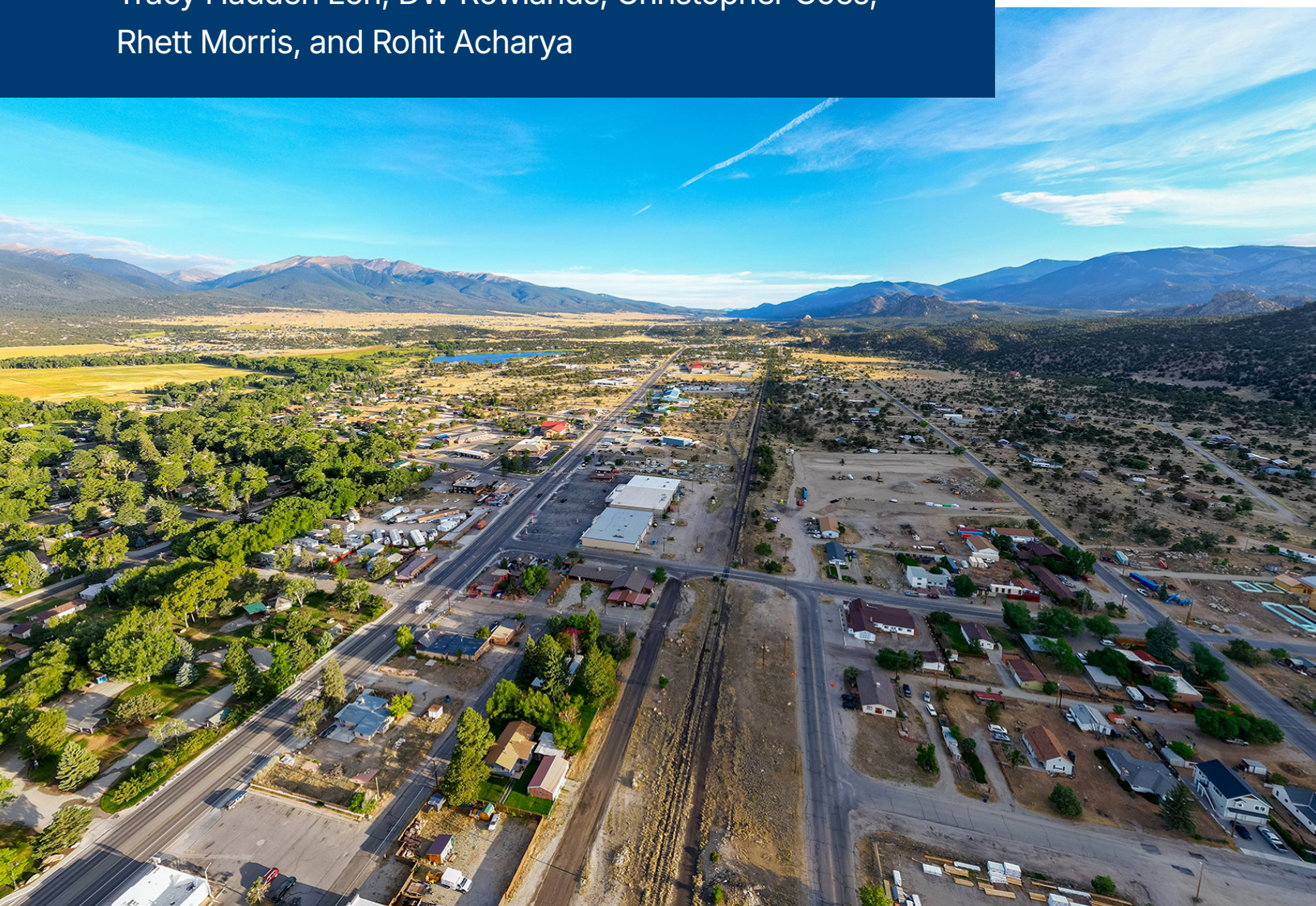


OPPORTUNITY ZONES: ANALYZING THE TAX INCENTIVE'S IMPACTS, AND HOW TO ENHANCE THEM

Tracy Hadden Loh, DW Rowlands, Christopher Coes,
Rhett Morris, and Rohit Acharya



Appendix: Data and methods

Descriptive statistics of Opportunity Zones in the 50 states and Washington, DC

In Table 3, we show additional descriptive statistics of both Opportunity Zones and all census tracts in the 50 states and Washington, D.C., to supplement the information in Table 1 in the text.

