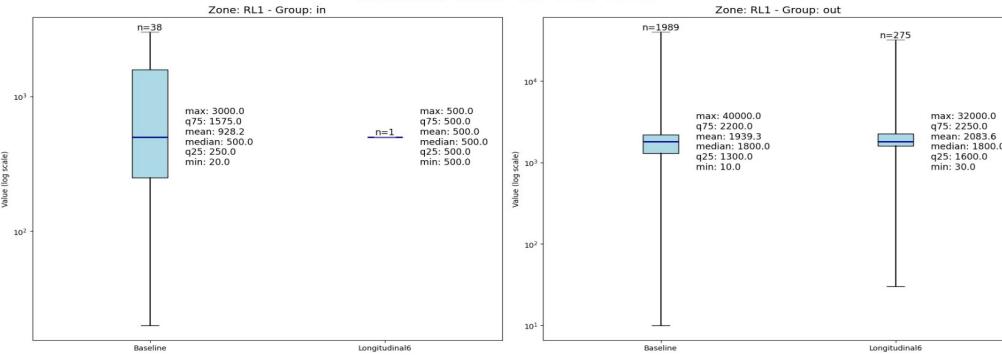
Nominal Value for Year 2020



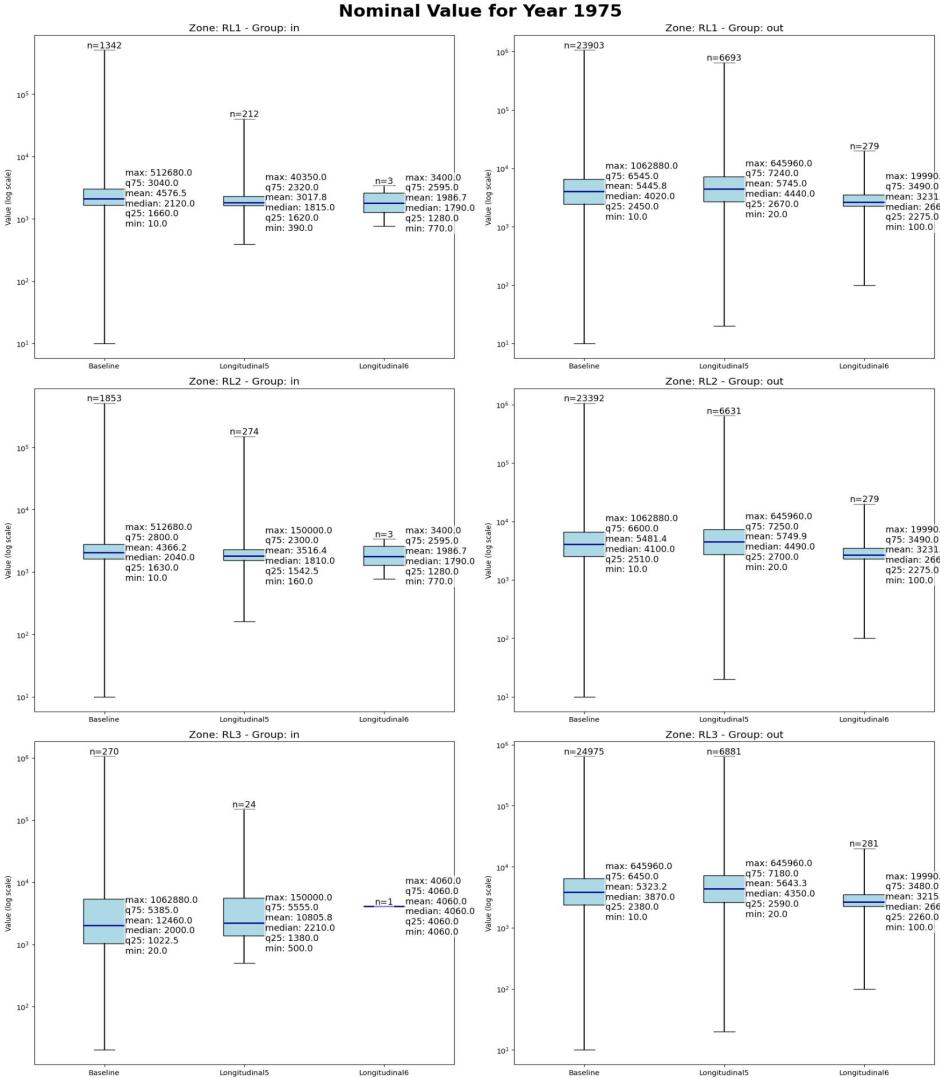
Nominal Value for Year 2021



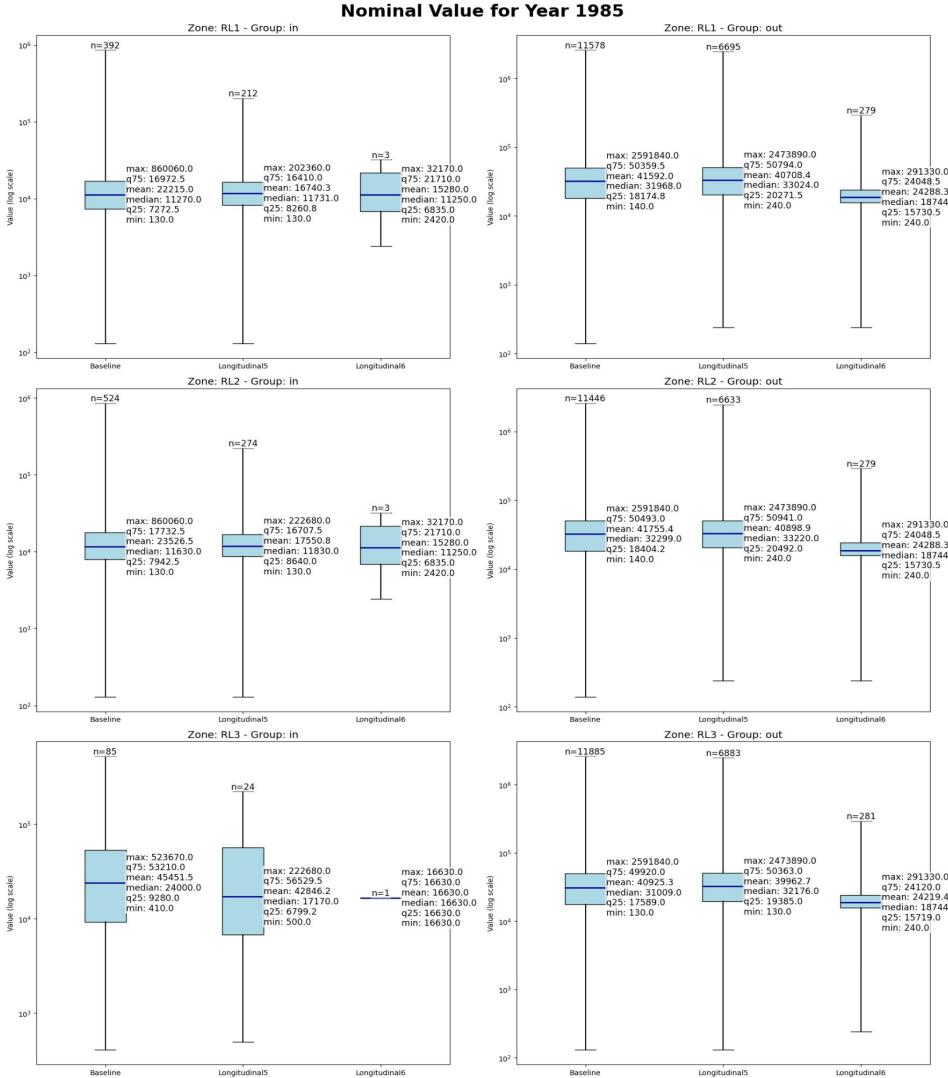
Nominal Value for Year 1945



