

Title: **The Job Openings and Labor Turnover Survey (JOLTS) Item Imputation: An Alternative Approach**

Date/Time: Wednesday, April 27, 2016, 12:30 – 2:00 p.m.

Speaker: Mark Crankshaw, Bureau of Labor Statistics

Discussant: Matthew Dey, Bureau of Labor Statistics

Chair: Charlotte Oslund, Bureau of Labor Statistics

Sponsor: WSS Methodology Section

Abstract: The Job Openings and Labor Turnover Survey (JOLTS) measures unmet labor demand through the job openings data, and measures turnover through data on hires and separations. The data show a very dynamic labor market with some establishments growing, some declining, and some steady in employment. JOLTS currently uses a hot deck nearest neighbor imputation methodology to impute missing data items with the measure of ‘nearness’ based on reported employment. The shortcoming of that approach is that reported employment in a single month does not in any way reflect the employment dynamics of the business. Additionally, imputing from a single donor often pairs donors and recipients who may share a common level of employment but have very different economic dynamics. The imputed values derived from such a ‘mismatch’ may contribute to the divergence between JOLTS implied employment change and CES employment change estimates. The narrow imputation cells also lead on occasion to unexpectedly high variation in JOLTS estimation when a donor with an unusually high JOLTS rate is paired through nearest neighbor with a recipient with a large sample weight.

A better approach for the JOLTS program may be to classify units based on their employment dynamic—expanding, stable, or contracting—and impute from within those groups. Thus, expanding establishments would donate to expanding establishments, stable to stable, and contracting to contracting. Drawing imputed values from a model-based donor distribution derived from reported donor data within a dynamic grouping eliminates pairing donors and recipients with different economic dynamics and has been shown to reduce unexpectedly high variation in the estimates while ensuring that imputed data within dynamic group is consistent with reported data, without biasing the means of the data elements or substantially lowering their variances.

Location: Bureau of Labor Statistics Janet Norwood Conference Center, Room 1

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