Table 3. Additional descriptive statistics of tracts

	All Census Tracts	Opportunity Zones
Number of Tracts	73,054	7,826
Population	322,903,030	31,501,520
Median Poverty Rate	12%	26%
% of Population in Poverty	14%	26%
% of Tracts with Poverty Rate of At Least 20%	27%	68%
Median family income (MFI)	\$68,800	\$45,500
% of tracts that meet low-income community definition only by MFI criterion (poverty rate less than 20%)	15%	21%
% of tracts that are not low-income communities	59%	11%
% in a micropolitan area (μSA)	9%	12%
Median Foreign-Born Population Share	7%	7%
% of Population Foreign-Born	13%	15%
Median Non-Hispanic White Population Share	70%	41%
% of Residents who are Non-Hispanic White	61%	43%
# of Residents who are Non-Hispanic White	196,970,848	13,545,654
Median Non-Hispanic Black Population Share	4%	13%
% of Residents who are Non-Hispanic Black	12%	23%
# of Residents who are Non-Hispanic Black	38,748,364	7,245,350
Median Latino or Hispanic Population Share	1.50%	0.70%
% of Residents who are Latino or Hispanic	18%	26%
# of Residents who are Latino or Hispanic	58,122,545	8,190,395
Median Non-Hispanic Asian Population Share	0%	0%
% of Residents who are Non-Hispanic Asian	5%	3%
# of Residents who are Non-Hispanic Asian	16,145,152	945,046
Median Non-Hispanic Native/Pacific Islander Population Share	2.00%	1.90%

	All Census Tracts	Opportunity Zones
% of Residents who are Non-Hispanic Native/Pacific Islander	1%	2%
# of Residents who are Non-Hispanic Native/Pacific Islander	3,229,030	630,030
Median Non-Hispanic Other/Multiple Races Population Share	7%	10%
% of Residents who are Non-Hispanic Other/Multiple Races	3%	3%
# of Residents who are Non-Hispanic Other/Multiple Races	9,687,091	945,046
Median Unemployment Rate	5%	8%
% of People in Civilian Labor Force who are Unemployed	6%	9%
# of People in Civilian Labor Force who are Unemployed	9,507,181	1,304,302
Median Housing + Transportation Cost as Share of MFI	43%	54%

Source: All data from 2014-2018 ACS 5-year estimates except for housing plus transportation costs, which are calculated based on the Center for Neighborhood Technology's [H+T Index](#).

Note: These statistics are for OZs in the 50 states and Washington, D.C.; Puerto Rico and island area OZs are excluded.

Cotality data coverage

The Cotality builds dataset is based on state and local real property records and is incomplete because several state and county governments do not allow the required data to be sold. As a result, several states are excluded from our analysis, and several other states have incomplete data, as shown in Table 4 below.

Table 4. States excluded from analysis or with incomplete data

State	Included in dataset?
Idaho	Excluded; entire state missing from Cotality data
Illinois	Included except for Clay County, Hancock County, and Warren County
Kansas	Excluded; entire state missing from Cotality data
Maine	Excluded; state is incomplete in Cotality data
Michigan	Included except for Livingston County
Minnesota	Excluded from Finding 2; state is incomplete in Cotality data
Missouri	Included except for Clay County
Montana	Excluded; entire state missing from Cotality data
Pennsylvania	Excluded; no data for Philadelphia County
South Carolina	Excluded; entire state missing from Cotality data
South Dakota	Excluded from Finding 2; state is incomplete in Cotality data
Washington	Included except for Walla Walla County