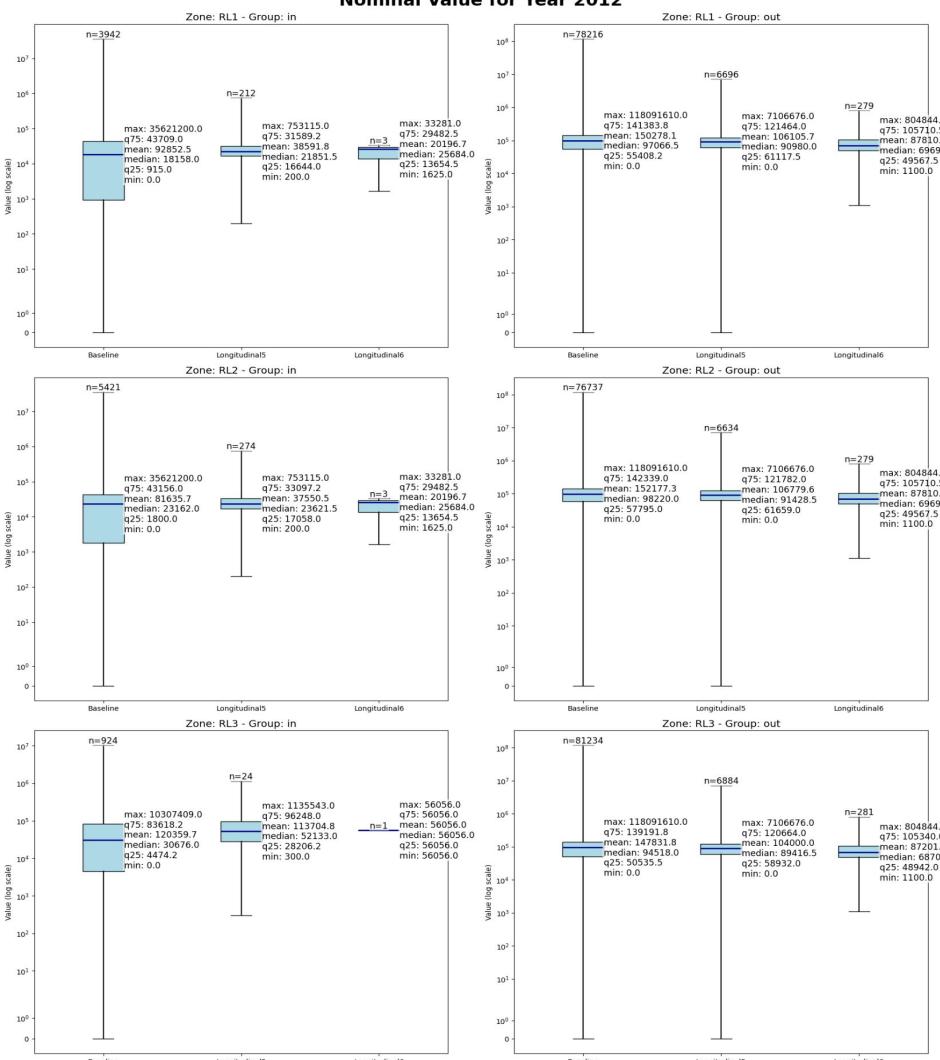
Nominal Value for Year 1975



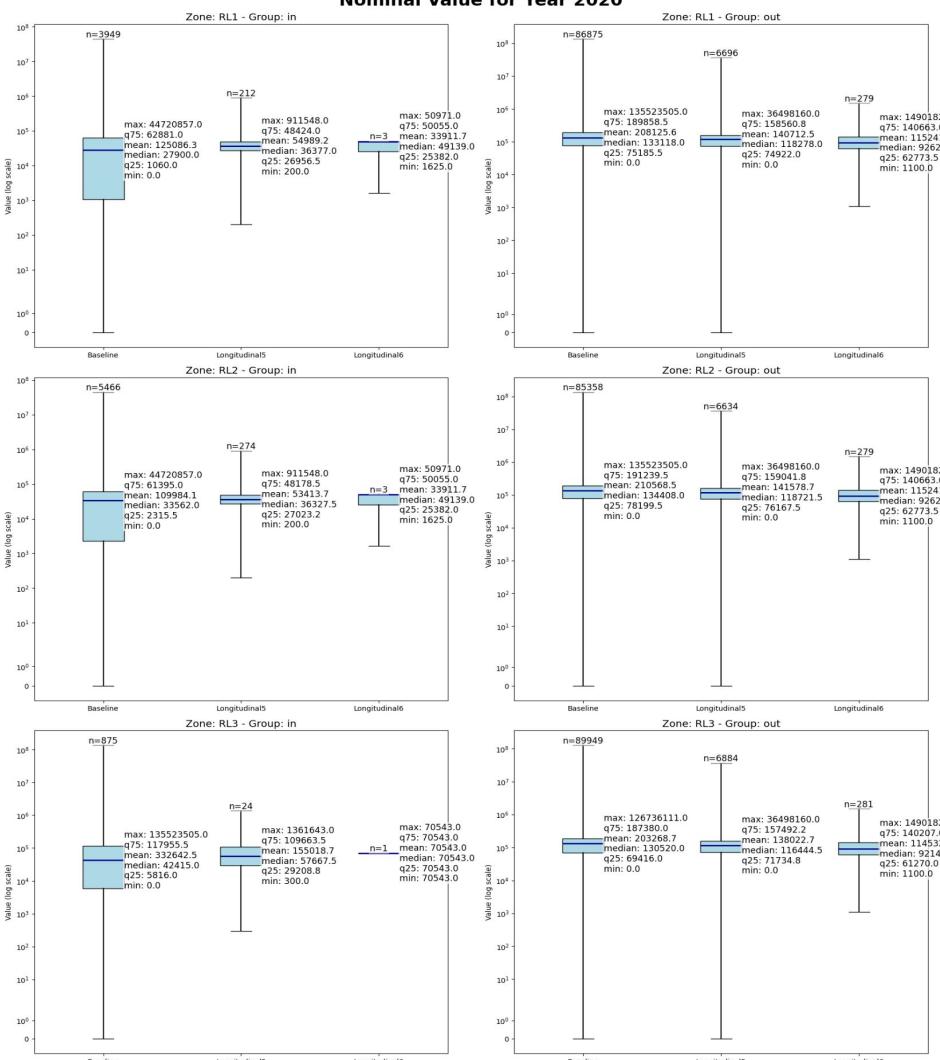
Nominal Value for Year 1985



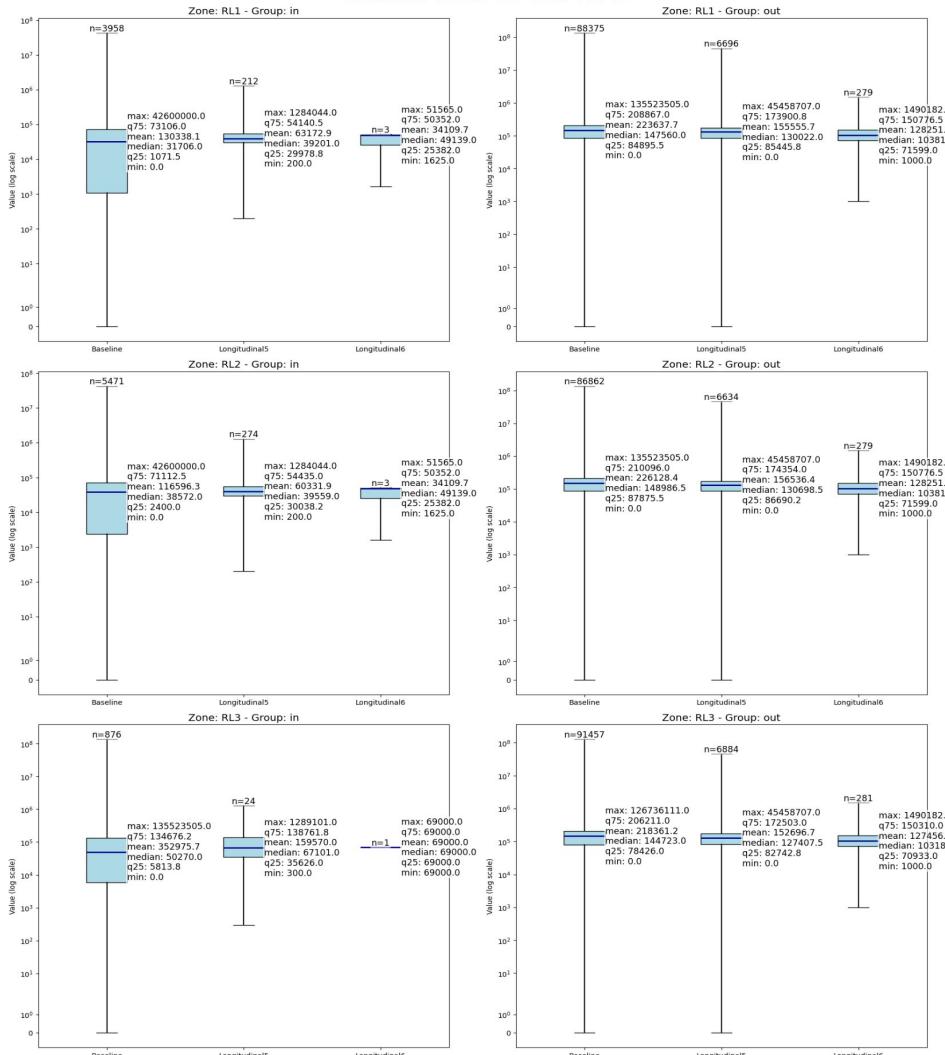
Nominal Value for Year 2012



