The Role of "Filtering" in Housing Affordability

Dowell Myers, PhD
Professor of Policy, Planning, and Demography

NMHC Research Forum
Webinar Series
April 16, 2020

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Mark Obrinsky

SVP, Research and Chief Economist

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Agenda

- **Welcome and Overview**

- NMHC Research Foundation Study: Filtering of Apartment Housing between 1980 and 2018

  - Dowell Myers, Ph. D.
    Population Dynamics Research Group
    Sol Price School of Public Policy
    University of Southern California

- Questions

- **Closing Remarks**

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Speaker

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Filtering of Apartment Housing Between 1980 and 2018

Dowell Myers, PhD

Professor of Policy, Planning, and Demography

and

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Themes Addressed

1. Growing problems of ***shortage and affordability***

2. What is ***apartment filtering***? How is it measured?

3. How has filtering ***changed*** between 1980 and 2020?

4. Who (what metropolitan area) is a ***winner or loser***?

5. The growing evidence for ***importance of new construction***

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Shortages and Affordability Strain

Too many Millennials compared to the preceding Gen X

Too many diverted homeowners when homeownership plunged

Not enough rental construction → someone is squeezed out

Contraction of units occupied by young, entering cohorts

Multitudes of Millennials Trying to Form Households: *Peak is Now Age 30*

Peak Millennial Births, Annual Births in the United States, 1960 to 2018

32% greater than in 1976

4.2 M in 1990
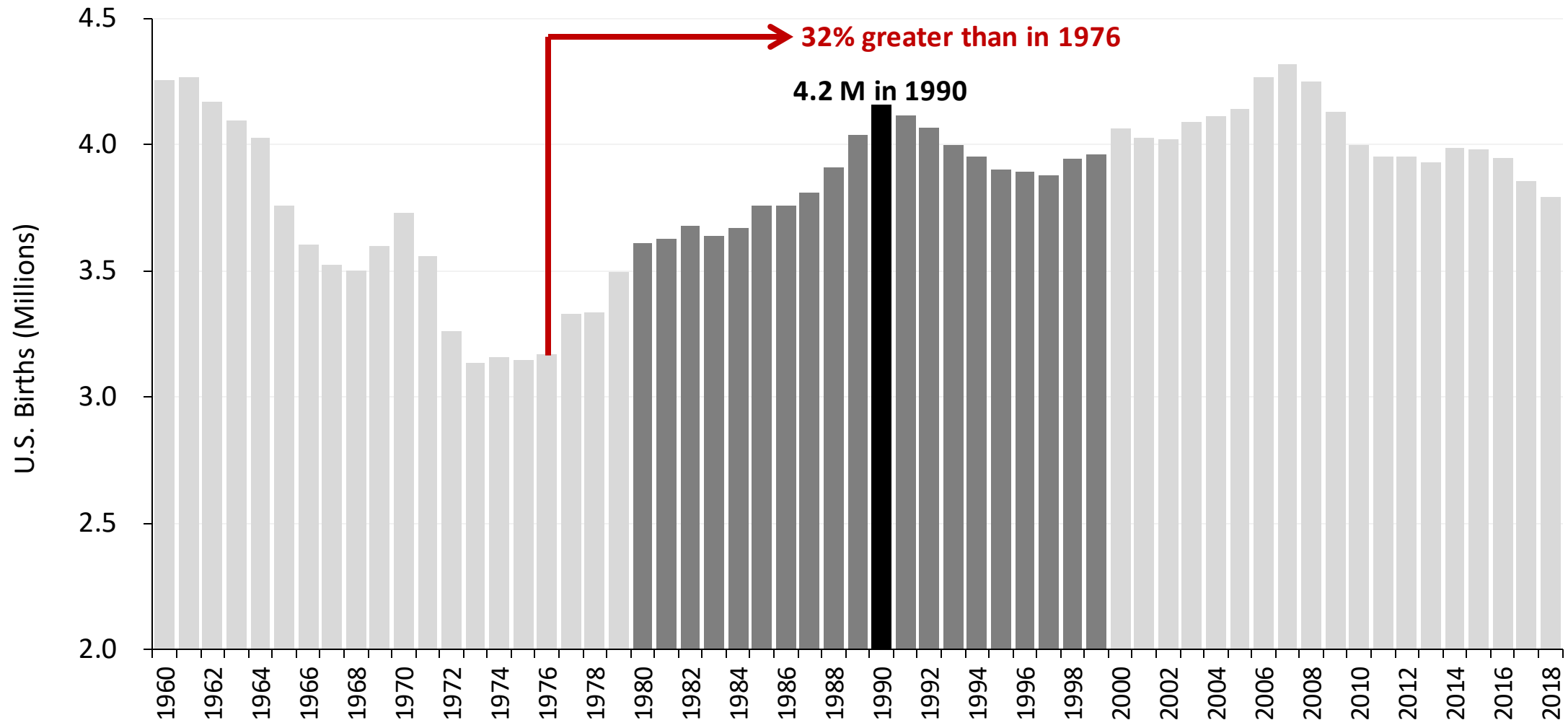
Sources: Graphs based on Figure 1 of Myers, D. (2016). Peak Millennials: Three Reinforcing Cycles That Amplify the Rise and Fall of Urban Concentration by Millennials. *Housing Policy Debate*, 26(6), 928–947; National Vital Statistics Reports, Vol. 68, No. 13, November 27, 2019

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Homeownership Rates By Age Group, United States, 1980 to 2018

Percentage

65+

45 to 54

All Ages

35 to 44

25 to 34
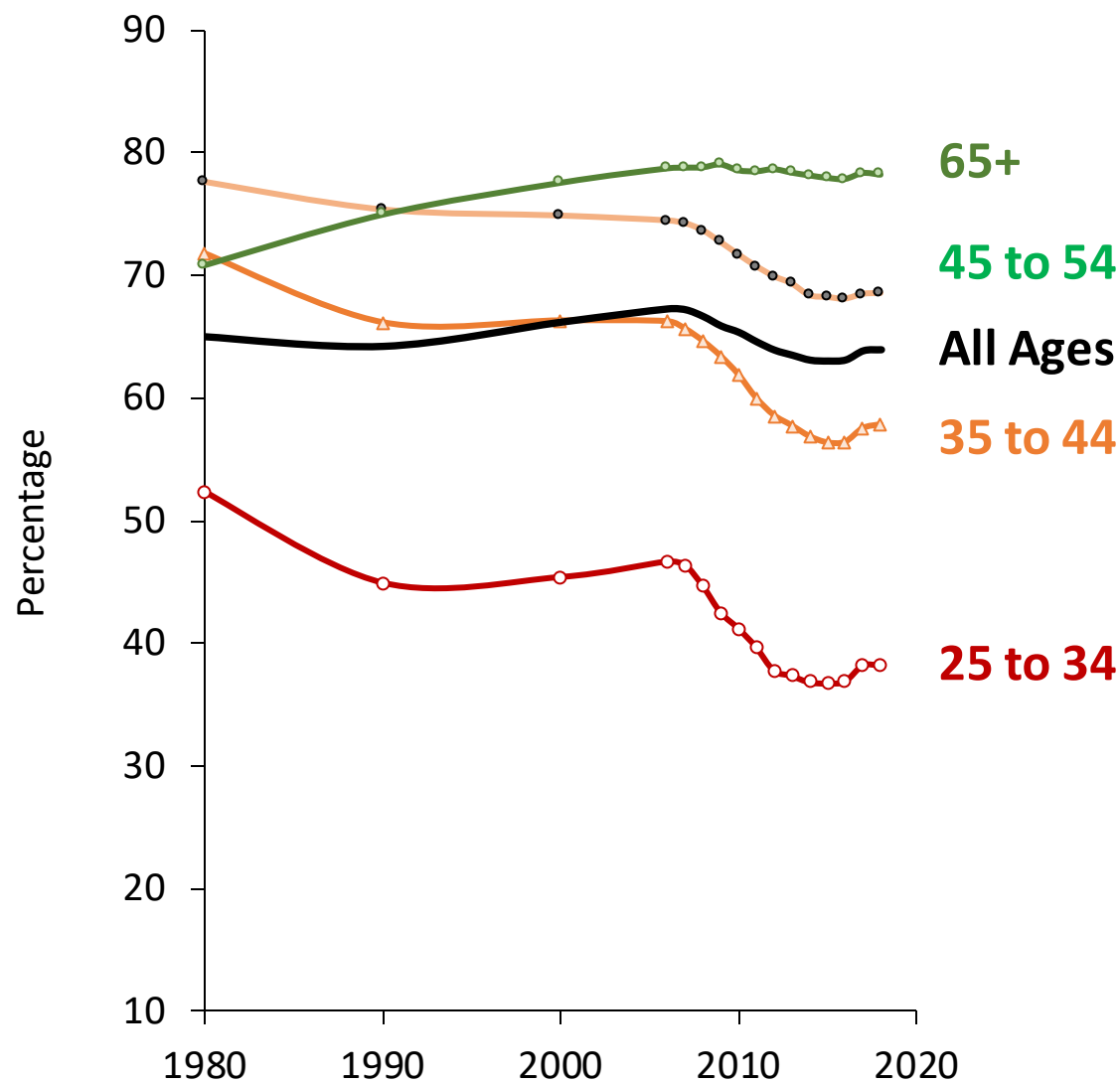
Big consequences of falling homeownership rates for the rest of the housing market

Sources: 1960 to 2000 Decennial Census IPUMS Microdata Files; 2006 through 2018 American Community Survey.