Source: Brookings analysis of Cotality data

Table 5. State and Opportunity Zone coverage and market share statistics

State	% OZs with data coverage	OZs with data coverage as % all tracts	% builds in OZs	% change in builds in median OZ	OZ build share / OZ tract share	OZ builds per 100,000 residents	State share all builds 2017-2018	State share all builds 2019-2024	Percentage-point change state share	OZ share state builds 2017-2018	OZ share state builds 2019-2024	Percentage-point change state OZ share
AK	88%	13.20%	0.70%	0.00%	0.05	9.9	0.20%	0.20%	-0.05%	0.60%	0.70%	0.04%
AL	97%	13.10%	7.00%	16.80%	0.54	179.4	2.10%	2.20%	0.12%	7.00%	7.00%	0.07%
AR	100%	12.40%	5.10%	2.80%	0.41	131.6	1.30%	1.40%	0.07%	5.40%	5.10%	0.34%
AZ	99%	10.90%	7.00%	16.70%	0.64	208.9	3.70%	3.70%	0.05%	6.10%	7.00%	0.90%
CA	100%	10.90%	5.90%	0.00%	0.54	50.2	7.40%	6.00%	-1.39%	6.30%	5.90%	-0.33%
CO	98%	9.30%	7.50%	11.90%	0.76	216.1	3.40%	2.90%	0.49%	6.70%	7.50%	0.86%
CT	100%	8.70%	2.30%	0.00%	0.27	10.8	0.40%	0.30%	-0.06%	2.70%	2.30%	-0.35%
DC	100%	14.00%	17.80%	146.70%	1.27	182.2	0.20%	0.10%	0.05%	8.20%	17.80%	9.62%
DE	100%	11.50%	3.10%	-16.70%	0.27	48.6	0.60%	0.30%	0.30%	1.60%	3.10%	1.49%
FL	100%	10.10%	6.10%	98.70%	0.6	231.1	11.50%	14.10%	2.60%	4.50%	6.10%	1.63%
GA	100%	13.20%	3.80%	35.40%	0.29	108.6	5.00%	5.30%	0.28%	3.50%	3.80%	0.31%
HI	100%	7.60%	2.60%	-40.70%	0.34	41.9	0.50%	0.40%	0.08%	3.00%	2.60%	0.38%
IA	95%	7.20%	2.70%	0.00%	0.37	47.6	1.30%	1.00%	-0.26%	5.40%	2.70%	-2.74%
IL	90%	9.40%	2.10%	0.00%	0.22	3.7	0.60%	0.40%	-0.16%	1.40%	2.10%	0.69%
IN	89%	9.20%	4.30%	14.30%	0.47	63.5	2.00%	1.80%	0.18%	4.10%	4.30%	0.20%
KY	76%	9.80%	9.60%	0.00%	0.98	28.4	0.30%	0.20%	-0.08%	9.20%	9.60%	0.34%
LA	85%	11.10%	6.10%	0.00%	0.55	72.3	1.20%	1.00%	-0.21%	6.60%	6.10%	0.45%
MA	100%	9.40%	3.10%	0.00%	0.33	23.3	1.50%	0.90%	-0.54%	3.50%	3.10%	0.44%
MD	100%	10.70%	6.70%	7.60%	0.63	86.1	1.50%	1.40%	0.15%	4.50%	6.70%	2.27%
MI	96%	10.00%	5.00%	0.00%	0.5	30.5	1.40%	1.10%	0.28%	4.30%	5.00%	0.21%
MO	78%	9.00%	4.10%	33.30%	0.45	51.1	1.50%	1.40%	0.10%	3.30%	4.10%	0.75%
MS	94%	14.20%	11.60%	0.00%	0.82	215	1.10%	1.00%	0.08%	11.80%	11.60%	-0.18%
NC	100%	11.50%	7.60%	45.20%	0.66	268.8	5.90%	6.40%	0.57%	6.10%	7.60%	1.53%
ND	100%	12.20%	2.70%	0.00%	0.22	26.9	0.20%	0.10%	0.05%	1.60%	2.70%	1.05%
NE	100%	8.30%	4.20%	25.00%	0.51	79.6	0.70%	0.70%	-0.04%	3.50%	4.20%	0.68%
NH	100%	9.20%	7.90%	33.30%	0.86	133.3	0.50%	0.40%	0.05%	5.80%	7.90%	2.12%
NJ	100%	8.40%	6.20%	14.30%	0.74	40.1	1.30%	1.00%	0.27%	6.90%	6.20%	-0.69%
NM	100%	12.60%	16.10%	0.00%	1.27	135.4	0.30%	0.30%	-0.02%	18.80%	16.10%	-2.71%
NV	100%	8.90%	1.90%	50.00%	0.22	63.7	1.60%	1.70%	0.16%	1.50%	1.90%	0.46%
NY	100%	10.50%	7.50%	0.00%	0.72	31.9	2.40%	1.50%	-0.85%	7.50%	7.50%	0.04%
OH	98%	10.70%	4.70%	16.70%	0.44	50.9	2.40%	2.30%	0.13%	4.30%	4.70%	0.46%

State	% OZs with data coverage	OZs with data coverage as % all tracts	% builds in OZs	% change in builds in median OZ	OZ build share / OZ tract share	OZ builds per 100,000 residents	State share all builds 2017-2018	State share all builds 2019-2024	Percentage-point change state share	OZ share state builds 2017-2018	OZ share state builds 2019-2024	Percentage-point change state OZ share
OK	100%	11.20%	6.70%	22.20%	0.6	170.2	1.70%	1.80%	0.10%	6.40%	6.70%	0.33%
OR	98%	10.10%	8.40%	0.00%	0.83	136.9	1.50%	1.20%	-0.26%	8.30%	8.40%	0.09%
RI	100%	10.30%	5.30%	33.30%	0.51	39.9	0.20%	0.10%	0.02%	3.80%	5.30%	1.51%
TN	100%	11.80%	7.20%	35.40%	0.61	244.9	3.60%	4.10%	0.44%	7.30%	7.20%	-0.15%
TX	92%	11.00%	9.30%	30.80%	0.85	394.9	18.60%	21.40%	2.79%	7.20%	9.30%	2.06%
UT	92%	7.30%	2.80%	41.50%	0.38	109.2	2.10%	2.20%	0.01%	3.10%	2.80%	0.32%
VA	98%	11.00%	6.20%	0.00%	0.56	100.3	2.70%	2.50%	0.18%	6.50%	6.20%	-0.34%
VT	100%	13.60%	5.40%	-25.00%	0.4	43	0.10%	0.10%	0.03%	6.20%	5.40%	0.81%
WA	99%	9.40%	7.00%	13.10%	0.74	136.8	3.00%	2.60%	0.43%	6.10%	7.00%	0.87%
WI	100%	8.60%	4.20%	0.00%	0.49	7.3	0.20%	0.20%	-0.05%	4.40%	4.20%	-0.19%
WV	100%	11.40%	10.80%	22.20%	0.95	117.2	0.40%	0.40%	-0.03%	7.50%	10.80%	3.23%
WY	100%	18.90%	12.00%	3.70%	0.63	231	0.20%	0.20%	0.00%	14.10%	12.00%	-2.13%