Nominal Value for Year 2020



Nominal Value for Year 2021



Task 2, 5 and 6

T - test values

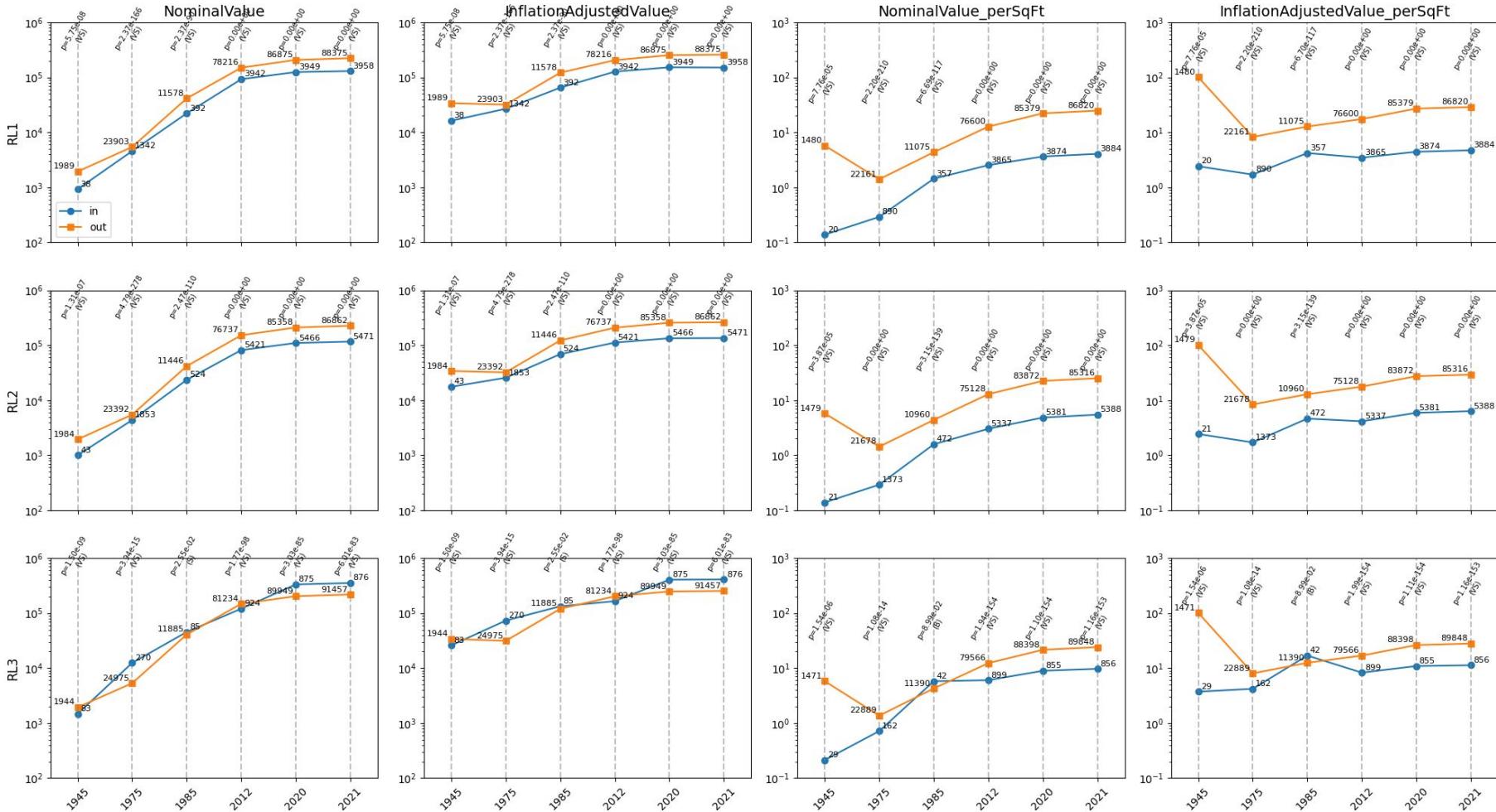
VS: Very Significant ($p < 0.001$)

S: Significant ($0.001 \leq p < 0.05$)