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Trends in Apartment Rent and Tenant's Income, Adjusted 2018$
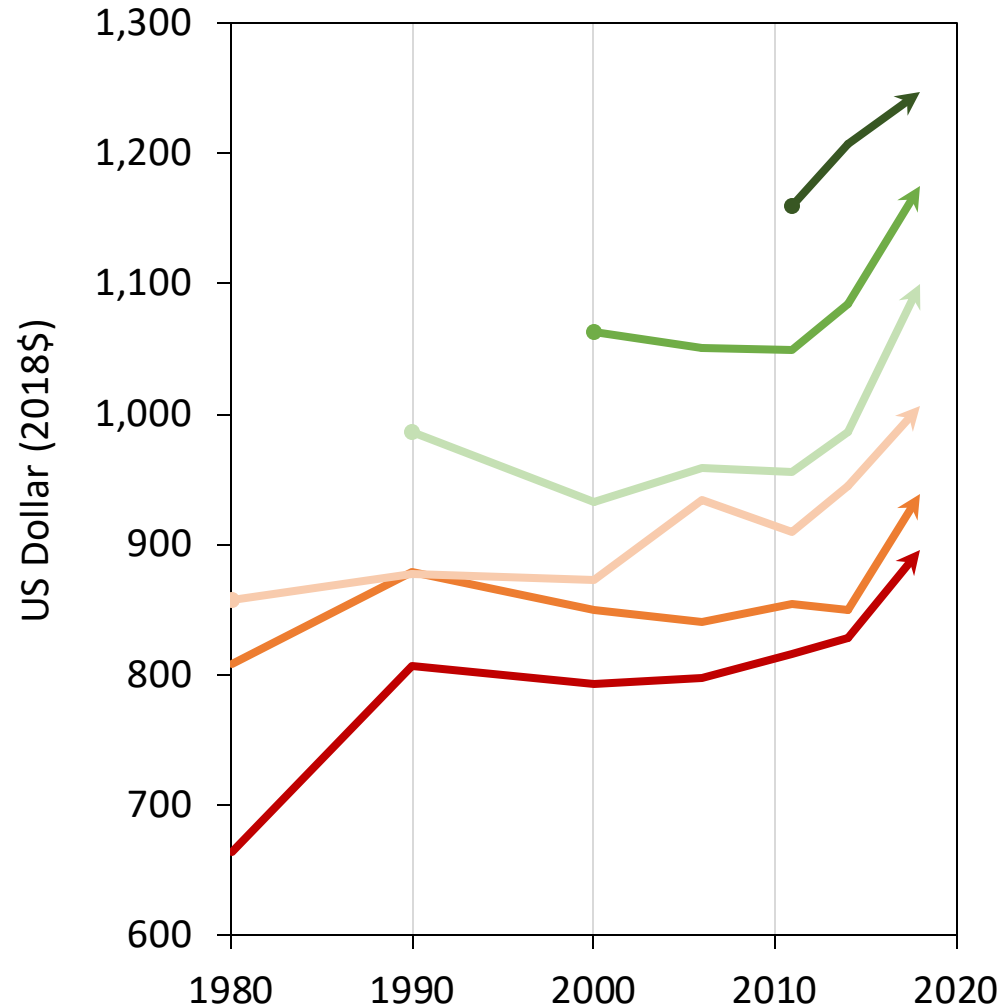
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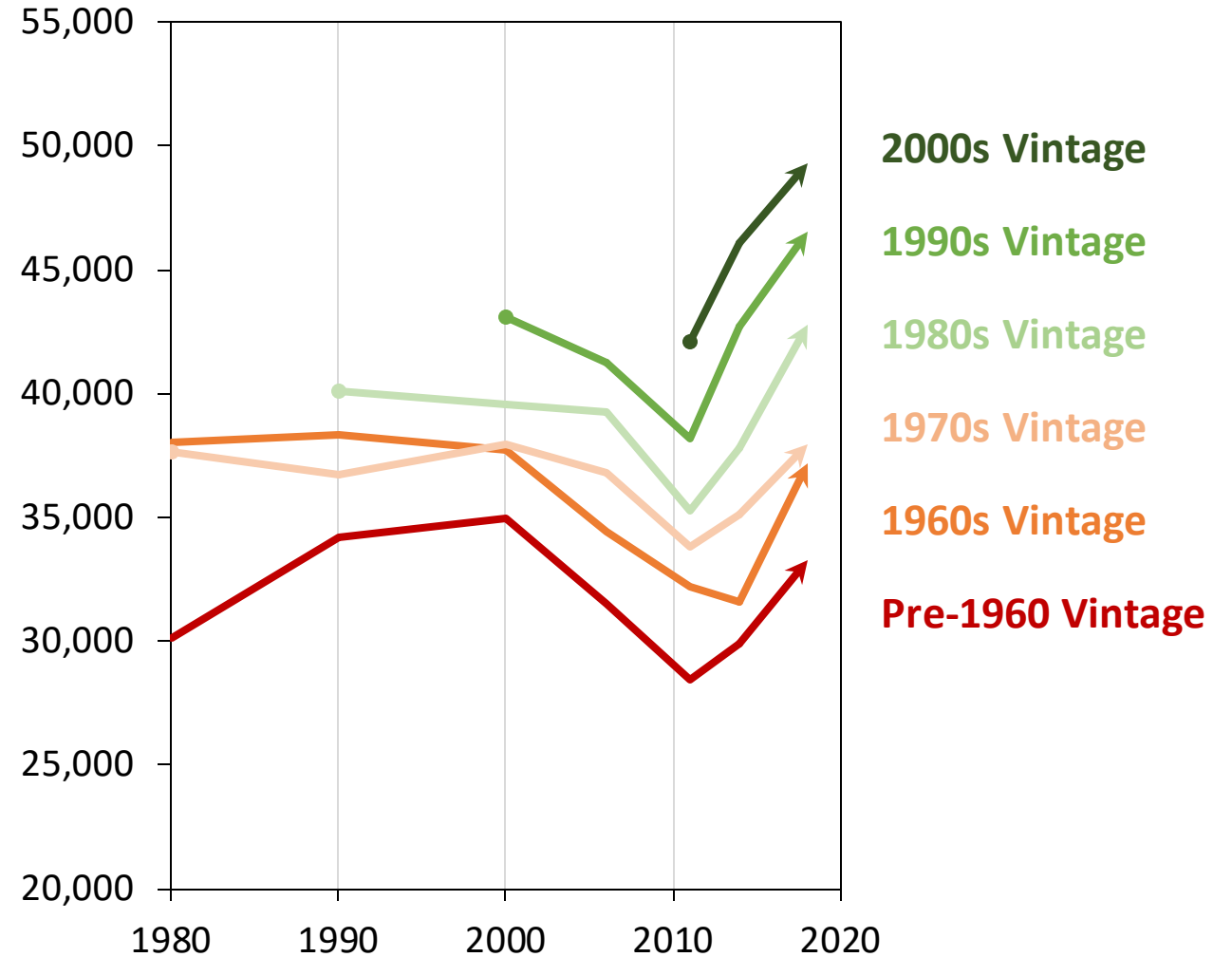
Long-term Trend of Rent Burden, United States, 1980 to 2018

Paying more than 30% of Income on Rent

Paying more than 50% of Income on Rent
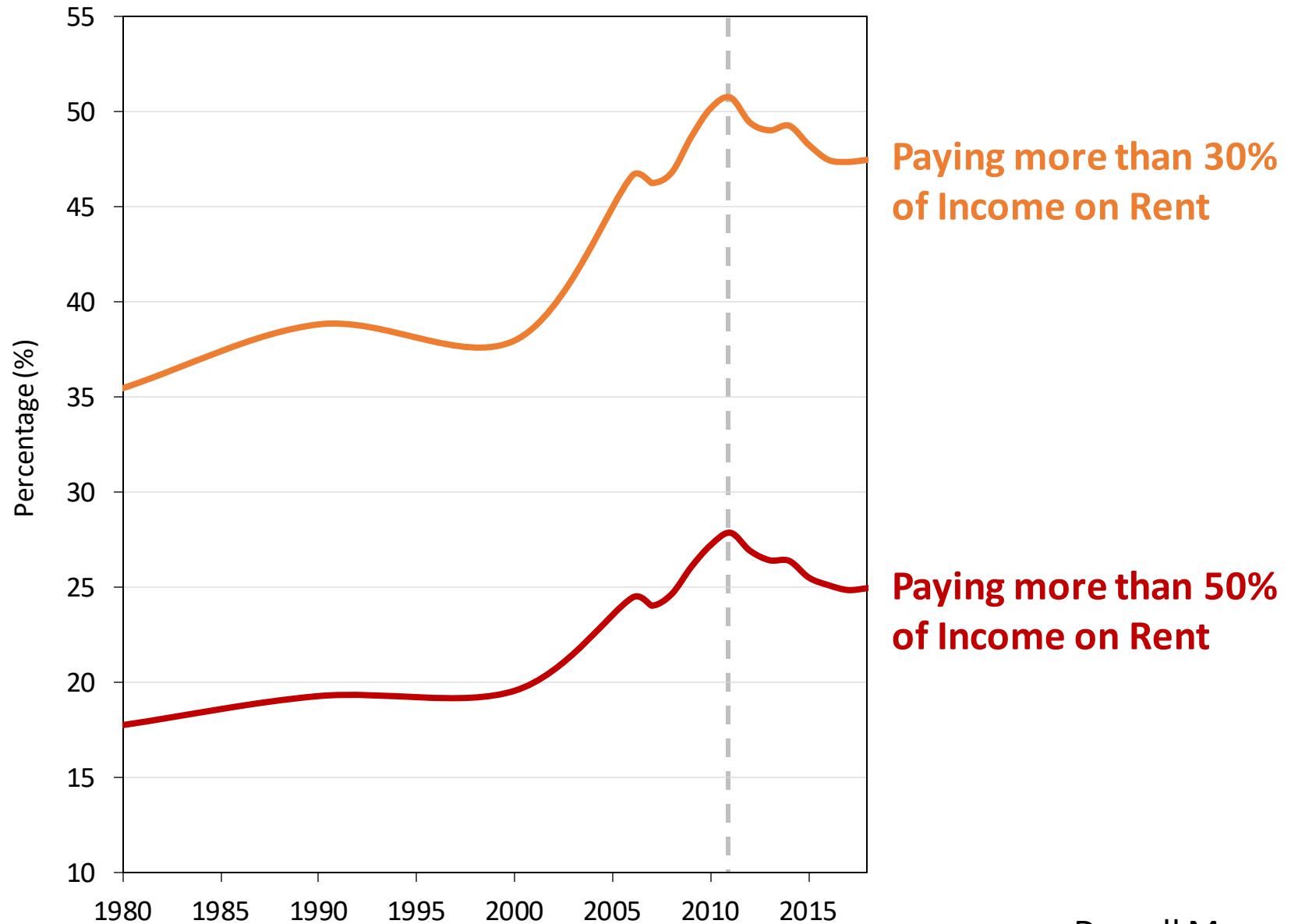
Sources: 1980 to 2000 Decennial Census and 2006 through 2018 American Community Survey (ACS) IPUMS Microdata Files.

