How to Improve Measurement of Housing Costs

A Summary of Recommendations from Modernizing the Consumer Price Index for the 21st Century

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Disclaimer: Any opinions and conclusions expressed herein are those of the panel and do not indicate concurrence with other members of the research staff of the Federal Reserve or the Board of Governors.
Housing services are a large fraction of household expenditures

Relative Importance Weight for Housing Services
(Rent of Primary Residence + Owners’ Equivalent Rent of Residence)
The price of housing services is difficult to measure

- Housing services are unobserved for owner-occupied housing
  - Roughly 2/3 of households in the US
  - Multiple ways to impute price of housing services; none are perfect.

- For rental units, price of housing services = rent. But measurement remain.
  - CPI Housing Survey under-represents single-family rental (Poole, Ptacek and Verbrugge 2005)
  - CPI Housing Survey collects data on each unit every six months, so high-frequency rent changes are not observed.
Goals of this chapter

• Review the method for imputing the price of housing services to owner-occupied housing.

• Consider whether new data sources could help improve measurement of the price of housing services.
Methodologies for imputing price of housing services for owner-occupied housing

- **Rental equivalence**
  - Use observed rents of nearby rental units and impute based on differences in observed characteristics between rental and owner-occupied units.
  - Current BLS methodology
  - Should work well for areas where rental markets are thick and owner-occupied units are similar to rentals.

- **User cost**
  - Add up all costs of owning a home: mortgage interest, property taxes, homeowners insurance, maintenance, expected capital gains.
  - Theoretically equal to price of housing services

- **Other approaches**
  - Opportunity cost = max(rental equivalence, user cost) (Diewert 2008, 2011; Diewert and Nakamura 2009)
  - Payments approach = payments made by owners for ownership and upkeep
R4.1 Continue using rental equivalence

- Method should work well for homes in many markets
- User cost too difficult to calculate—many components very difficult to observe, and estimates are highly sensitive to assumptions made.
- R4.6: pursue research estimating the price of housing services of individual housing units using various methods.
  - Such research could help identify types of homes/markets for which some approaches might be better than others.
R4.2 Identify new data sources that would improve coverage

- **Single-family rental**
  - Rent payment data from large single-family landlords or property management companies

- **Multifamily property management companies**
  - Rent payment data on millions of MF rental units

- **Private sources could provide *monthly* data, improving timeliness of rent growth estimates.**

- **Private sources could improve coverage of the US housing stock, but could never fully replace the CPI Housing Survey because they are not nationally representative.**
R4.3 Alternate data for estimating expenditure shares for owner-occupied housing

- Current method uses American Community Survey to impute rental expenditures based on housing characteristics

- But not many housing characteristics in ACS
  - Lacks information on unit square footage and lot square footage

- Explore using property tax records instead
  - More detailed characteristics; covers 99% of US housing
  - BEA already has the data!
R4.4 Publish additional detail

• Structure type: would have been very useful to assess effects of the pandemic on changes in demand for different types of housing units.

• Larger number of geographic areas.
  o Currently BLS only publishes data for 23 metro areas.
  o Housing costs vary more across locations than the prices of many other goods and services, so it could be useful to publish price indexes for a larger number of locations.

• Research series using alternate methods of imputing price of housing services for owner-occupied units.
Summary

• The Panel likes the general method used by BLS.

• New data sources have the potential to improve coverage, timeliness, and expenditure weights.

• We also encourage BLS to publish more detail on the price of housing services.