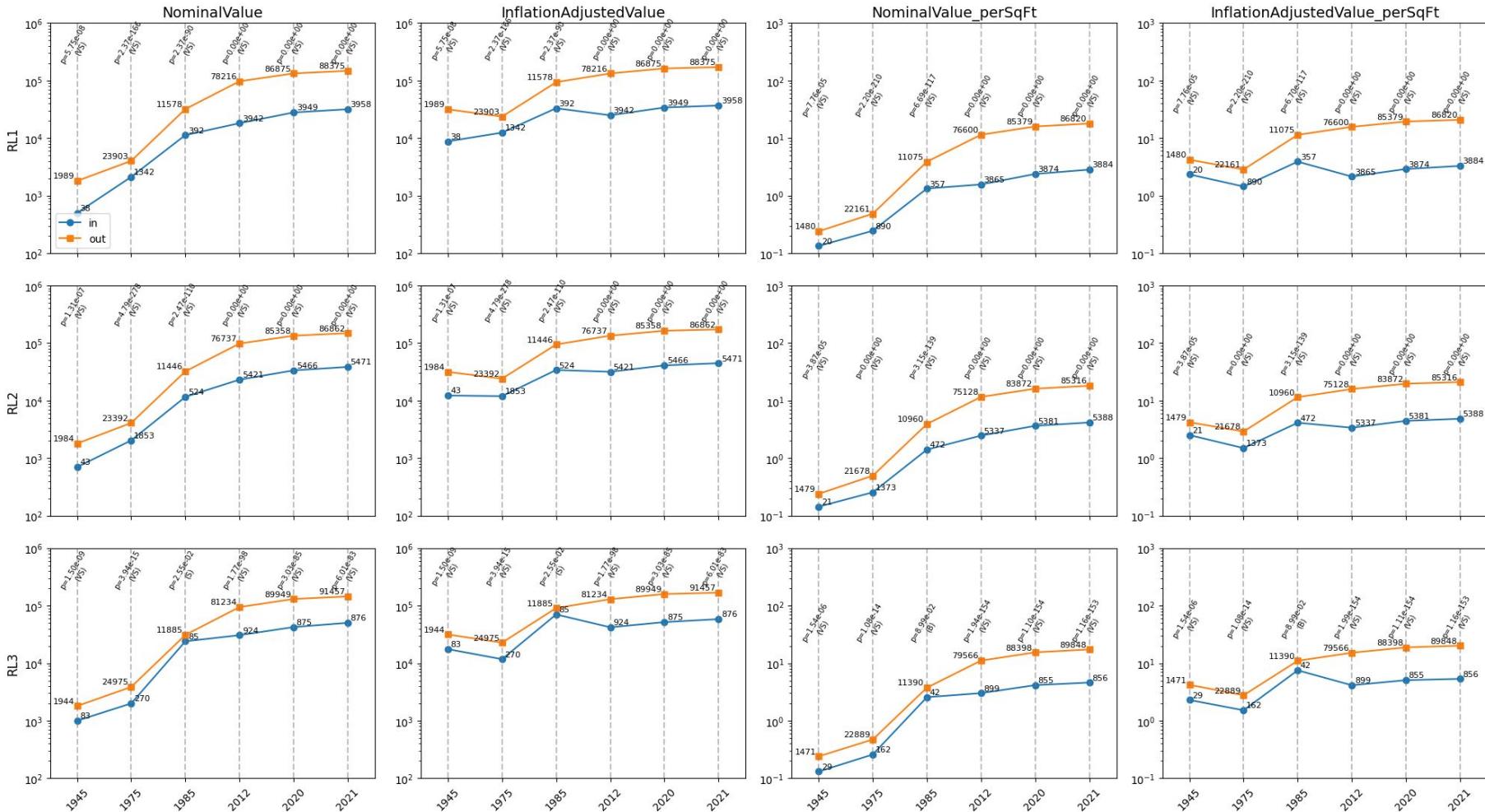
B: Borderline ($0.05 \leq p < 0.1$)

VI: Very Insignificant ($p \geq 0.1$)