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Note: Counts of OZs and builds in OZs only include those OZs represented in Cotality dataset.

Table 6 below shows how the share of Opportunity Zones with no builds in the “pre-” (2017-2018) or “post-” (2019-2024) periods or both differs between tract types.

Table 6. Frequency of Opportunity Zones with no builds in pre- and post-period by built environment type

OZ Type	Total OZs	No Builds 2017-2018 but not 2019-2024	No Builds 2019-2024 but not 2017-2018	No Builds in Both Periods
Rural	2,488	186 (7%)	68 (3%)	326 (13%)
Commercial	598	110 (18%)	26 (4%)	77 (13%)
Residential-SFH	1,242	217 (17%)	68 (5%)	197 (16%)
Residential-Mixed	1,607	295 (18%)	46 (3%)	238 (15%)
Residential-MHF	1,239	290 (23%)	59 (5%)	248 (20%)

Source: Brookings analysis of Cotality data

Table 7 below shows how the median distance to the fifth-nearest [Brookings Institution-defined activity center](#) differs between tract types.

Table 7. Median distance to activity centers for Opportunity Zones by built environment type

OZ Type	Median Distance to 5th-Nearest Activity Center
Rural	48 mi.
Commercial	1.8 mi.
Residential SFH	3.1 mi.
Residential Mixed	2.8 mi.
Residential MHF	1.4 mi.

Source: Brookings analysis of Cotality data

Build-coverage and build-population ratios for OZs by state and tract type

Table 8. Build-coverage and build-population ratios by state for rural OZs

State	Build share / tract share ratio	OZ builds per 100,000 residents
AK	0.04	4.6
AL	0.77	116.3
AR	0.34	75.2
AZ	0.71	66.7
CA	0.65	8.9
CO	0.59	79.4
CT	0.39	2.4
DC	-	-
DE	0.59	43.1
FL	1.22	108.3
GA	0.33	65.3
HI	0.6	35
IA	0.47	37.7
IL	0.46	1.3
IN	0.47	14.7
KY	1.31	25.9
LA	0.51	24.8
MA	0.5	11
MD	1.1	47.3
MI	0.8	17
MN	1.05	31.3
MO	1.08	28.2
MS	0.8	159.8
NC	0.66	145.6
ND	0.17	11.8
NE	0.81	52
NH	0.93	118
NJ	0.62	3.2
NM	0.26	16.4
NV	0.47	15.8
NY	0.64	5.8

State	Build share / tract share ratio	OZ builds per 100,000 residents
OH	0.82	25.9
OK	0.81	130.5
OR	1	68.9
RI	1.34	12.5
SD	2.78	48.9
TN	0.79	157
TX	0.82	157.3
UT	0.47	34.8
VA	0.62	49.2
VT	0.4	43
WA	1.03	91.7
WI	0.08	0.5
WV	0.95	117.2
WY	0.61	167.7

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Table 9. Build-coverage and build-population ratios by state for commercial OZs

State	Build share / tract share ratio	OZ builds per 100,000 residents
AK	-	-
AL	0.25	7
AR	0.12	1.8
AZ	0.09	4.5
CA	0.78	4.2
CO	0.98	27
CT	0.16	1.1
DC	0.05	0.3
DE	0.06	0.9
FL	0.23	5.9
GA	0.12	2
HI	0.07	0.7
IA	0.31	6.1
IL	0	0
IN	0.31	5.7
KY	0.52	1.1
LA	0.13	1.4
MA	0.24	1.6
MD	1.12	14.3
MI	0.31	2
MN	0.15	1.7
MO	0.25	3.4
MS	0.18	4
NC	0.84	14.3
ND	0.12	2.4
NE	0.36	6.9
NH	0.06	0.7
NJ	0.3	1.6
NM	0.96	6.5
NV	0.13	3.4
NY	1.77	6.9
OH	0.3	3.8