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Declining Household Formation and Renter Rate

Proportional Changes since 2000 in Housing Occupancy by Age, United States, 2000, 2006, 2011, and 2018
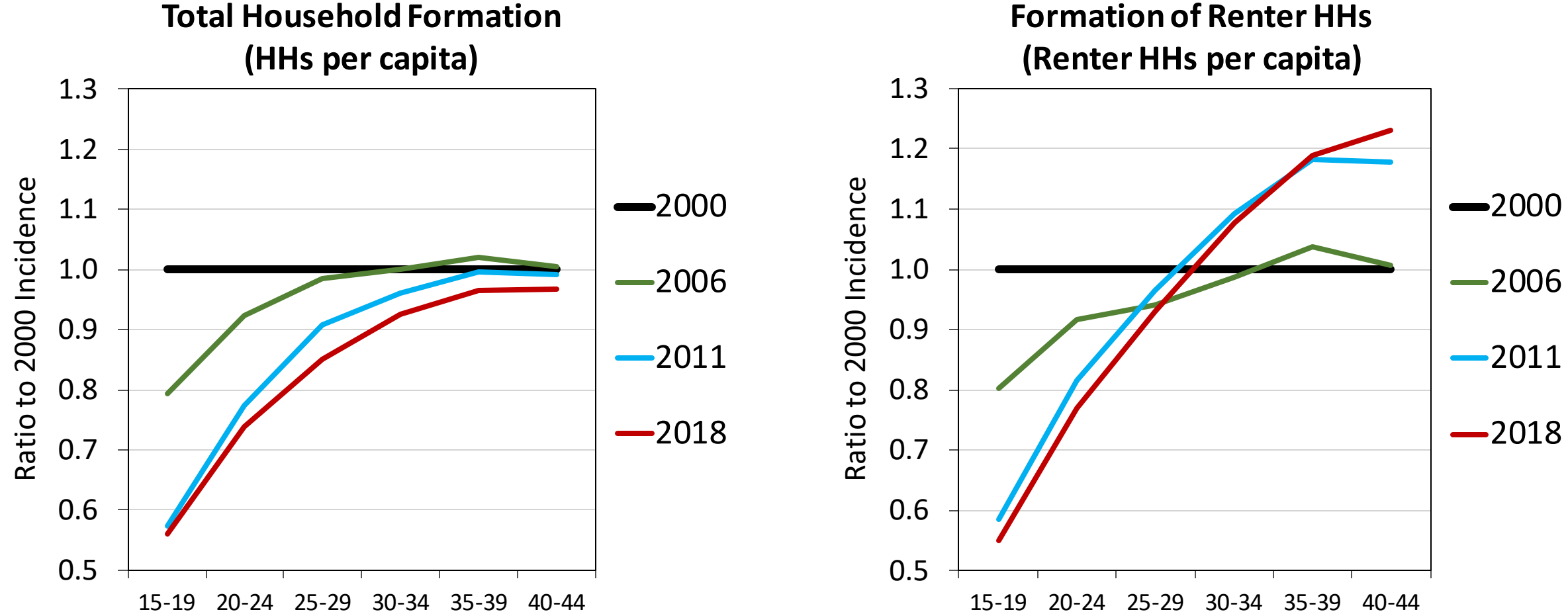
Source: Graphs based on Myers (2016), 2000 Decennial Census IPUMS and 2006, 2011, and 2018 ACS 1-year Estimates IPUMS files.

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Levels of Housing Adequacy

4. Decent home and suitable living environment that is affordable (no more than 30% of income)

3. Decent home and a suitable living environment

2. Any shelter for independent living

1. Doubled up or homeless

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Filtering Over Time of Apartment Units

Definition of Filtering and its Importance

HUD declares filtering is the traditional means of creating ***Naturally Occurring Affordable Housing (NOAH)*** for lower-income families in the United States (HUD 2016).
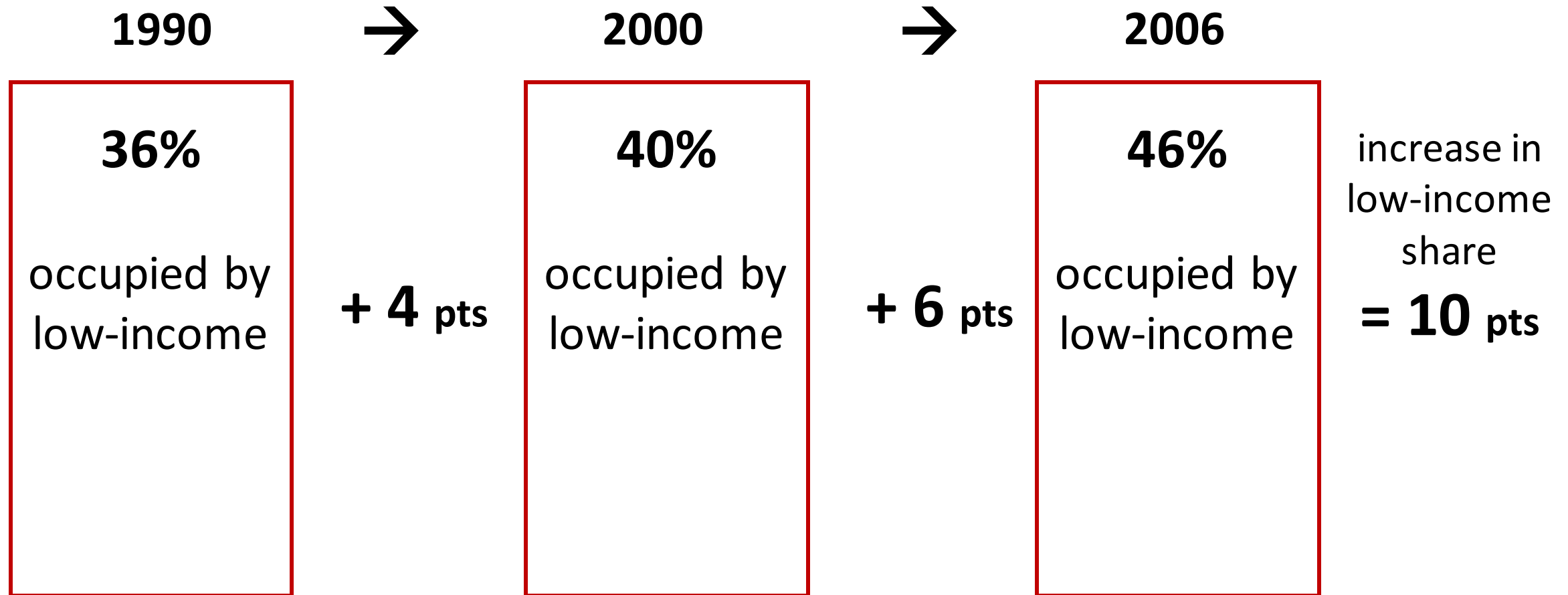
Over time properties obsolesce and are made less competitive, commanding lower rents, and provided housing for lower-income renters. Filtering of apartments is vital to meeting the nation's low-income housing needs, but its effectiveness may *vary decade to decade.*

Many people have lost faith in "trickle down" strategies. ***Gentrification*** has been prevalent in most large cities, but its outcome has outweighed filtering and may even indicate the ***reversal of filtering*** – All thinking about filtering has been precluded without a careful testing of its effectiveness over time.

Filtering requires a surplus supply if this favorable sorting is going to work. Greater apartment construction is needed and merits policy support.

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Filtering is Indicated by increased **low-income occupancy**

Example of apartments built in 1980s

1990	→	**2000**	→	**2006**	
36% occupied by low-income	**+ 4 pts**	**40%** occupied by low-income	**+ 6 pts**	**46%** occupied by low-income	increase in low-income share **= 10 pts**

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Data and Method

- A ***vintage longitudinal method with cross-sectional data*** observes a group of units built in a given decade (= vintage) in successive survey years, thus as the vintage grows older over time between one survey year and the next

- 1980, 1990, and 2000 Decennial ***Census*** and 2006 through 2018 Annual ***American Community Survey (ACS)*** microdata

- **Five periods** between Census/ACS surveys: 1980 – 1990, 1990 – 2000, 2000 – 2006 (boom), 2007 – 2011 (recession), and 2012 – 2018 (recovery)

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Data and Method (Continued)

- Low-income households report *income at or below 50%* of the area median income (AMI), normally termed as "very low-income" by HUD

- Focus is on *apartment rental units* – 5 or more units in structure

- In this analysis we address *six vintages* built in the pre-1960, 1960s, 1970s, 1980s, 1990s, and 2000s

