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Quality and Coverage

Editing and Imputing Measure of Size Variables on the US Census Bureau's Business Register

Abstract

When selecting a sample of businesses for a survey, one important goal is to ensure that the measure of size data are accurate for each of the units in the target population. Key measure of size variables on the Census Bureau's Business Register (BR) include annual payroll, first quarter payroll, March 12th employment, and business income or receipts data. Various processes are used to edit and impute these variables so that they are as complete and accurate as possible for BR users. Payroll and employment variables are both regularly edited and imputed when they are applied to the BR from both administrative records sources and survey data collections. Additionally, an annual "wrap-up" process is conducted for both administrative records and survey payroll and employment data in order to address any remaining issues that may exist with the data before it is considered complete for a given reference year. The Census Bureau is also conducting research to identify extreme values in administrative records receipts. Receipts data are more difficult to evaluate due to it having multiple definitions and not having a consistent correlation to other variables across all industries and sectors. In addition, unlike payroll and employment, receipts data are only widely collected on an establishment basis via the five-year Economic Census. Identifying and flagging extreme receipts values on the BR would allow the survey designer the opportunity to determine appropriate methods for handling these outlying values during the sample design, editing, imputation, and estimation processes. This paper will discuss: (1) why these data items are important to the Census Bureau's business statistics programs, (2) the challenges faced when assessing their quality, (3) the methods that are used to edit and impute payroll and employment from different data sources, (4) the annual "wrap-up" processes, and (5) how extreme receipts data values will be identified.