State	Build share / tract share ratio	OZ builds per 100,000 residents
OK	0.16	6.3
OR	0.39	13.2
RI	0.85	7.3
SD	0	0
TN	0.45	16.2
TX	0.38	9
UT	0.16	8.3
VA	0.68	8.8
VT	-	-
WA	0.35	9.3
WI	0.51	0.8
WV	-	-
WY	0.18	2.6

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Table 10. Build-coverage and build-population ratios by state for residential single-family OZs

State	Build share / tract share ratio	OZ builds per 100,000 residents
AK	-	-
AL	0.3	24.1
AR	0.48	9.1
AZ	2.13	99.9
CA	0.83	18
CO	1.8	70.2
CT	0.3	0.5
DC	0.31	1.8
DE	0.07	3.2
FL	0.58	59.9
GA	0.19	9.3
HI	-	-
IA	0.19	1.6
IL	0.09	0.3
IN	0.53	22
KY	0.1	0.2
LA	0.41	15.3
MA	0.32	1
MD	0.25	9.5
MI	0.3	5.1
MN	0.18	0.7
MO	0.36	12.1
MS	3.94	44.1
NC	1.03	72.5
ND	0	0
NE	0.36	6.4
NH	-	-
NJ	2.32	17.2
NM	5.74	87.2
NV	0.02	0.7
NY	0.26	0.2
OH	0.21	5.8

State	Build share / tract share ratio	OZ builds per 100,000 residents
OK	0.31	10.7
OR	1.83	32.4
RI	-	-
SD	-	-
TN	0.47	21.2
TX	0.77	89.5
UT	0.62	37.2
VA	0.76	18.2
VT	-	-
WA	0.41	7.7
WI	1.02	0.8
WV	-	-

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Table 11. Build-coverage and build-population ratios by state for residential mixed OZs

State	Build share / tract share ratio	OZ builds per 100,000 residents
AK	0.09	3
AL	0.43	25
AR	0.8	45.3
AZ	0.32	32.1
CA	0.42	12.4
CO	0.48	33.9
CT	0.61	3.4
DC	1.48	118.3
DE	0.03	1.4
FL	0.42	49.6
GA	0.27	21.4
HI	0.09	0.9
IA	0.08	1.4
IL	0.14	0.6
IN	0.55	19.5
KY	0.16	0.6
LA	1.35	30.7
MA	0.4	4.3
MD	0.38	12
MI	0.34	4.2
MN	0.21	7.8
MO	0.19	6
MS	0.24	6.7
NC	0.4	33.1
ND	0.65	12.6
NE	0.35	8.7
NH	0.72	4.2
NJ	0.52	6
NM	1.34	22.6
NV	0.82	31.8
NY	0.82	3.1
OH	0.42	11.7

State	Build share / tract share ratio	OZ builds per 100,000 residents
OK	0.52	17.9
OR	0.35	11.7
RI	0.48	10.4
SD	0.27	2.1
TN	0.47	43.7
TX	1.39	133.1
UT	0.25	22.1
VA	0.4	16.9
VT	-	-
WA	0.64	21.6
WI	0.81	3.7
WV	-	-
WY	0.83	36.3

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Table 12. Build-coverage and build-population ratios by state for residential multi-family OZs

State	Build share / tract share ratio	OZ builds per 100,000 residents
AK	0.09	2.3
AL	0.45	6.9
AR	0.03	0.2
AZ	0.17	5.7
CA	0.31	6.7
CO	0.6	5.5
CT	0.17	3.4
DC	1.2	61.8
DE	-	-
FL	0.16	7.3
GA	0.28	10.6
HI	0.12	5.3
IA	0.38	0.8
IL	0.25	1.6
IN	0.15	1.5
KY	0.41	0.7
LA	0.01	0.2
MA	0.19	5.5
MD	0.28	3.1
MI	0.71	2.2
MN	0.18	1.8
MO	0.16	1.4
MS	0.13	0.4
NC	0.24	2.6
ND	0	0
NE	0.15	3.7
NH	0.9	10.3
NJ	0.49	12.1
NM	0.56	2.8
NV	0.05	6
NY	0.59	15.8
OH	0.24	3.6

State	Build share / tract share ratio	OZ builds per 100,000 residents
OK	0.28	4.7
OR	0.91	10.8
RI	0.24	9.1
SD	0.18	0.7
TN	0.25	6.8
TX	0.15	6
UT	0.51	6.8
VA	0.35	7.3
VT	-	-
WA	0.4	6.4
WI	0.62	1.6
WV	-	-
WY	1.13	16.5

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Measuring growth and displacement in Opportunity Zones

We measured growth and displacement in all Opportunity Zones, including the adjacent-tract OZs excluded from the analysis of the non-land-use determinants of growth in OZs.