- Records from the *100 largest metros*

How Has Filtering Proceeded Over the Decades

Greater Share is Low-Income in Apartments as They Grow Older
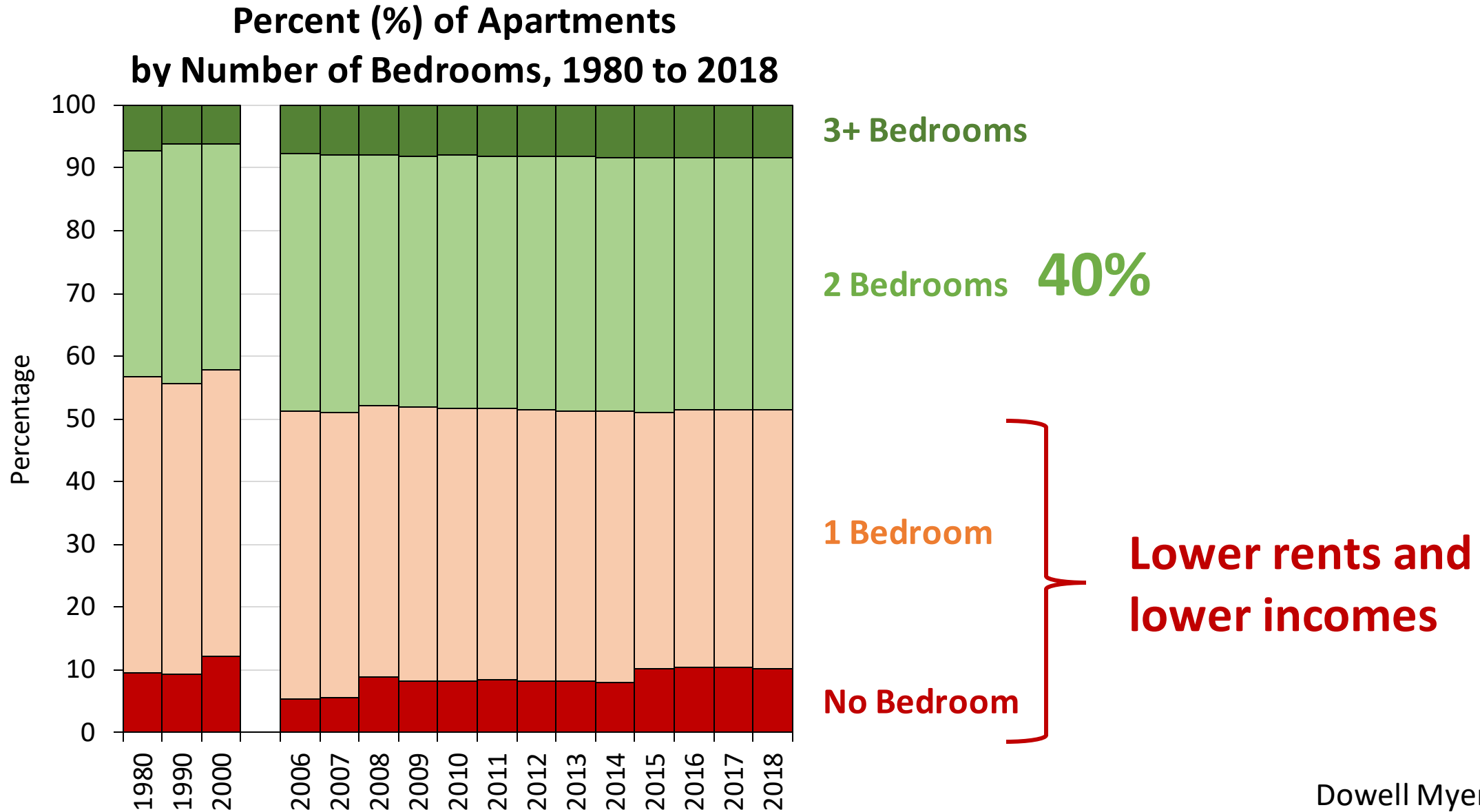
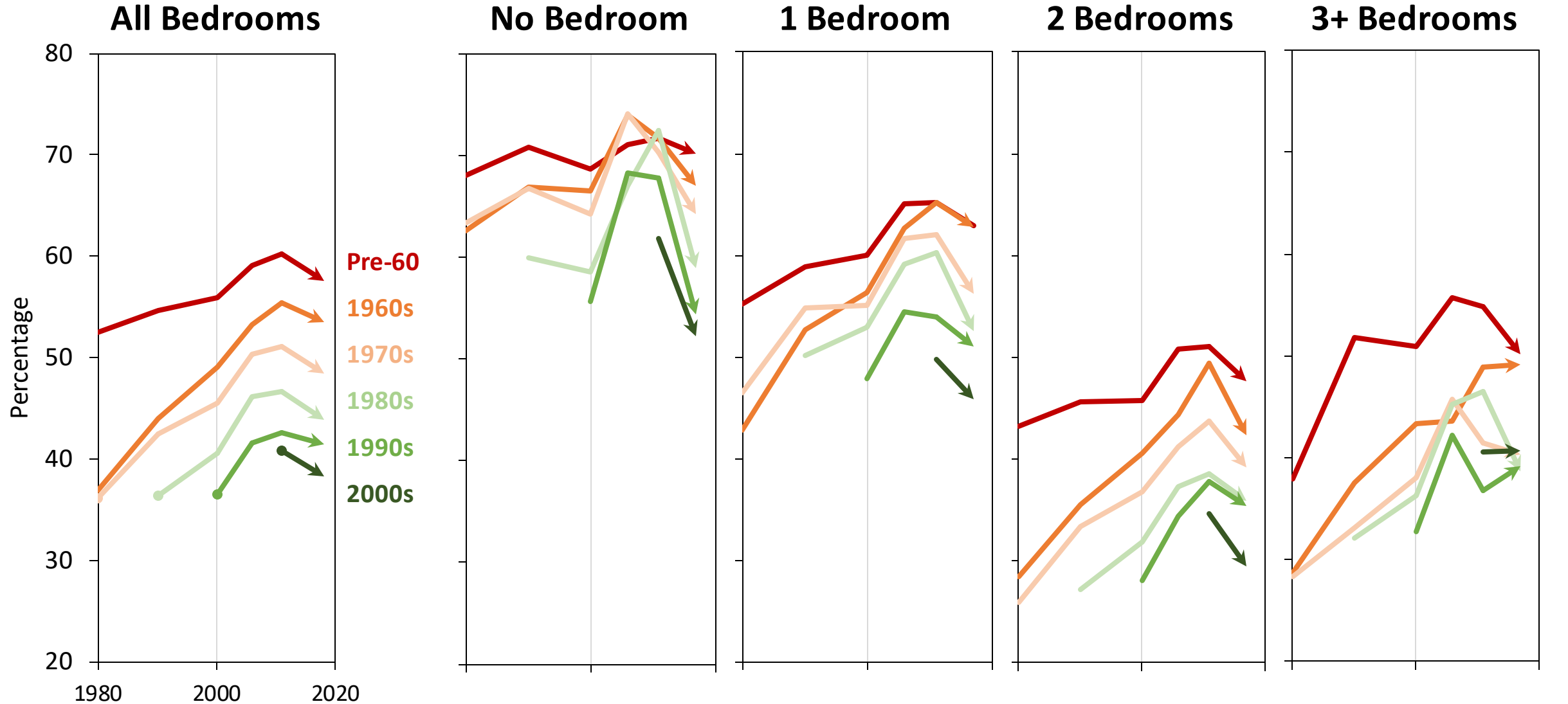**Percent (%) Low-income Tenants in Apartments of Each Vintage, Between 1980 and 2018, Largest 100 Metro Areas**
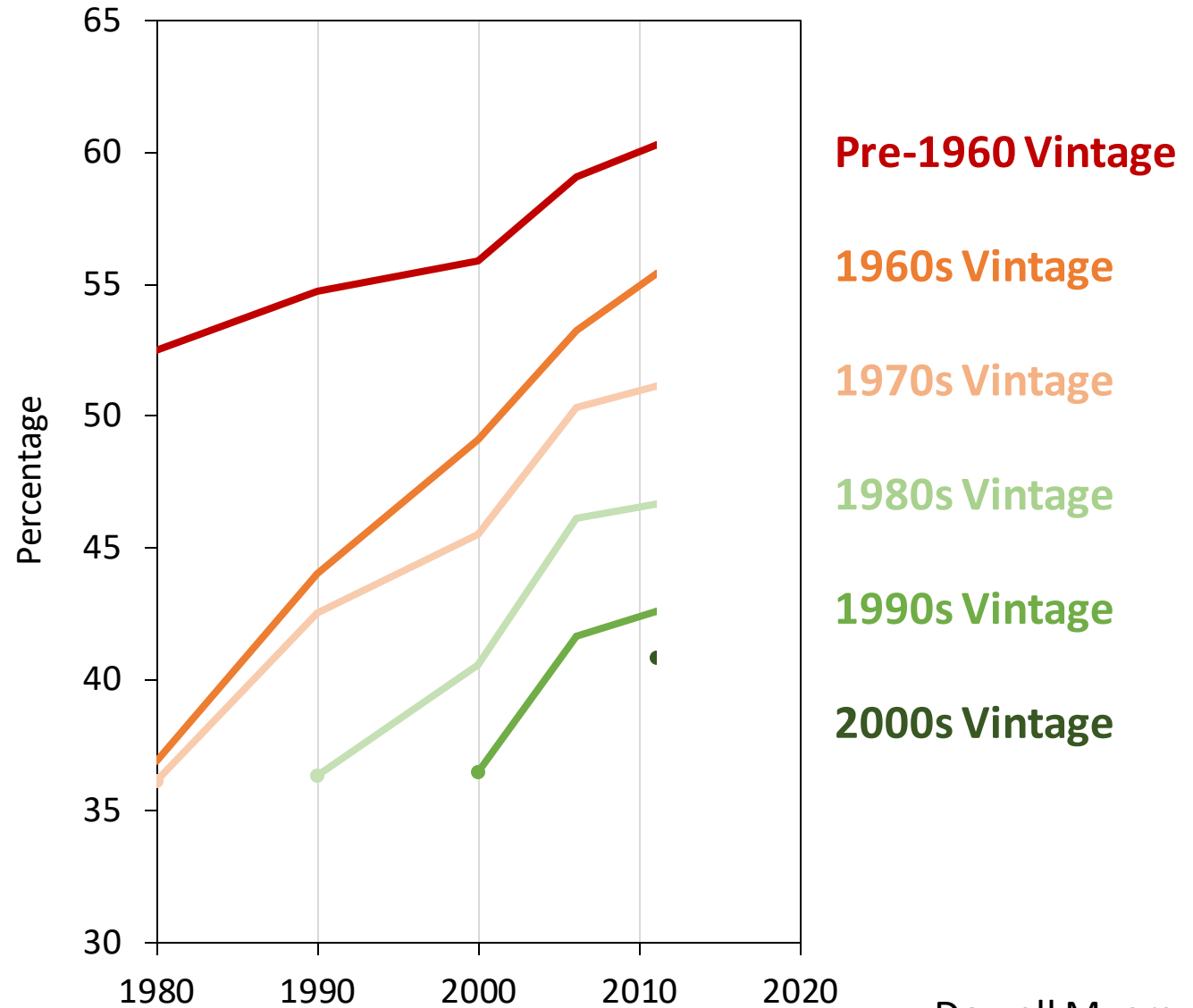
Sources: USC PopDynamics Analysis based on 1980, 1990, and 2000 Decennial Census and 2006 through 2018 ACS IPUMS Files.

