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### Re-engineering Key National Economic Indicators

David Johnson

Matthew Shapiro

John Haltiwanger

Gabriel Ehrlich

Ron Jarmin

Traditional methods of collecting data from businesses and households face increasing challenges. These include declining response rates to surveys, increasing costs to traditional modes of data collection, and the difficulty of keeping pace with rapid changes in the economy. The digitization of virtually all market transactions offers the potential for re-engineering key national economic indicators. The challenge for the statistical system is how to operate in this data-rich environment. This paper focuses on the opportunities for collecting item-level data at the source and constructing key indicators using measurement methods consistent with such a data infrastructure. Ubiquitous digitization of transactions allows price and quantity be collected or aggregated simultaneously at the source. This new architecture for economic statistics creates challenges arising from the rapid change in items sold. The paper explores some recently proposed techniques for estimating price and quantity indices in large-scale item-level data. Although those methods display tremendous promise, substantially more research is necessary before they will be ready to serve as the basis for the official economic statistics. Finally, the paper addresses implications for building national statistics from transactions for data collection and for the capabilities and organization of the statistical agencies in the 21st century.