Displacement was defined as a loss of total population or population of a plurality racial-ethnic group (other than non-Hispanic whites), with racial-ethnic groups defined as:

- Latino or Hispanic of any race
- Non-Hispanic white
- Non-Hispanic Black
- Non-Hispanic Asian
- Non-Hispanic Native American, Alaskan Native, or Pacific Islander
- Non-Hispanic other or multiple races

To account for uncertainty due to sampling error, a loss of population or population of a group was only identified when the 2020-2024 ACS 5-year estimate for the value was at least 5% lower than the 2014-2018 ACS 5-year estimate.

Our definition of growth was specifically an acceleration of growth: A tract was considered to experience growth only if its average builds per year during the period 2019-2024 was at least 15% higher than during the period 2017-2018. (Note that tracts with no builds in the period 2019-2024 necessarily did not experience growth, while those with no builds in the period 2017-2018 did experience growth if there were any builds in the period 2019-2024.)

To ensure that the effects seen in this analysis were not a consequence of our choice of growth thresholds or the margins of error in the ACS population data, sensitivity testing was performed for both possible effects. We compared the results with the growth threshold set at 10% as well as 15%, with minimal difference in the shares of tracts found to experience growth. Likewise, we compared the results with tracts where the reported margin of error in the overall population or the population of the plurality racial group was greater than 50% of the reported value removed. (This cut-off was chosen based on the Department of Housing and Urban Development's [reliability standard for data](#) used to identify Qualified Census Tracts for the Low-Income Housing Tax Credit.) Removing these tracts was found to have minimal effect on the share of tracts identified as experiencing displacement: Fewer than 0.3% of tracts had margins of error larger than this cut-off.

Table 13. Growth rate change and displacement outcomes crosstab by land use type and state

Region	Total OZs	Neither growth nor displacement: #	%	Growth without displacement: #	%	Displacement without growth: #	%	Growth with displacement: #	%
All OZs (National)	7,174	2,085	29.1%	1,849	25.8%	1,769	24.7%	1,471	20.5%
Rural OZs	2,488	852	34.2%	700	28.1%	522	21.0%	414	16.6%
Commercial OZs	598	214	35.8%	169	28.3%	122	20.4%	93	15.6%
Single-Family Residential OZs	1,242	257	20.7%	301	24.2%	340	27.4%	344	27.7%
Mixed Residential OZs	1,607	405	25.2%	413	25.7%	418	26.0%	371	23.1%
Multi-Family Residential OZs	1,239	357	28.8%	266	21.5%	367	29.6%	249	20.1%
AK	22	8	36.4%	2	9.1%	7	31.8%	5	22.7%
AL	154	40	26.0%	37	24.0%	32	20.8%	45	29.2%
AR	85	21	24.7%	21	24.7%	26	30.6%	17	20.0%
AZ	167	44	26.3%	51	30.5%	36	21.6%	36	21.6%
CA	879	251	28.6%	175	19.9%	263	29.9%	190	21.6%
CO	123	43	35.0%	42	34.1%	19	15.4%	19	15.4%
CT	72	27	37.5%	15	20.8%	19	26.4%	11	15.3%
DC	25	5	20.0%	5	20.0%	3	12.0%	12	48.0%
DE	25	11	44.0%	3	12.0%	5	20.0%	6	24.0%
FL	426	66	15.5%	162	38.0%	55	12.9%	143	33.6%
GA	260	59	22.7%	74	28.5%	53	20.4%	74	28.5%
HI	25	11	44.0%	4	16.0%	8	32.0%	2	8.0%
IA	59	20	33.9%	18	30.5%	10	16.9%	11	18.6%
IL	293	73	24.9%	22	7.5%	168	57.3%	30	10.2%
IN	139	45	32.4%	43	30.9%	25	18.0%	26	18.7%
KY	109	55	50.5%	9	8.3%	42	38.5%	3	2.8%
LA	127	32	25.2%	7	5.5%	66	52.0%	22	17.3%
MA	138	57	41.3%	44	31.9%	21	15.2%	16	11.6%
MD	149	43	28.9%	39	26.2%	33	22.1%	34	22.8%
MI	275	84	30.5%	54	19.6%	88	32.0%	49	17.8%
MN	90	36	40.0%	26	28.9%	22	24.4%	6	6.7%