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Filtering of
2-Bedroom Apartments

National Bedroom Mix of Apartments Constant Since 1980

**Percent (%) of Apartments
by Number of Bedrooms, 1980 to 2018**

3+ Bedrooms

2 Bedrooms **40%**

1 Bedroom

No Bedroom

Lower rents and lower incomes

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Low-income Occupancy Trend by Number of Bedrooms
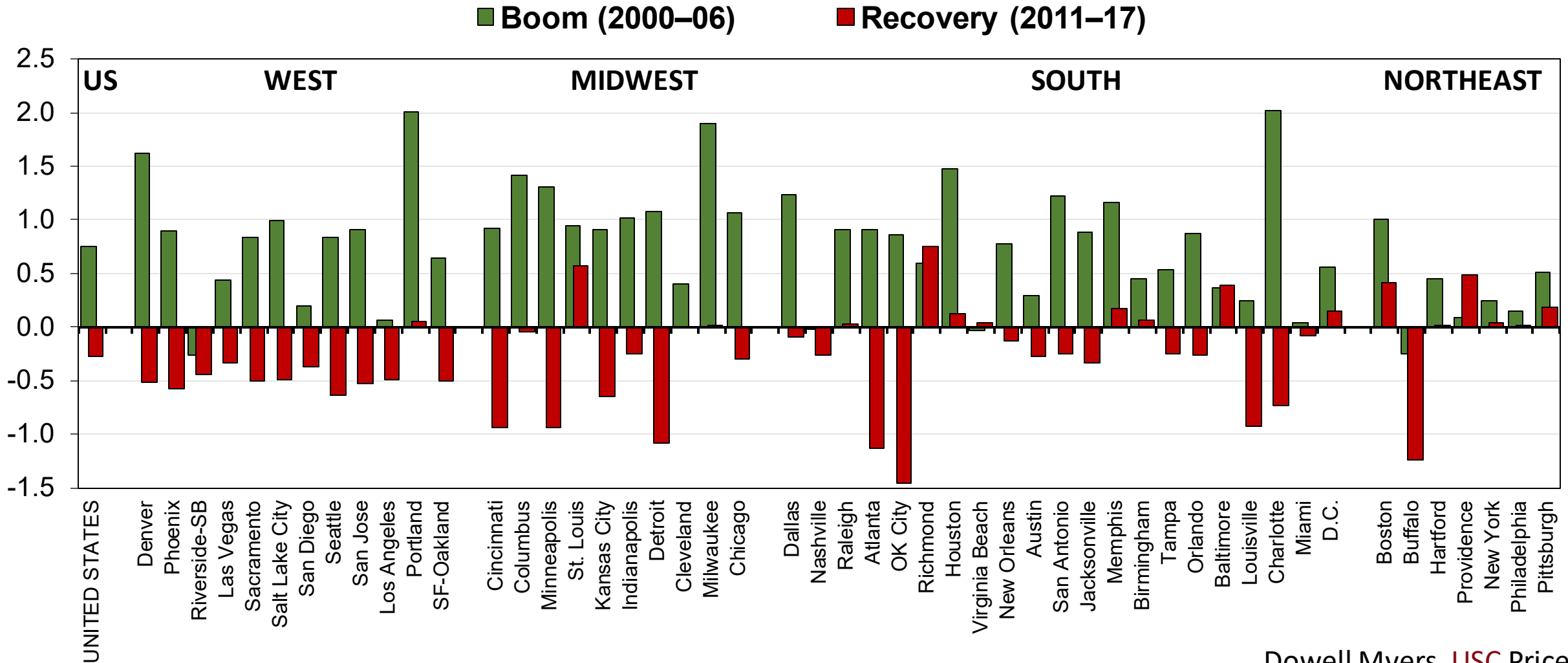

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Differences across Metros

Quiet Filtering in 1980s and 1990s

Annualized Percentage Point Change in Low-income Share of Apartment Units, New Units Not Included, U.S. and 50 Largest Metros

■ 1980s   □ 1990s

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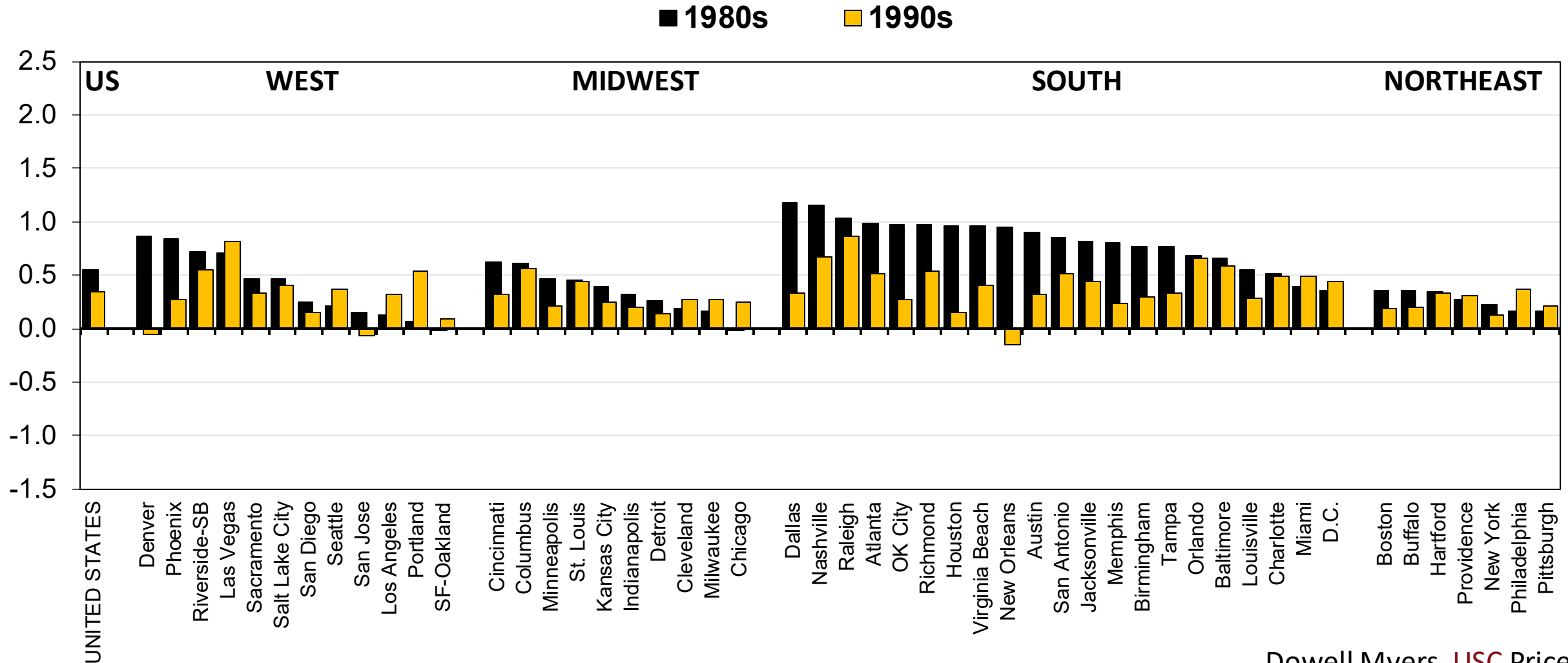
Strong Filtering in Recent Boom but *Widespread Reversal* During Recovery