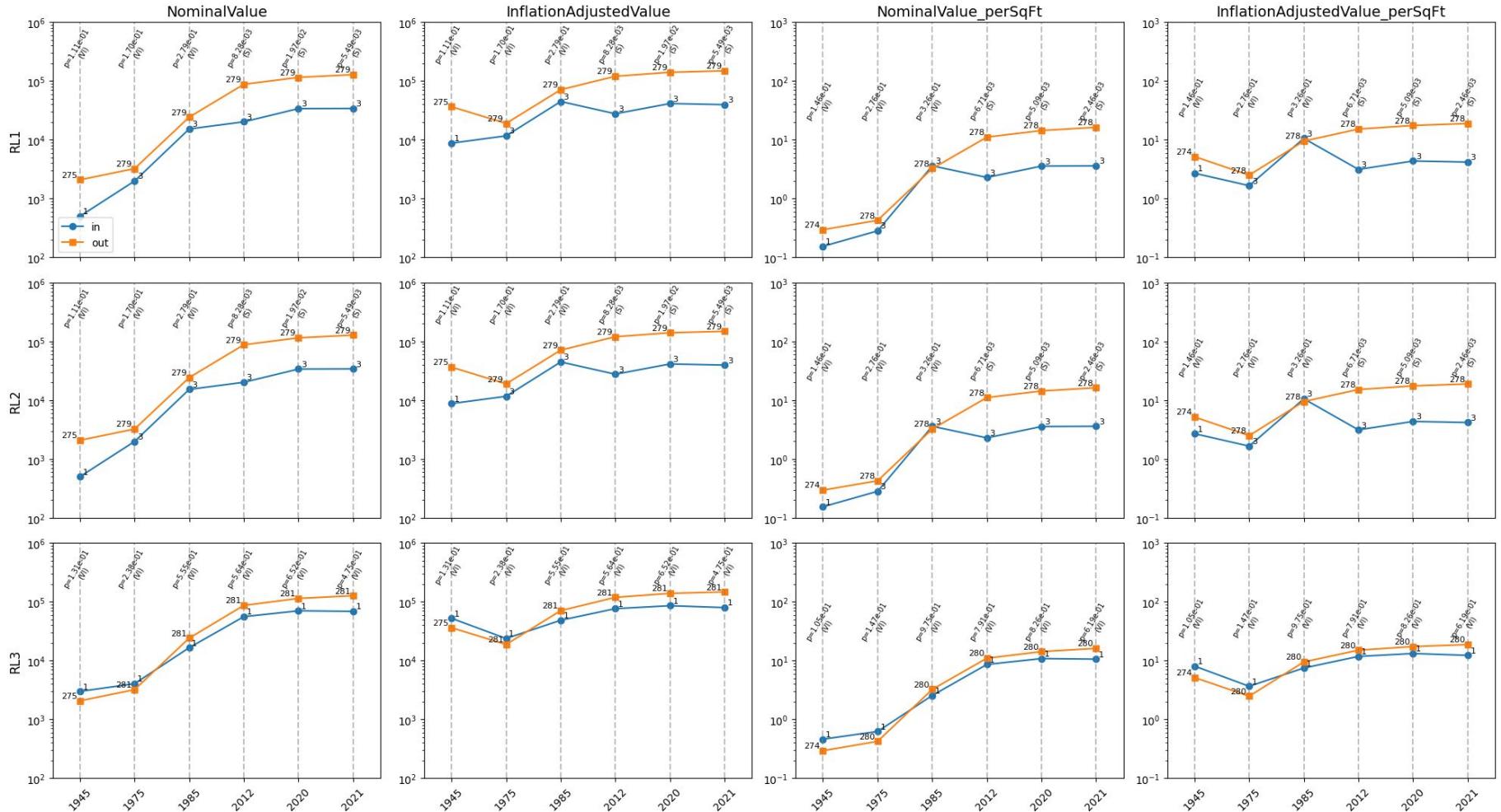
Baseline — Mean



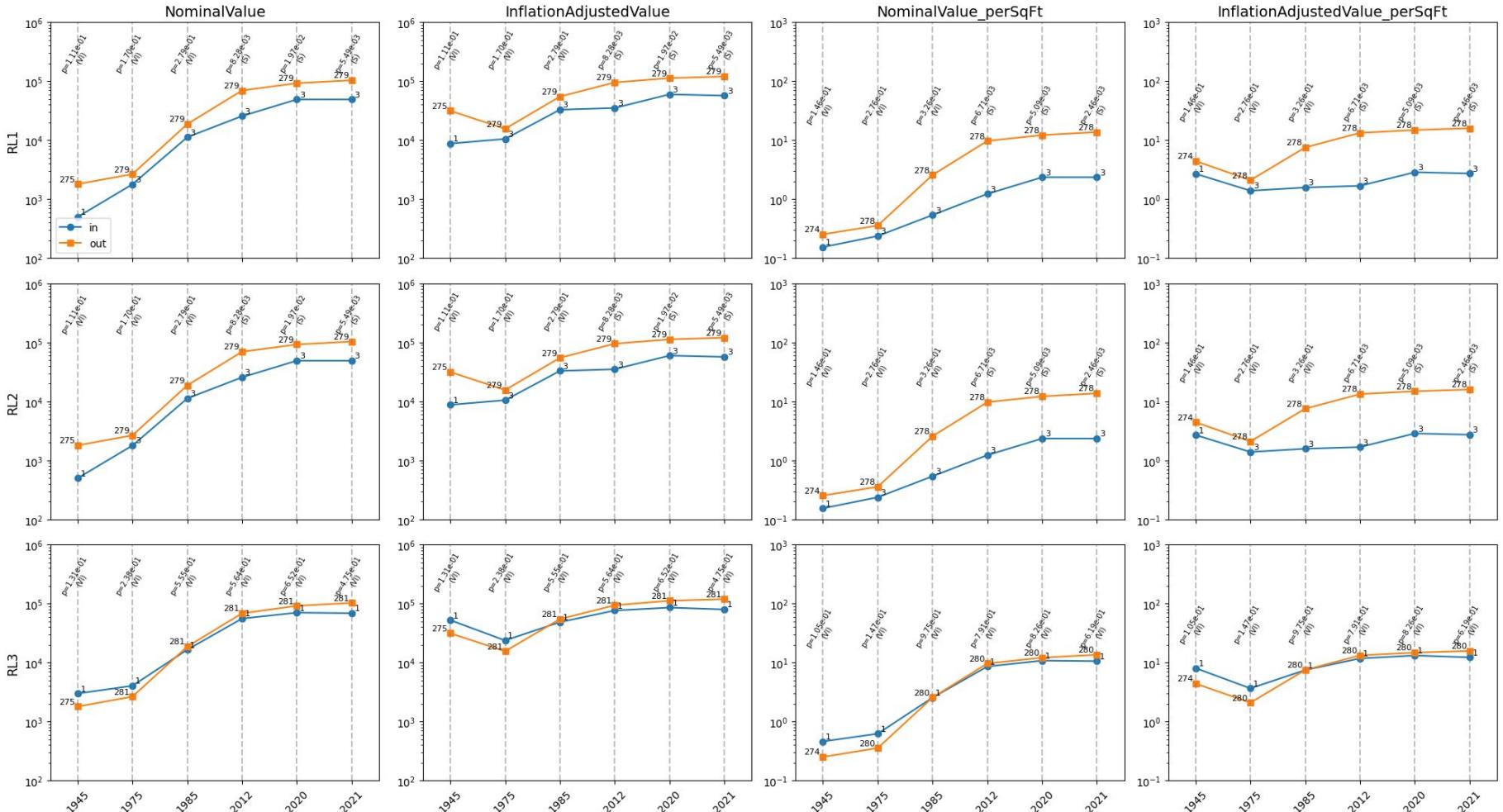
Baseline — Median



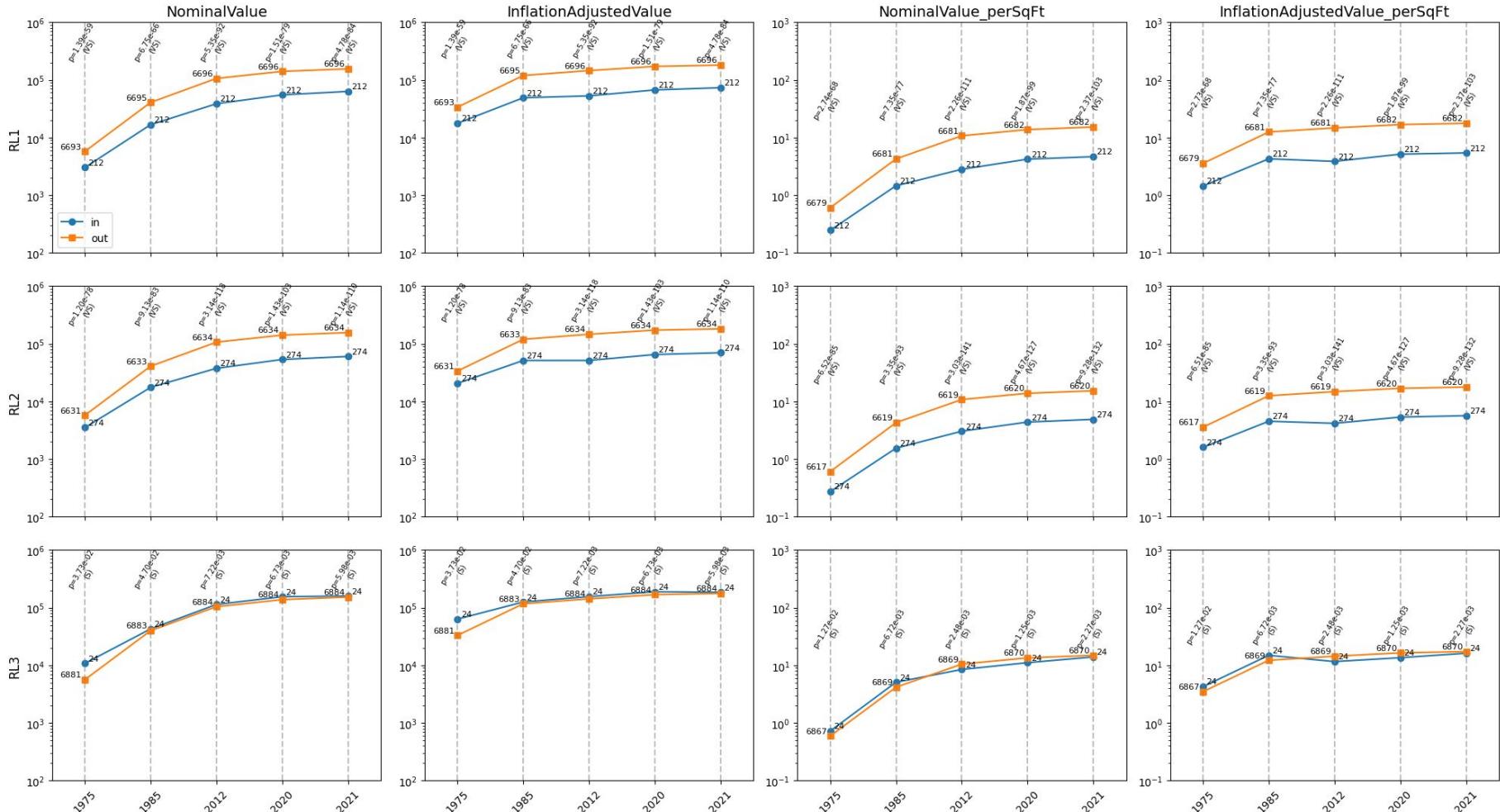
Longitudinal6 — Mean



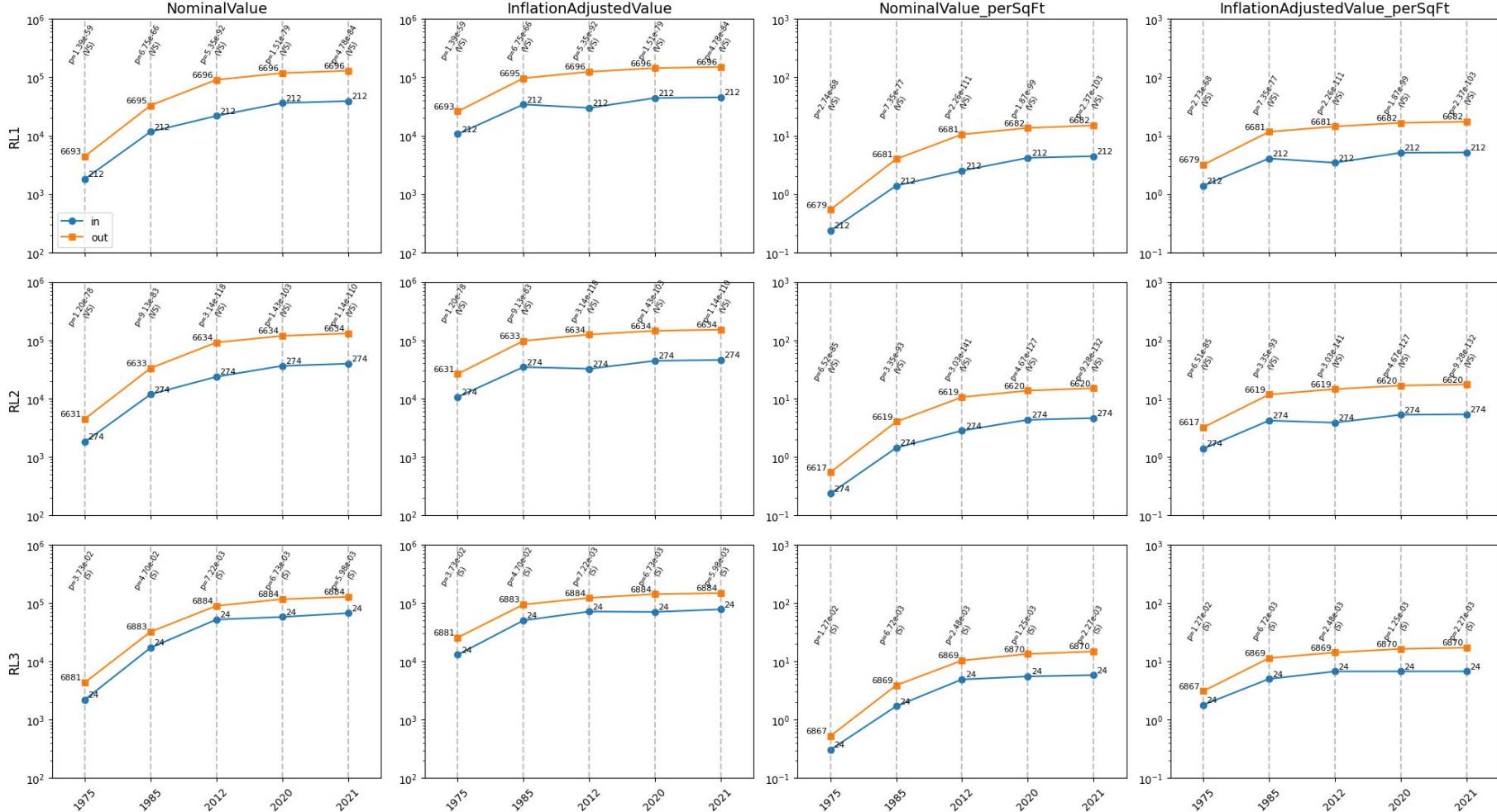
Longitudinal6 — Median



Longitudinal5 — Mean



Longitudinal5 — Median

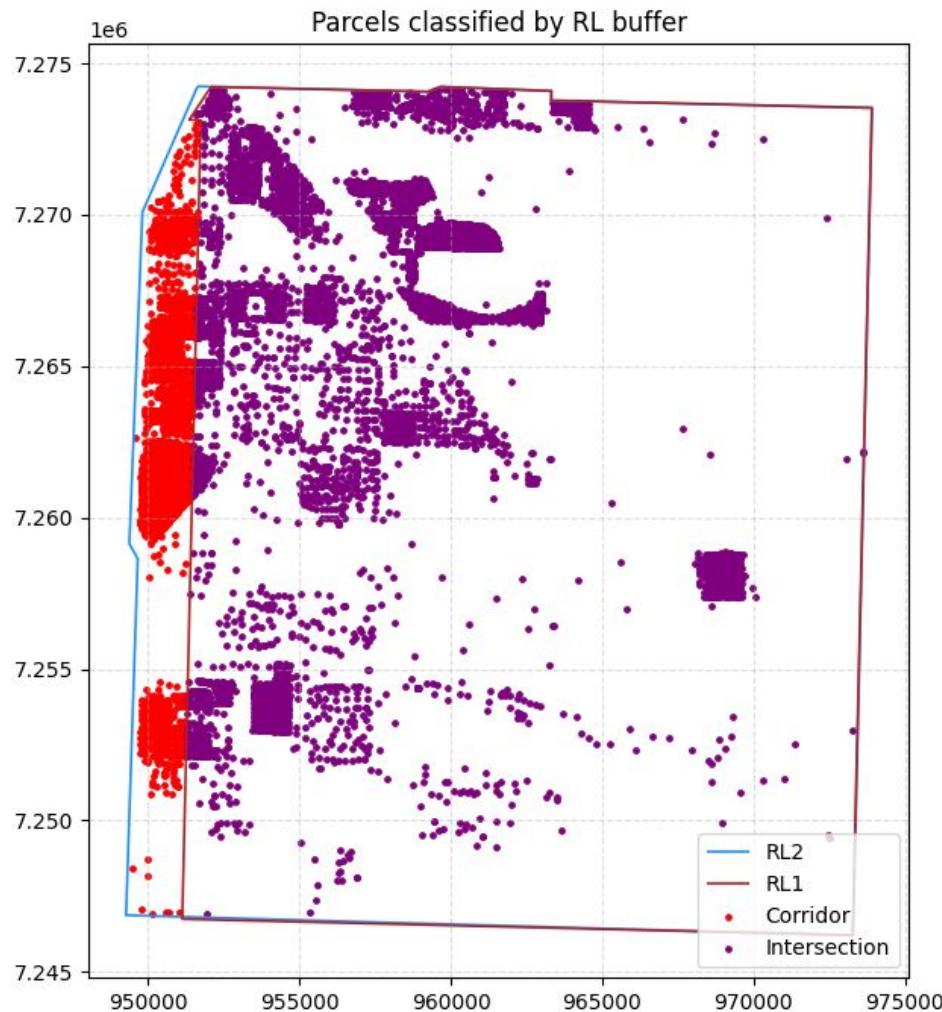


Parcels - RL2 and RL1

Corridor parcels : 1,641

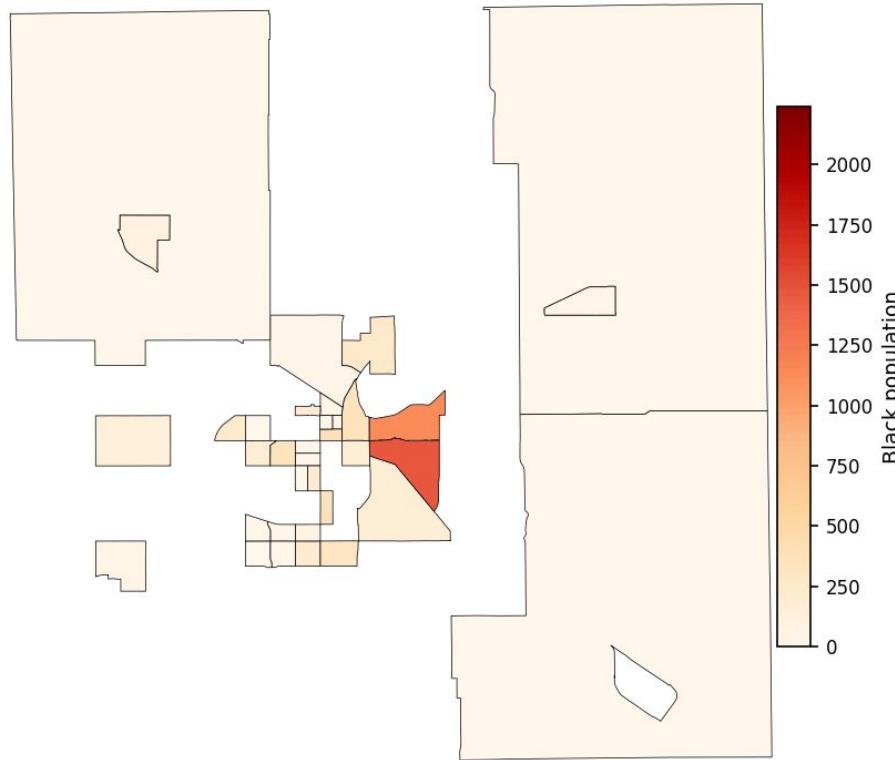
Intersection parcels : 4,675

Total tagged : 6316

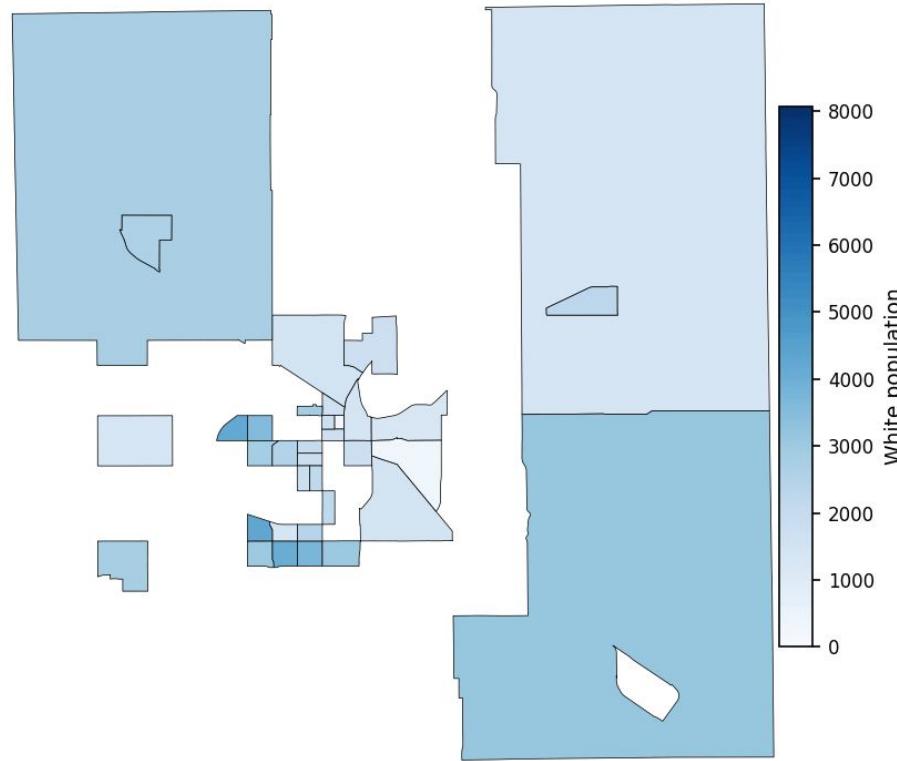


RACIAL DEMOGRAPHICS

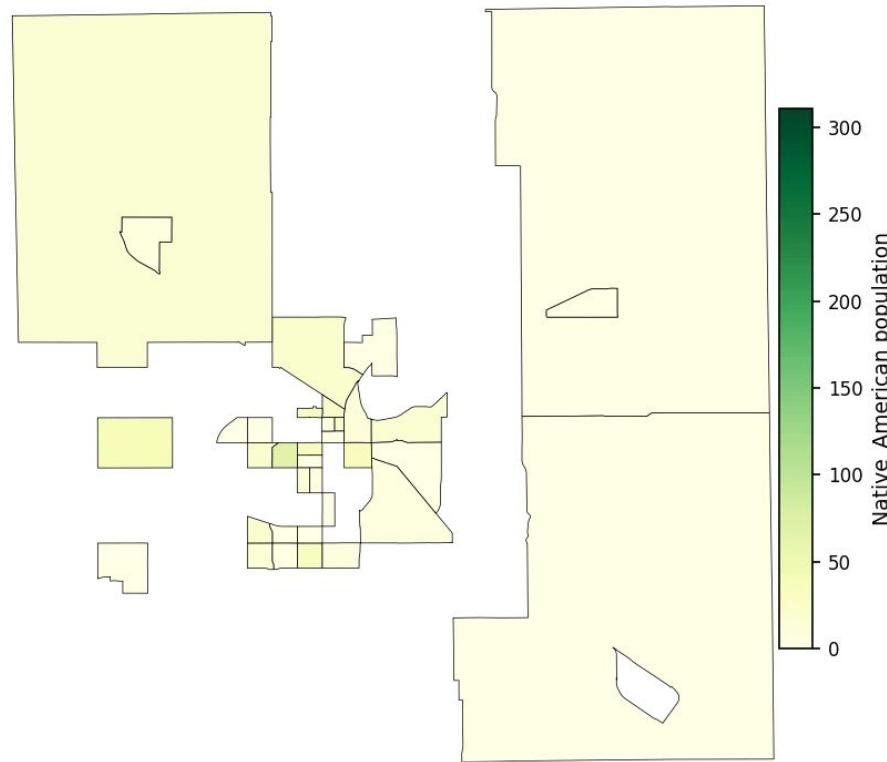
Lubbock County - Black
ACS 5-Year 2009



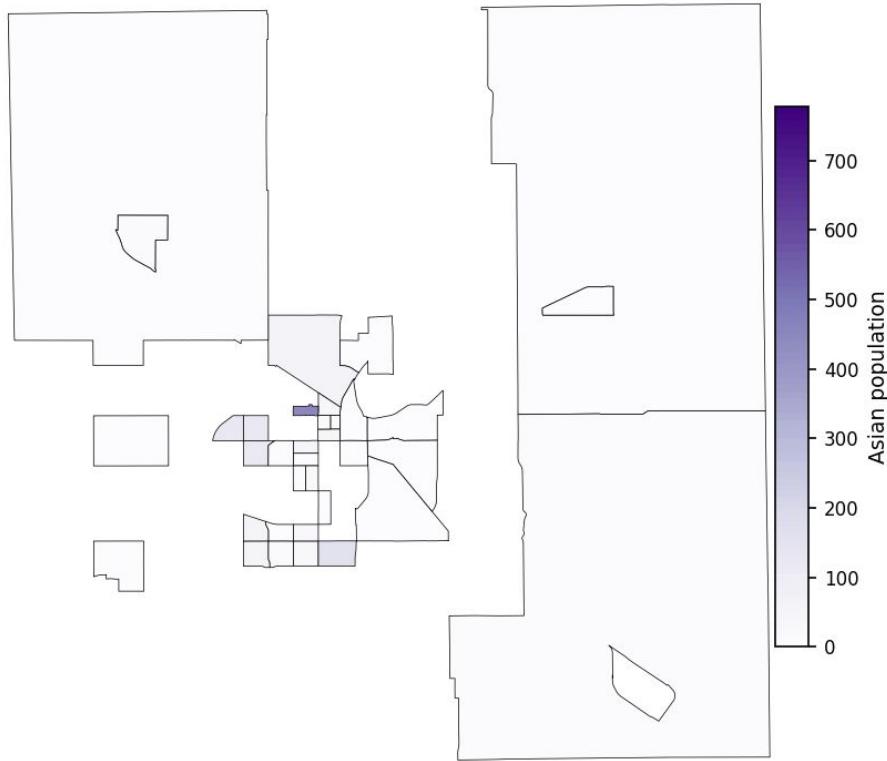
Lubbock County - White
ACS 5-Year 2009



**Lubbock County - Native_American
ACS 5-Year 2009**



**Lubbock County - Asian
ACS 5-Year 2009**



Lubbock County - Pacific_Islander
ACS 5-Year 2009