Region	Total OZs	Neither growth nor displacement: #	%	Growth without displacement: #	%	Displacement without growth: #	%	Growth with displacement: #	%
MO	126	27	21.4%	33	26.2%	30	23.8%	36	28.6%
MS	94	29	30.9%	14	14.9%	26	27.7%	25	26.6%
NC	252	48	19.0%	81	32.1%	38	15.1%	85	33.7%
ND	25	8	32.0%	4	16.0%	9	36.0%	4	16.0%
NE	44	14	31.8%	18	40.9%	6	13.6%	6	13.6%
NH	27	5	18.5%	14	51.9%	3	11.1%	5	18.5%
NJ	169	56	33.1%	60	35.5%	29	17.2%	24	14.2%
NM	63	27	42.9%	12	19.0%	17	27.0%	7	11.1%
NV	61	15	24.6%	22	36.1%	11	18.0%	13	21.3%
NY	514	161	31.3%	109	21.2%	141	27.4%	103	20.0%
OH	315	77	24.4%	86	27.3%	79	25.1%	73	23.2%
OK	117	31	26.5%	36	30.8%	21	17.9%	29	24.8%
OR	84	37	44.0%	32	38.1%	9	10.7%	6	7.1%
RI	25	6	24.0%	11	44.0%	5	20.0%	3	12.0%
SD	16	8	50.0%	1	6.3%	6	37.5%	1	6.3%
TN	176	45	25.6%	65	36.9%	24	13.6%	42	23.9%
TX	576	125	21.7%	184	31.9%	119	20.7%	148	25.7%
UT	43	15	34.9%	16	37.2%	5	11.6%	7	16.3%
VA	209	76	36.4%	50	23.9%	47	22.5%	36	17.2%
VT	25	17	68.0%	6	24.0%	1	4.0%	1	4.0%
WA	137	56	40.9%	53	38.7%	15	10.9%	13	9.5%
WI	120	62	51.7%	17	14.2%	32	26.7%	9	7.5%
WV	55	14	25.5%	16	29.1%	13	23.6%	12	21.8%
WY	25	8	32.0%	6	24.0%	7	28.0%	4	16.0%

Source: Brookings analysis of Cotality data and 2014-2018 American Community Survey 5-year estimates

Identifying non-land-use determinants of growth in Opportunity Zones

Linear regressions were performed separately on Opportunity Zones in each of the five tract types (rural, commercial, residential single-family, residential mixed, and residential multi-family), both to control for the effects of land use type on growth and to control for the fact that our builds dataset does not distinguish buildings by size. In addition, since one of our primary goals was to help states and communities identify traits that make a tract a promising candidate for an OZ 2.0 designation, we limited our dataset for the regressions to low-income community tracts, excluding the “contiguous tract” OZs that were allowed under the original 2018 program but are not eligible for OZ 2.0 designation.

For each tract type, an initial round of fitting was attempted with a set of 20 potential independent variables, and one or more additional rounds were performed after dropping variables that did not show correlation with the number of builds per year with at least 95% confidence.

In addition, when the cross-correlation between pairs of independent variables was greater than 50%, the variable less strongly correlated with the dependent variable was dropped. Table 14 below shows which independent variables were found to have a significant positive or negative correlation with the common logarithm of the number of builds per year in tracts during the period 2019-2024. Unless specified otherwise, all data comes from 2014-2018 [American Community Survey \(ACS\)](#) 5-year estimates.

Common logarithms were taken of the dependent variable and several of the independent variables to ensure a closer-to-normal distribution of values. Naturally, this introduces a complication when the variable in question can have a value of 0, since the logarithm of 0 is negative infinity. In these cases, linear extrapolation based on the logarithms of the values of the variable closest to 0 were used to generate a value to substitute for the logarithm of 0. For the dependent variable, this value was -1.2; for the number of Small Business Administration loans in 2018, it was -0.48; and for the share of housing units constructed after 2009, it was -3.6.

Table 14. Independent variables used in regression analyses

Independent Variable	Rural OZs	Commercial OZs	Single-Family Residential OZs	Mixed Residential OZs	Multi-Family Residential OZs
Log of Tract Population					
Log of Jobs in Tract					
Log of Housing Units in Tract					
Log of Activity Units in Tract					
Log of Tract Area	(+)		(+)	(+)	(+)
% Change in Activity Units 2013-2018	(+)		(+)	(+)	(+)
Log of % Housing Units Built Post-2009	(+)	(+)	(+)	(+)	(+)
Poverty Rate	(-)				
Share of Single-Family Homes		(+)			
Vacant Housing Unit Rate					(-)
Housing Owner-Occupied Rate					
Self-Employment Rate			(+)	(+)	(+)
Plurality Race Population Share	(-)				
Share of Income on Housing & Transportation					
% Income Spent on Housing					
% Income Spent on Transportation					
Median Household Income			(-)		(+)
National Walkability Index					
Small Business Administration Loans (2018)	(+)	(+)	(+)	(+)	
Distance to 5th-Nearest Activity Center	(-)			(-)	(-)

Source: Jobs data from LEHD Versions 7.5 and 8.4; expenditures on housing and transportation from Center for Neighborhood Technology H+T Index; National Walkability Index from the EPA Smart Locations Database; number of Small Business Administration loans from the Small Business Administration; distance to activity centers from Brookings Institution; all other data from the 2014-2018 ACS.

The resulting fits for the five tract types are shown in Tables 15 through 19 below.