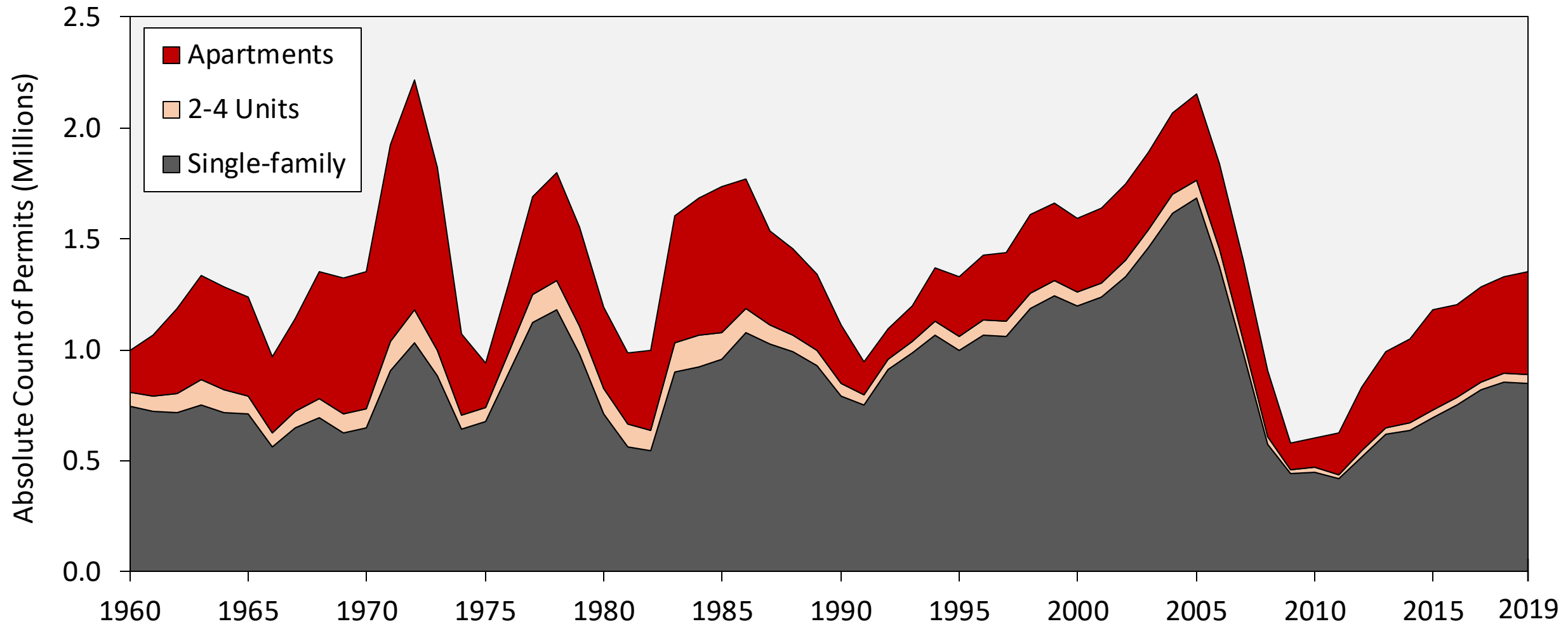Dowell Myers, USC Price

Uneven Supply of Apartments

Crucial for Filtering and the Nation's Workforce Housing

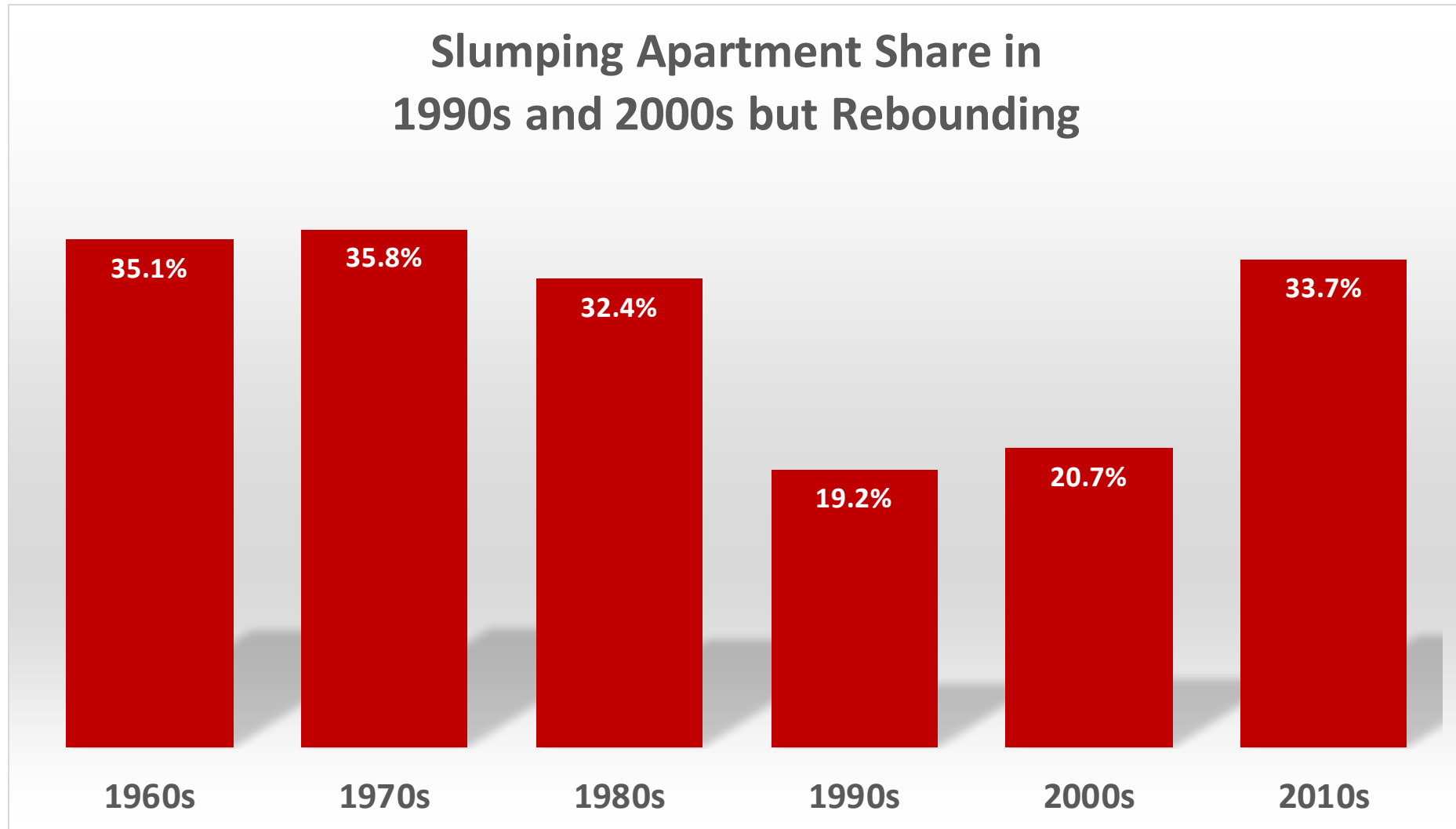# Apartment Share of New Construction Nationwide

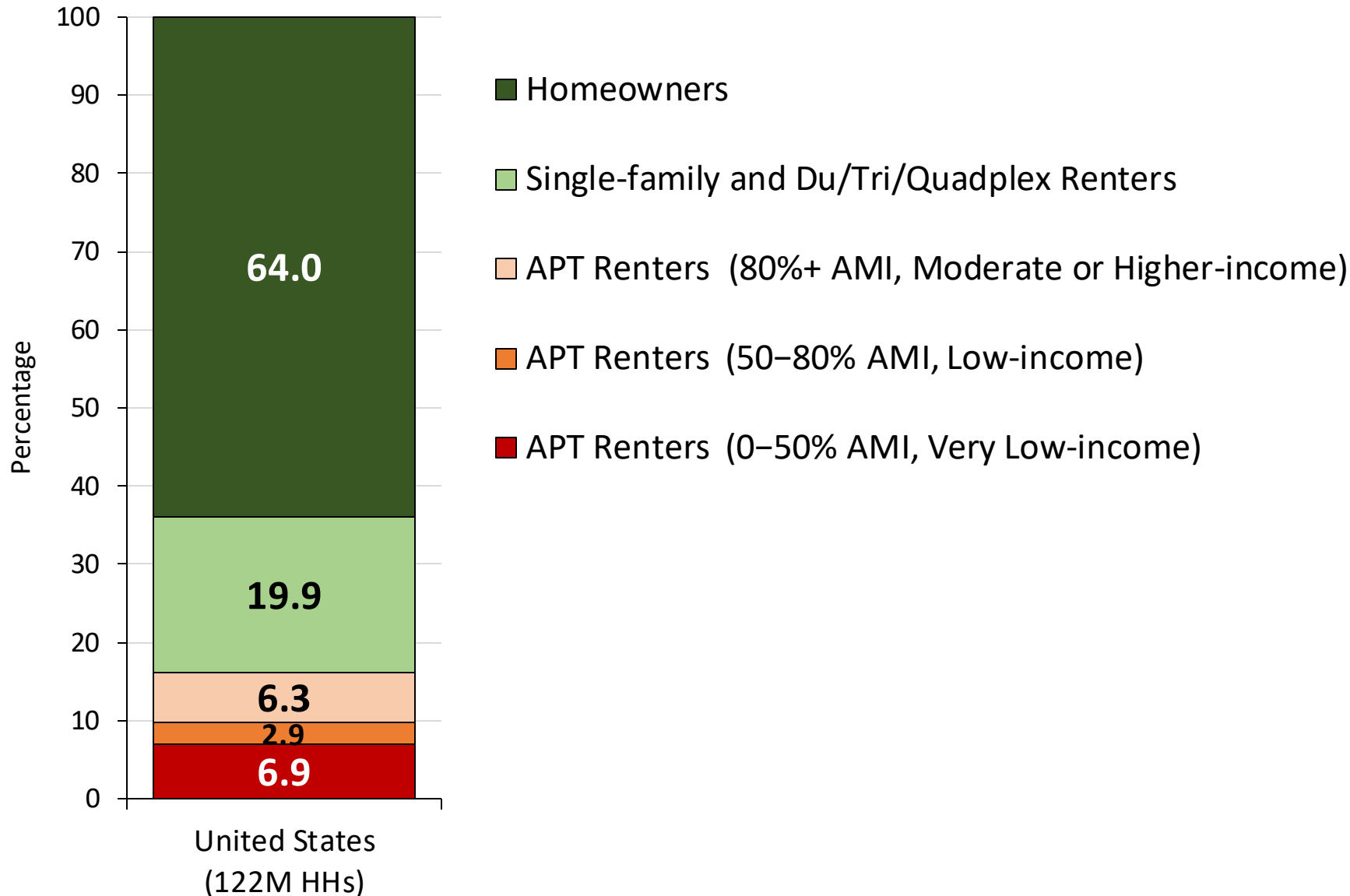Annual Building Permits by Structure Type, United States, 1960 to 2019

Sources: U.S. Census Bureau, Building Permits Survey (BPS).

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Apartment Share (5+ Units) Among New Building Permits Each Decade in the Nation
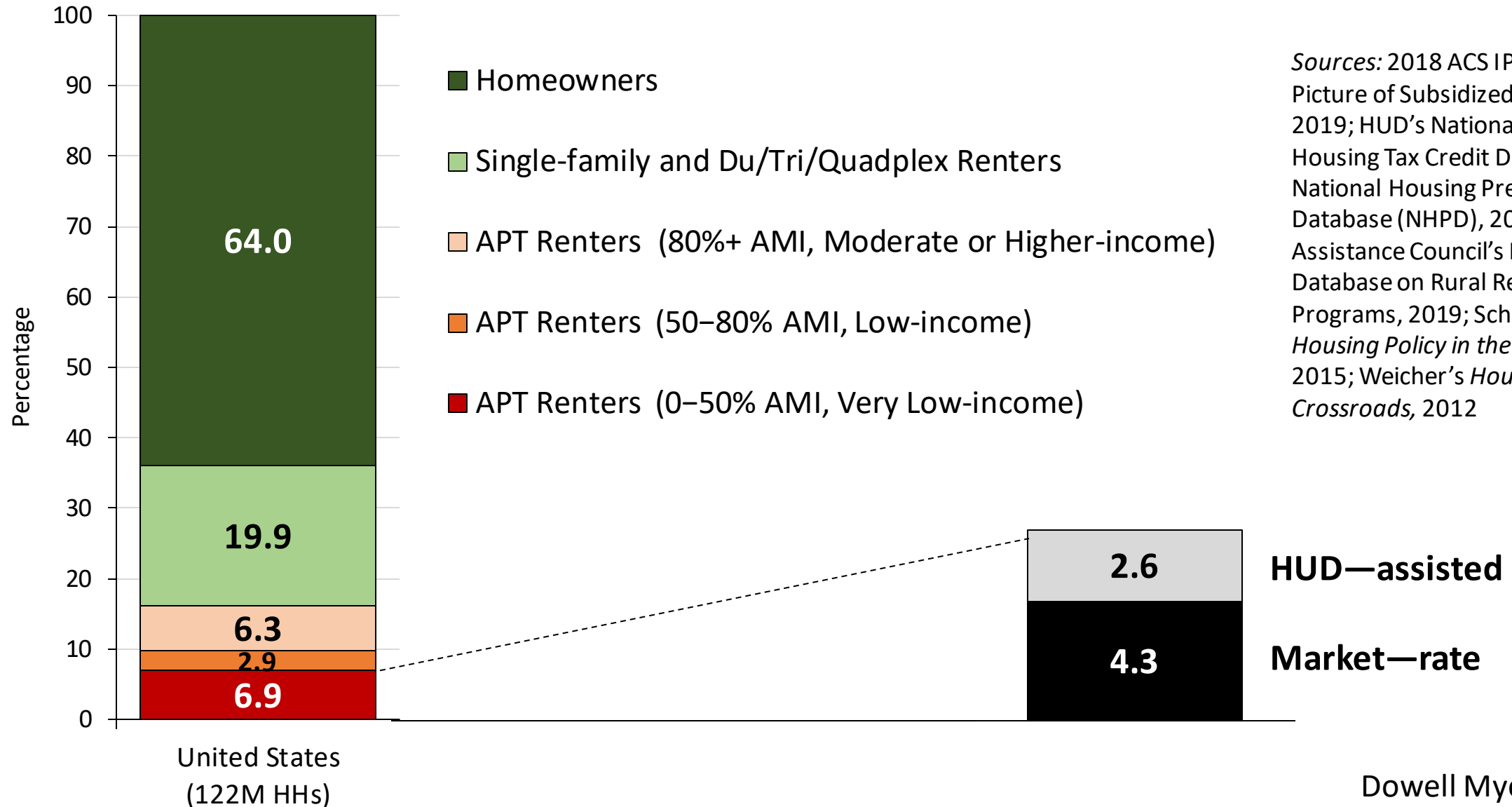
**Slumping Apartment Share in
1990s and 2000s but Rebounding**

