Filtering of Apartment Housing Between 1980 and 2018

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Themes Addressed

1. What is apartment filtering? How is it measured?

2. How has it changed between 1980 and 2020?

3. Who (what metropolitan area) is winner or loser?

4. The growing evidence for importance of new construction
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Low-Income Occupancy</th>
</tr>
</thead>
</table>
| 1990  | 36% 
occupied by low-income |
| 2000  | 40% 
occupied by low-income |
| 2006  | 46% 
occupied by low-income |

\[\text{increase in low-income share} = \text{10 pts}\]

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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

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

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

**Median Gross Rent of APTs**


**Median APT Tenant’s Income**

- Median APT Tenant’s Income

- 2000s Vintage
- 1990s Vintage
- 1980s Vintage
- 1970s Vintage
- 1960s Vintage
- Pre-1960 Vintage

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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 for lower incomes

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Low-income Occupancy Trend by Number of Bedrooms

All Bedrooms

No Bedroom

1 Bedroom

2 Bedrooms

3+ Bedrooms

Percentage

Pre-60
1960s
1970s
1980s
1990s
2000s

1980 2000 2020

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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

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

Percentage

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)

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

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

1980s

Recovery (2011–17)

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>
</tbody>
</table>

Fixed Period Effects

<table>
<thead>
<tr>
<th>Period</th>
<th>Coefficient</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

Constant

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.249</td>
<td>***</td>
</tr>
</tbody>
</table>

Number of Obs. 2,300

Adj. R-squared 0.113

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

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

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