Dominic Smith

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I am an economist who conducts research that focuses on inflation and the retail sector.

Measuring U.S. Inflation

My primary job is to improve U.S. inflation statistics. To that end, I have worked with the International Price Program at the BLS to convert the data source for over one-third of their import and export indexes to use unit values from customs data. Over five years, we refined a methodology that would allow us to produce import and export price indexes with customs data that are virtually identical to current sources. Switching to this new data source allows us to greatly expand the number of indexes that the BLS publishes while lowering the cost of collecting data. I wrote the final report on the methodology that is being used for this change and presented the work to the BLS technical advisory committee. My current work in this area involves refining our methods of automatically detecting outlier observations and identifying additional areas that can be converted to this source. Another project involves studying how inflation dynamics are impacted by currency fluctuations and other changes in trade prices.

Retail Productivity and Competition

Initially, my work studying the retail sector involved understanding how local and national concentration has changed in the retail sector. One of the challenges of this research is that industry codes are poorly suited for identifying which retail establishments compete with each other. For example, stores in the General Merchandising subsector (NAICS 452) sell many goods and compete with both Clothing (NAICS 448) and Grocery (445) stores. I cleaned information collected as part of the Census of Retail Trade on sales by product area for retail establishments. I found that local and national concentration have increased in the retail sector and that product-based concentration measures increase by less than industry-based measures.

Now, I am part of a BLS and Census project creating measures of productivity dispersion in the retail sector. A first draft of this work has been presented to the BLS technical advisory committee, and a data product covering 1987 to 2017 will be released on the BLS and Census websites this year. In addition to our work measuring productivity dispersion we have been studying the determinants of retail productivity growth.[1] This work has found confirmed previous findings that productivity growth in the 1990s came from more productive establishments of national firms replacing less productive establishments. However, we have found that by the 2000s productivity growth increasingly came from existing stores becoming more productive.

This work was presented at the CRIW summer meetings last year by a coauthor and included in a session I organized on *The Retail Transformation* that was accepted by AEASTAT for inclusion in the 2025 AEA program.

Other Work on Economic Measurement

As a research assistant at the Federal Reserve Board of Governors I coauthored a book chapter with Kim Bayard and Dave Byrne on *The Scope of U.S. Factoryless Manufacturing* for *Measuring Globalization: Better Trade Statistics for Better Policy* (2015). We combined economic census

[1] The productivity growth paper and productivity dispersion paper were initially released as drafts with the same title. We're working to split this work into two papers that will be released this year.

questions with information from annual reports or public companies and industry reports to estimate how many factoryless goods producers had been classified into the wholesale and services sectors instead of manufacturing.

I published an article in the BLS Monthly Labor Review on *A Consumption Measure for Automobiles*, in which we estimated consumer unit consumption of motor vehicle services based on the depreciation of each household's vehicle. In another article for the Monthly Labor Review, I studied the impact of using a geometric Young formula for lower-level import and export price indexes, which may result in the BLS releasing these data as a research series.

I have also been asked to present to a CNStat panel on the expanded scope of the retail sector and review a report for the National Academies of Sciences on *Understanding the Impact of Global Value Chains*. I also organize a virtual seminar series for the Central Bank Research Association on Inflation Drivers and Dynamics. In four years, we have hosted over 60 presentations on various inflation topics.

Relevant Research

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Smith, Dominic, G. Jacob Blackwood, Michael Giandrea, Cheryl Grim, Jay Stewart, and Zoltan Wolf. "Productivity Dispersion in Retail Trade," CES Working Paper CES-23-60. 2023* https://www2.census.gov/library/working-papers/2023/adrm/ces/CES-WP-23-60.pdf

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