35.1%	35.8%	32.4%	19.2%	20.7%	33.7%
1960s	1970s	1980s	1990s	2000s	2010s

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Connections in the Housing Market with Owners at the Top And the Lowest Income Apartment Renters at the Bottom, 2018

Legend:
- ■ Homeowners
- ■ Single-family and Du/Tri/Quadplex Renters
- ■ APT Renters (80%+ AMI, Moderate or Higher-income)
- ■ APT Renters (50–80% AMI, Low-income)
- ■ APT Renters (0–50% AMI, Very Low-income)

Bar values (United States, 122M HHs):
- 64.0
- 19.9
- 6.3
- 2.9
- 6.9

Y-axis: Percentage

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More than Half of Apartments for Low-income Renter Households are *Market-Rate*, United States, 2018

Percentage (y-axis)

- ■ Homeowners
- ■ Single-family and Du/Tri/Quadplex Renters
- ■ APT Renters (80%+ AMI, Moderate or Higher-income)
- ■ APT Renters (50–80% AMI, Low-income)
- ■ APT Renters (0–50% AMI, Very Low-income)

Bar values: 64.0, 19.9, 6.3, 2.9, 6.9

United States (122M HHs)

2.6 — HUD—assisted
4.3 — Market—rate

Sources: 2018 ACS IPUMS; HUD's Picture of Subsidized Households, 2019; HUD's National Low Income Housing Tax Credit Database, 2019; National Housing Preservation Database (NHPD), 2019; Housing Assistance Council's Historic Database on Rural Rental Housing Programs, 2019; Schwartz's *Housing Policy in the United States,* 2015; Weicher's *Housing Policy at a Crossroads,* 2012

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Low-Income Rental Homes by Structure Type in 2018, U.S. and Selected Largest Metro Areas

Single-family and 2-4 Units

Subsidized APTs

Market-rate APTs

United States: Market-rate 32, Subsidized 28
Chicago: Market-rate 36, Subsidized 26
SF-Oakland: Market-rate 43, Subsidized 21
LA: Market-rate 47, Subsidized 18
New York: Market-rate 47, Subsidized 35
Houston: Market-rate 56, Subsidized 12
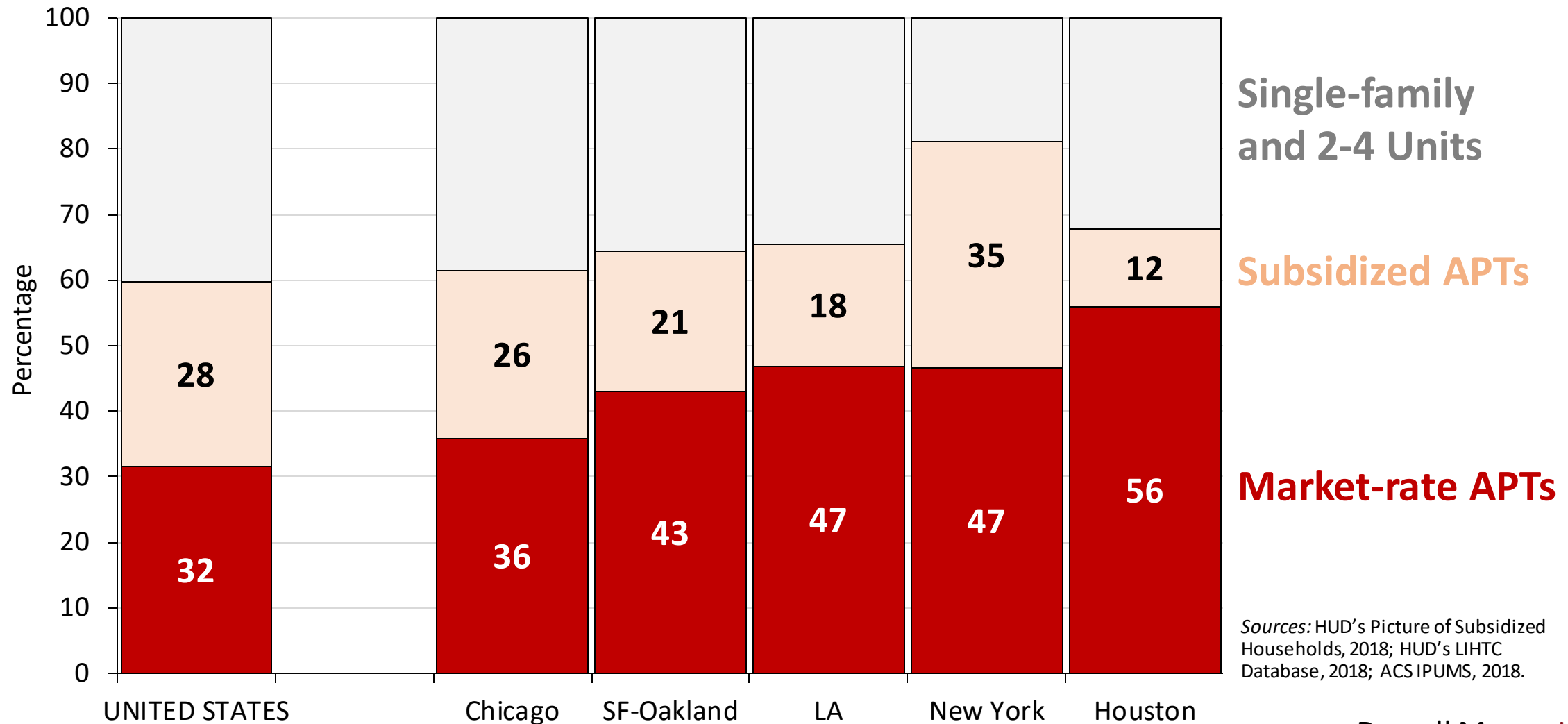
Sources: HUD's Picture of Subsidized Households, 2018; HUD's LIHTC Database, 2018; ACS IPUMS, 2018.
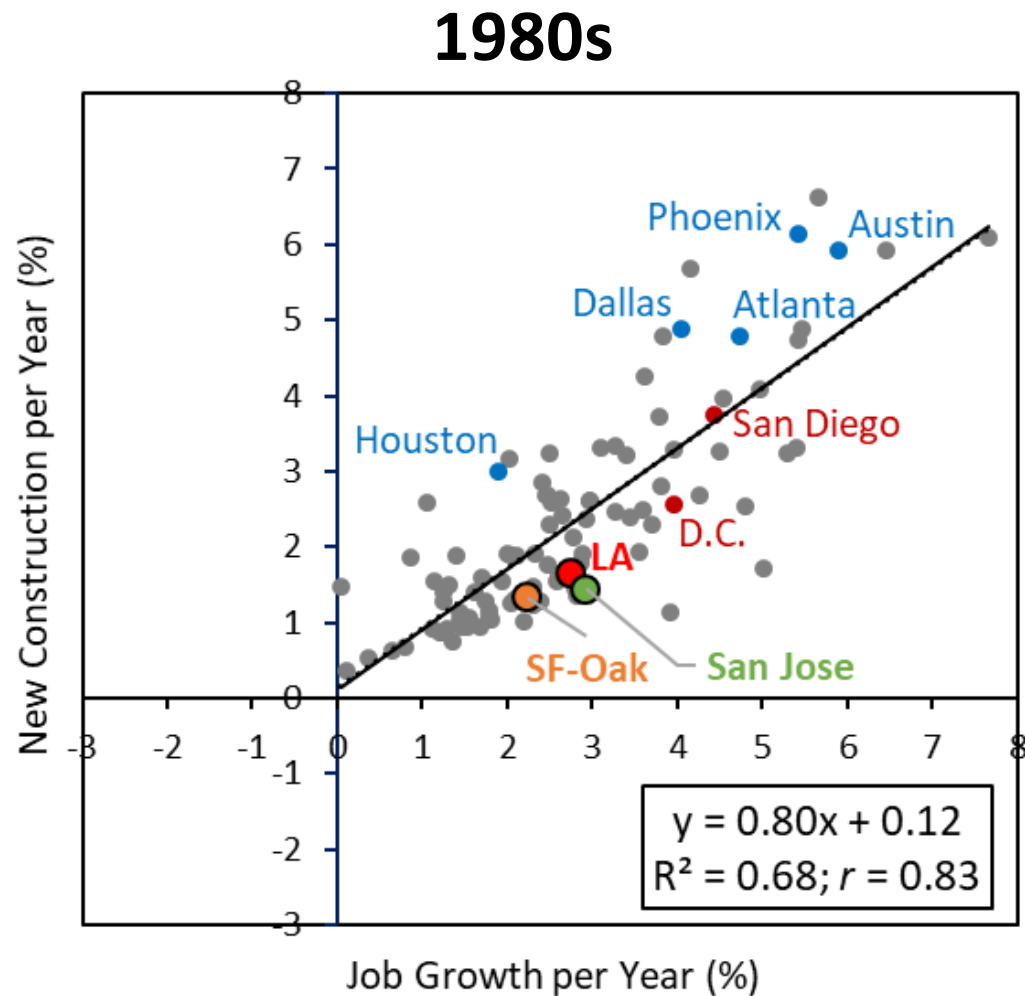
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Annualized Change in Number of *Filtered Market Rate* Apartment Units and *Federally Subsidized* Apartment Units, United States
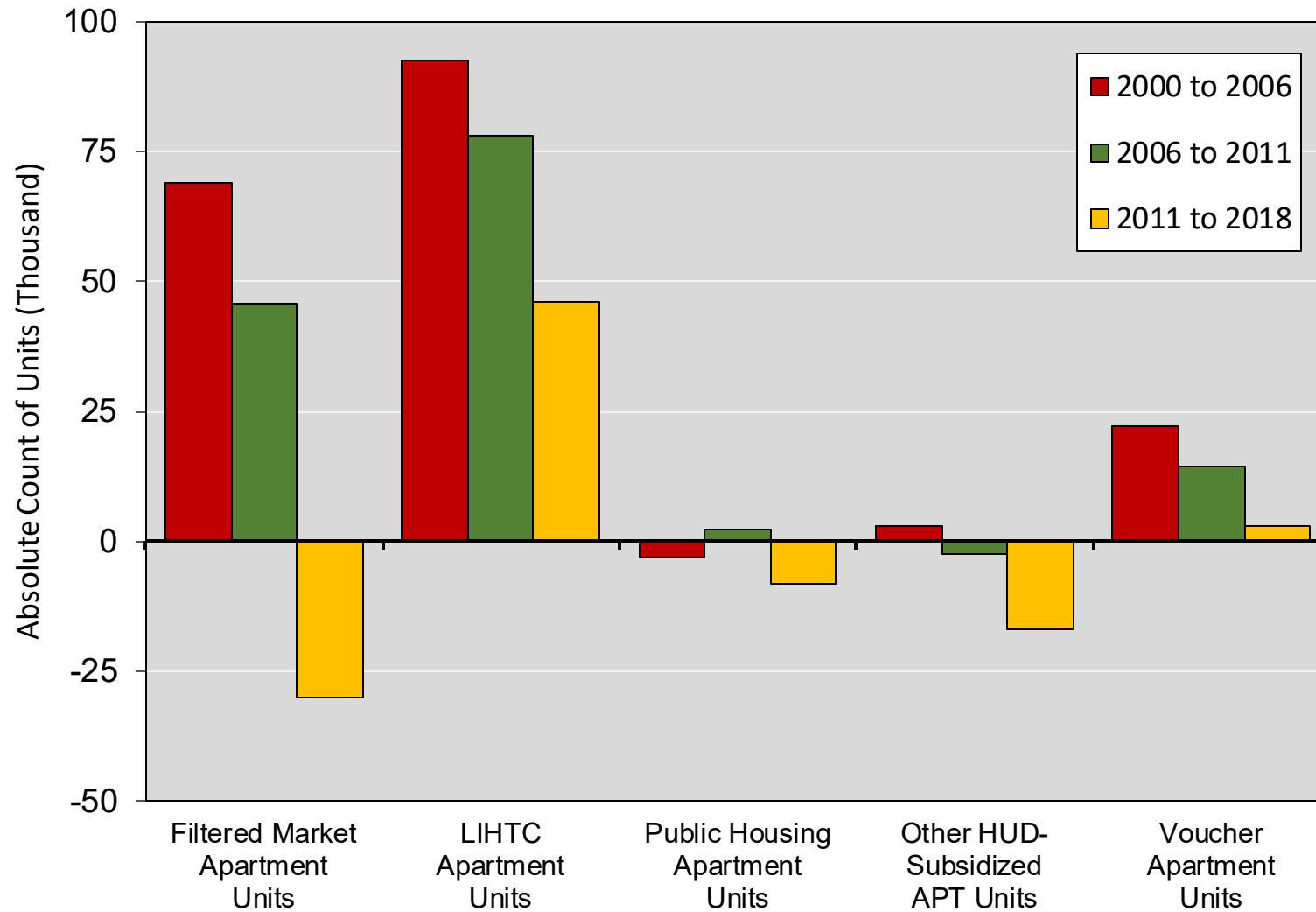
Notes: LIHTC apartment units include units placed in service in 2000 and later. Other HUD-Subsidized Apartment Units include five federal programs such as Mod Rehab, Project Based Section 8, RentSup/RAP, S236/BMIR, 202/PRAC, and 811/PRAC. All estimates pertain to low-income renters (<50% of median).

