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I am an economist whose research and service focuses the economic measurement of inflation. My specialties are alternative data in price indices, housing, and firm price-setting behavior.

Alternative Data in Price Index Measurement

My primary responsibility as a Bureau of Labor Statistics economist is improving the measurement of price indexes in the U.S. One of the projects I headed investigated whether we could use credit and debit card transaction data, provided in collaboration with Opportunity Insights, to supplement the Consumer Expenditure (CE) Survey, particularly during the pandemic period when in-person data collection became difficult. As described in (Erhard & Montag, 2026), we found that the alternative data matched the CE for several sectors, such as food, accommodation, and entertainment. However, it was difficult to cleanly match merchant types to the actual goods and services purchased, which resulted in a poor fit in other sectors.

I investigated whether the Producer Price Index (PPI) freight rail index could be created using an alternative data source rather than the traditional PPI survey. I had to deal with the challenge that a matched model approach would be infeasible, because there are so many price-determining characteristics that each shipment is almost unique. Several important characteristics were missing, which I addressed through imputation. The project resulted in the alternative dataset being incorporated into production. Due to my expertise, I also provide regular technical assistance to other price index teams that investigate how to incorporate alternative data into BLS price indices.

Housing

My initial research at the BLS studied why the BLS rent index differed significantly from private sector indices. My co-authors Cleveland Federal Reserve Bank and I constructed a Case-Shiller repeat transaction-style index using the BLS Housing Survey microdata to mimic the private sector methodologies. I became intimately familiar with the Housing Survey as I confronted methodological challenges such as heteroskedasticity and weighting. As discussed in (Adams et al., 2024), we found that private sector indices only measured *new* tenants, while the BLS was unique in including *continuing* tenants. After the paper's publication, I maintained the repeat rent indices as a regular BLS research series,[1] where it routinely gathered interest from policymakers-see (Miran, 2025)-and the private sector. I continue to provide technical assistance to the series.

I continued my housing research by focusing on how rents changed for continuing tenants in the paper (Gallin et al., 2024). As part of this project, my co-authors and I developed a rent gap measure, which compares the actual rent growth for a tenant since move-in to how much their rent would have changed if it tracked new tenant rents. In practice, we find that continuing tenant rents tend to fall behind market rents, even though landlords could reoptimize rents when leases renew. We are currently investigating how rent stickiness varies by structure type and developing a model of landlord behavior. This project has been presented at the annual ASSA conference and has already been cited in the literature (see (Cotton, 2026)).

[1] The repeat rent index can be viewed at https://www.bls.gov/pir/new-tenant-rent.htm.

As part of my housing work, I have investigated possible improvements to the nonresponse imputation procedure in the BLS Housing Survey. I constructed multiple rent price indices using counterfactual group means and hedonic imputations focusing on different covariates. One difficulty was that although my previous research demonstrates that renter tenure is a significant predictor of rent changes, nonresponding units do not have any information on tenant turnover, which I addressed through multiple different tenancy imputation approaches. As discussed in the forthcoming (Loewenstein et al., 2026), which we presented at the NBER CRIW Housing Conference in March 2026, we found that the current BLS methodology produces similar results to imputing rent change by city and date. By contrast, a tenancy-based imputation method tends to yield a slightly lower year-on-year rent inflation rate.

Price Frequency

I have a forthcoming article about the frequency of price changes during and after the Covid pandemic (Montag & Villar, forthcoming). For this research not only did I present the theory underlying the research question, but I also dealt with basic issues related to the data needed for the empirical analysis. For this I cleaned the BLS's Commodities and Services microdata and created a set of pricing statistics by goods and services category. My coauthor and I found that the frequency of price changes rose sharply after the pandemic and the magnitude of price changes stayed steady, which fits the menu cost model of price-setting. However, we also showed that standard menu cost models could not explain the sudden surge in price changes. We have shared our pricing statistics fairly widely, which has assisted other researchers in their own studies into the post-pandemic inflation (see (Blanco et al., 2024)).

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Cotton, C. D. (2026). Understanding CPI shelter inflation: The importance of the new-tenant/all-tenant rent gap. *Journal of Housing Economics*, *71*, 102117. https://doi.org/10.1016/j.jhe.2025.102117

Erhard, L., & Montag, H. (2026). The value of transactional data to a consumer spending survey. *Monthly Labor Review*. https://doi.org/10.21916/mlr.2026.3

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Miran, S. (2025, September 22). *Nonmonetary Forces and Appropriate Monetary Policy* [Speech]. The Economic Club of New York, New York, New York. https://www.federalreserve.gov/newsevents/speech/files/miran20250922a.pdf

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