Lubbock County - Other
ACS 5-Year 2009



Lubbock County - Two_or_more
ACS 5-Year 2009



Year Unit Built

Year Unit Built	Owner-Occupied		Renter-Occupied	
	Number	%	Number	%
2000 or later	10,069	21%	9,358	21%
1980-1999	11,840	25%	12,724	29%
1950-1979	22,872	47%	19,653	44%
Before 1950	3,375	7%	2,626	6%
Total	48,156	100%	44,361	100%

Table 33 – Year Unit Built

Alternate Data Source Name:
2013-2017 ACS 5-Yr Estimates

[link](#)

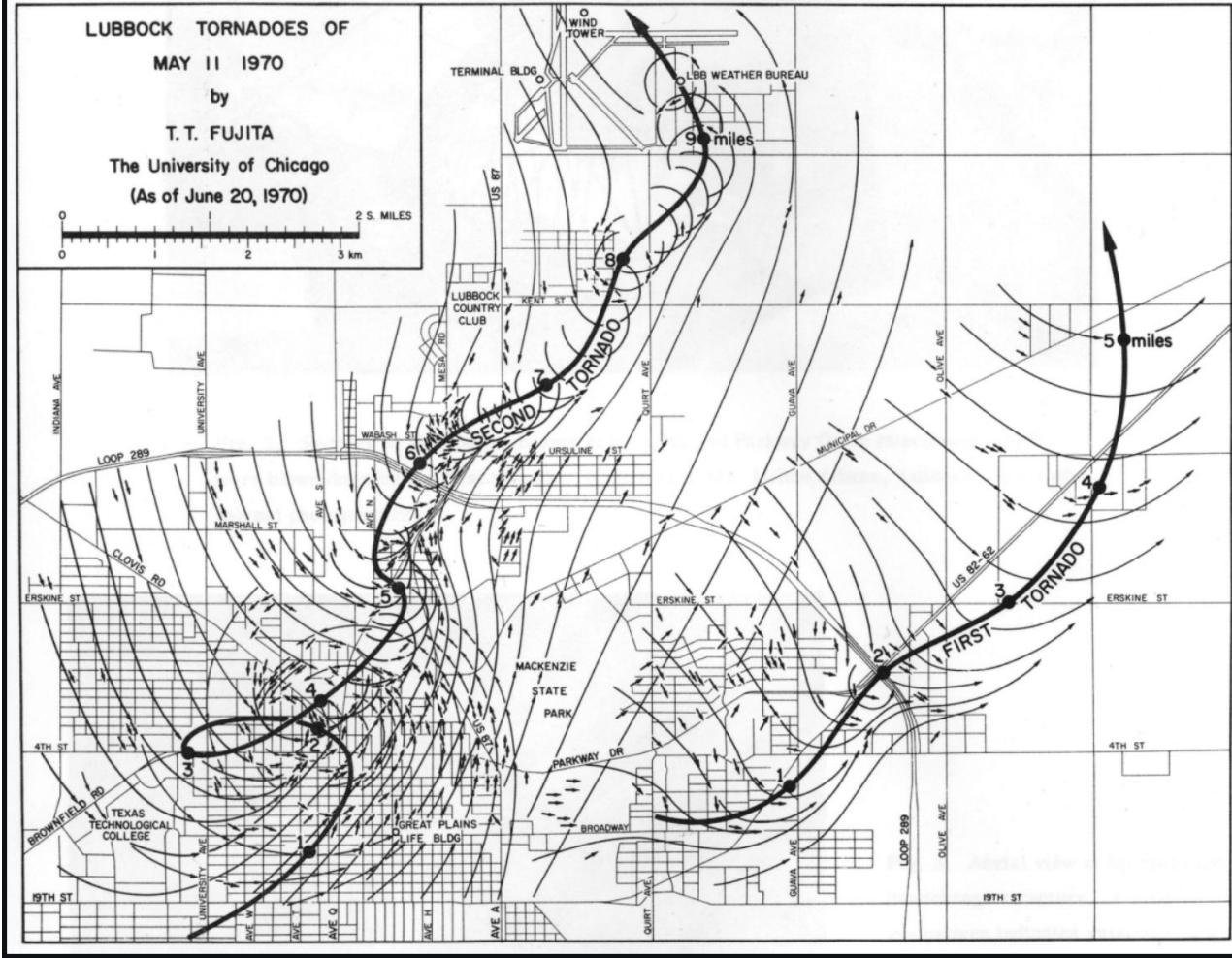
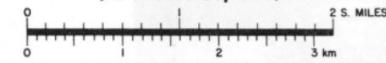
LUBBOCK TORNADOES OF

MAY 11 1970

by

T. T. FUJITA

The University of Chicago
(As of June 20, 1970)



link

Goal (1959 plan)	What actually happened	Evidence
Clear “slum” housing and replace it with new homes and shops.	<ul style="list-style-type: none"> ✓ Most of the 1,000 + sub-standard structures were bulldozed in the 1960s. ✗ But the promised private rebuilding stalled; many lots sat empty for decades. 	