Sources: HUD's Picture of Subsidized Households database, 2019; HUD's LIHTC database, 2019; 2000 Decennial Census IPUMS; 2006, 2011, and 2018 ACS 1-year IPUMS.

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Strong Relations Between New Construction and Job Growth *Before the Recession*, but NOT in Recent Recovery, 100 Metros

1980s

Recovery (2011–17)

New Construction per Year (%)

Phoenix Austin
Dallas Atlanta
Houston
San Diego
D.C.
LA
SF-Oak San Jose

y = 0.80x + 0.12
R² = 0.68; r = 0.83

Job Growth per Year (%)

Sources: USC PopDynamics Analysis based on U.S. Census Bureau's Building Permits Survey; Bureau of Economic Analysis (BEA)'s Employment Data; Decennial Census and American Community Survey IPUMS Microdata Files.

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Greater New Construction Associated with *More Effective Filtering*

Pooled regression result with fixed effects, 1980 to 2017, 100 Metros
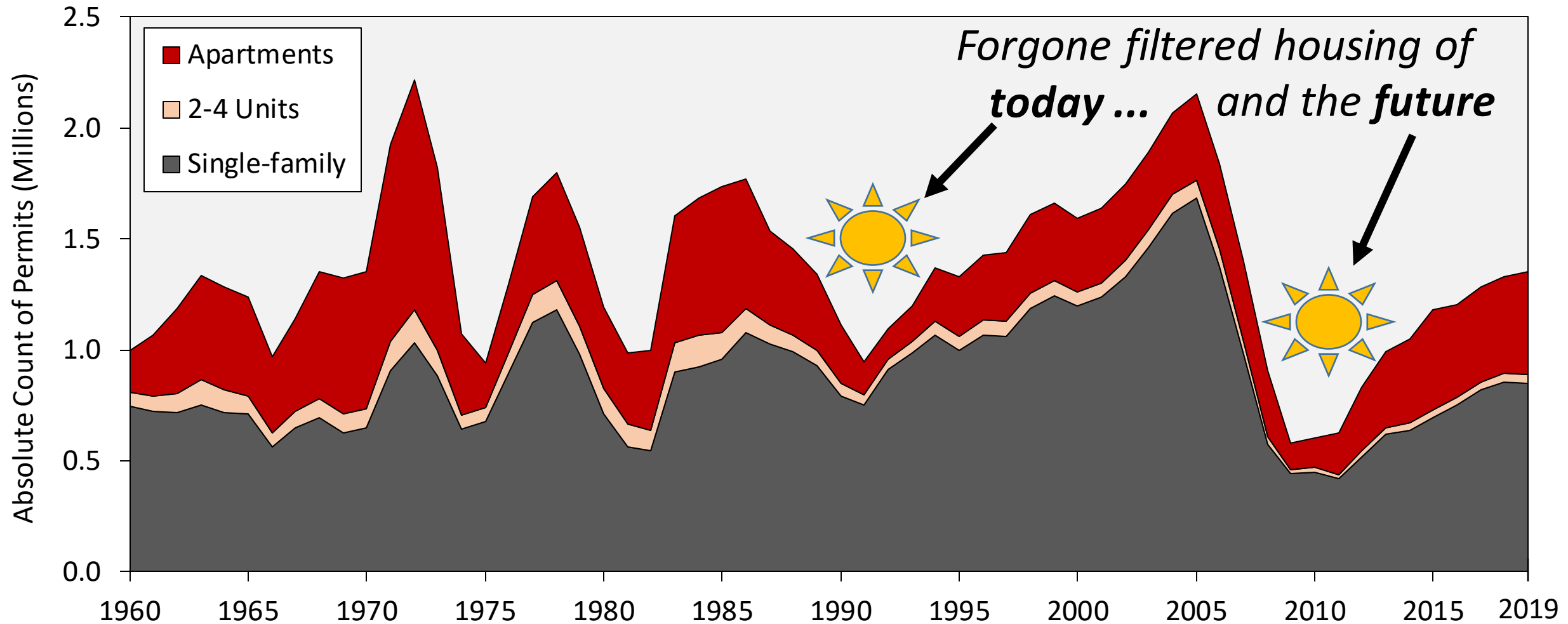
An increase in the homeownership rate among young adults eases rental competition and opens greater opportunities for low-income renters, spotlighting the interconnection between rental and owner markets

Notes: Dependent variable = change in low-income share of vintage apartment units (unit: percentage point). Robust standard errors were used to account for heteroskedasticity. + = $p < 0.10$, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

	Coefficient	Sig.
New Construction	**1.477**	***
Job Growth	**−0.801**	***
Change in Age 25-34 Homeownership Rate	**0.431**	***
Fixed Period Effects		
1980–1990	0.362	***
1990–2000 (Ref.)		
2000–2006	0.124	*
2006–2011	−0.052	
2011–2017	−0.340	***
Constant	0.249	***
Number of Obs.	2,300	
Adj. R-squared	0.113	

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Forgone Filtered Housing Today and the Future

Annual Building Permits by Structure Type, United States, 1960 to 2019

Forgone filtered housing of ***today ...*** *and the* ***future***

Legend: Apartments, 2-4 Units, Single-family

Y-axis: Absolute Count of Permits (Millions) — 0.0 to 2.5

X-axis: 1960 to 2019

Sources: U.S. Census Bureau, Building Permits Survey (BPS).

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Conclusion

- *Greater share* of low-income in APTs as they grow older **– filtering spreads benefits of new construction downward in income**

- Filtering was very *effective* in 1980s and early 2000s but has *slowed* since 2006 and even *reversed* in recent recovery years in most large metros

- The effectiveness of the housing filtering process largely *depends on adequate construction of APTs* relative to demand

- We should *reexamine filtering* as a long-term strategy that provides low-income access to housing in the *large quantities* required in today's climate of housing shortage. It all starts with **more apartments today**!

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Thank you

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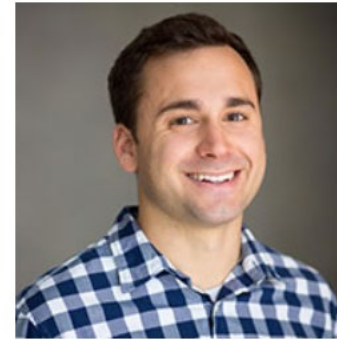Sol Price School of Public Policy

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