The Role of “Filtering” in Housing Affordability

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

NMHC Research Forum
Webinar Series
April 16, 2020
Webinar Information

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Webinar Host

Mark Obrinsky
SVP, Research and Chief Economist
NMHC
Mission Statement

NMHC is the place where the leaders of the apartment industry come together to guide their future success. With the industry’s most prominent and creative leaders at the helm, NMHC provides a forum for insight, advocacy and action that enable both members and the communities they build to thrive.
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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
In late 2016, NMHC launched the first-ever research foundation focused exclusively on filling the gap in the quality of research and analysis available to our increasingly sophisticated industry.
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Professor of Policy, Planning, and Demography
USC Sol Price School of Public Policy
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Filtering of Apartment Housing Between 1980 and 2018

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

and

JungHo Park, PhD
Postdoctoral Researcher
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*
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

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

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

Big consequences of falling homeownership rates for the rest of the housing market

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Trends in Apartment Rent and Tenant’s Income, Adjusted 2018$
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

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
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.
Filtering is indicated by increased low-income occupancy.

Example of apartments built in 1980s:

<table>
<thead>
<tr>
<th>Year</th>
<th>Low-income Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>36%</td>
</tr>
<tr>
<td>2000</td>
<td>40%</td>
</tr>
<tr>
<td>2006</td>
<td>46%</td>
</tr>
</tbody>
</table>

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.


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

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

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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

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

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

Sources: 2018 ACS IPUMS.

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

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

<table>
<thead>
<tr>
<th></th>
<th>Market-rate APTs</th>
<th>Subsidized APTs</th>
<th>Single-family and 2-4 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITED STATES</td>
<td>32</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Chicago</td>
<td>36</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>SF-Oakland</td>
<td>43</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>47</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>47</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Houston</td>
<td>56</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Sources: HUD’s Picture of Subsidized Households, 2018; HUD’s LIHTC Database, 2018; ACS IPUMS, 2018.
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.
Strong Relations Between New Construction and Job Growth Before the Recession, but NOT in Recent Recovery, 100 Metros

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.
**Greater New Construction Associated with More Effective Filtering**

Pooled regression result with fixed effects, 1980 to 2017, 100 Metros

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

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.*
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

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**!
Thank you

Visit USC PopDynamics

https://sites.usc.edu/popdynamics/housing/

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Questions

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New Apartment Construction: The Impact on Existing Apartments Webinar
May 12 | 2:00 – 3:00 PM EDT

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On Demand

James Chung
Reach Advisors

Quinn Eddins
Greystar

Mark Franceski
The Bozzuto Group

State of the Apartment Industry - Market Trends and Outlook Webinar
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