<p>City report (1987) notes “large areas of vacant land owned by the Redevelopment Corporation” and that only 7 of 238 original houses met code before clearance and “few [residents] chose to return … the area was dotted with residential vacant lots.” (Lubbock Weblink)</p>
Let displaced owners/tenants move back into new dwellings.	<ul style="list-style-type: none"> ✗ Roughly 1,300 families—virtually all Black—were uprooted. Most relocated elsewhere in East or North Lubbock rather than pay the higher price of the new units, so the neighborhood population never recovered. 	<p>Federal displacement tally quoted in 2020 history of urban renewal: “The Lubbock, Texas, Coronado project forced out nearly 1,300 families and … not a single white family.” (Boston Review)</p>
Revitalize the neighborhood economy.	<ul style="list-style-type: none"> ✗ Small businesses vanished with the residents. A 1987 Texas Tech studio found “few businesses left due to the lack of economic support.” (Lubbock Weblink) 	
Remove blight permanently.	<ul style="list-style-type: none"> ✗ Some cleared parcels turned into long-term hazards. In 2021 the city called demolishing a burnt-out apartment block its “<i>first proactive step in about 23 years</i>” for Chatman Hill. (https://www.kcbd.com) 	
Create a stable, rebuilt community.	<ul style="list-style-type: none"> ✗ Even in 2021 a state architectural journal observed that “<i>most of those lots remain vacant, awaiting justice.</i>” (Texas Architect Magazine) 	

More information about lubbock

[https://censusreporter.org/profiles/14000US48303002500-census-tract-25-lubbock
-tx/](https://censusreporter.org/profiles/14000US48303002500-census-tract-25-lubbock-tx/)