Table 15. Fit parameters for rural tracts

Dependent Variable	Fit Coefficient (for Log of Build Rate)	Change to Build Rate when Independent Variable increased from 25th Percentile to 75th Percentile	Standard Error	P-Value
Log of Tract Area	0.36821	236% increase	0.02085	$< 10^{-5}$
Small Business Administration Loans (2018)	0.60061	84% increase	0.04507	$< 10^{-5}$
Log of % Housing Units Built Post-2009	0.15784	37% increase	0.02019	$< 10^{-5}$
Plurality Race Population Share	-0.67495	36% decrease	0.09455	$< 10^{-5}$
Distance to 5th-Nearest Activity Center	-0.3608	33% decrease	0.04439	$< 10^{-5}$
Poverty Rate	-1.14796	32% decrease	0.15634	$< 10^{-5}$
% Change in Activity Units 2013-2018	0.53019	18% increase	0.12902	0.00004

Source: Jobs data from LEHD Versions 7.5 and 8.4; number of Small Business Administration loans from the Small Business Administration; distance to activity centers from Brookings Institution; all other data from the 2014-2018 ACS

Table 16. Fit parameters for commercial tracts

Dependent Variable	Fit Coefficient (for Log of Build Rate)	Change to Build Rate when Independent Variable increased from 25th Percentile to 75th Percentile	Standard Error	P-Value
Log of % Housing Units Built Post-2009	0.17257	164% increase	0.0294	$< 10^{-5}$
Share of Single-Family Homes	0.93499	124% increase	0.12218	$< 10^{-5}$
Small Business Administration Loans (2018)	0.49954	82% increase	0.06663	$< 10^{-5}$

Source: Number of Small Business Administration loans from the Small Business Administration; all other data from the 2014-2018 ACS

Table 17. Fit parameters for residential single-family housing tracts

Dependent Variable	Fit Coefficient (for Log of Build Rate)	Change to Build Rate when Independent Variable increased from 25th Percentile to 75th Percentile	Standard Error	P-Value
Small Business Administration Loans (2018)	0.4196	321% increase	0.06225	$< 10^{-5}$
Log of % Housing Units Built Post-2009	0.2845	283% increase	0.02271	$< 10^{-5}$
Log of Tract Area	0.5525	98% increase	0.04662	$< 10^{-5}$
Self-Employment Rate	2.707	39% increase	0.5552	$< 10^{-5}$
Median Household Income	-7.135×10^{-6}	28% decrease	1.645×10^{-6}	0.00002
% Change in Activity Units 2013-2018	0.4539	20% increase	0.06225	$< 10^{-5}$

Source: Jobs data from LEHD Versions 7.5 and 8.4; number of Small Business Administration loans from the Small Business Administration; all other data from the 2014-2018 ACS

Table 18. Fit parameters for residential mixed tracts

Dependent Variable	Fit Coefficient (for Log of Build Rate)	Change to Build Rate when Independent Variable increased from 25th Percentile to 75th Percentile	Standard Error	P-Value
Small Business Administration Loans (2018)	0.27651	179% increase	0.04708	$< 10^{-5}$
Log of % Housing Units Built Post-2009	0.19165	163% increase	0.01861	$< 10^{-5}$
Log of Tract Area	0.68115	127% increase	0.04398	$< 10^{-5}$
Self-Employment Rate	2.18925	31% increase	0.46123	$< 10^{-5}$
% Change in Activity Units 2013-2018	0.46593	20% increase	0.11458	0.00005
Distance to 5th-Nearest Activity Center	-0.14158	17% decrease	0.03431	0.00004

Source: Jobs data from LEHD Versions 7.5 and 8.4; number of Small Business Administration loans from the Small Business Administration; distance to activity centers from Brookings Institution; all other data from the 2014-2018 ACS

Table 19. Fit parameters for residential multi-family housing tracts

Dependent Variable	Fit Coefficient (for Log of Build Rate)	Change to Build Rate when Independent Variable increased from 25th Percentile to 75th Percentile	Standard Error	P-Value
Log of Tract Area	0.5186	113% increase	0.04835	$< 10^{-5}$
Log of % Housing Units Built Post-2009	0.1221	87% increase	0.01819	$< 10^{-5}$
Median Household Income	8.102×10^{-6}	57% increase	1.035×10^{-6}	$< 10^{-5}$
Self-Employment Rate	1.31	20% increase	0.4063	0.00129
Distance to 5th-Nearest Activity Center	-0.0926	10% decrease	0.04443	0.03735
% Change in Activity Units 2013-2018	0.2658	12% increase	0.1108	0.01664
Vacant Housing Unit Rate	-0.5989	8% decrease	0.1882	0.0015

Source: Jobs data from LEHD Versions 7.5 and 8.4; distance to activity centers from Brookings Institution; all other data from the 2014-2018 ACS

BROOKINGS

1775 Massachusetts Ave NW,
Washington, DC 20036
(202) 797-6000
www.brookings.edu