
REVEAL: A Paradigm for Official Statistics

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Big Data present particular challenges to National Statistical Organizations; there are opportunities and threats. Customers require statistics more rapidly and on more topics than ever before. Big data can provide answers, but with varying and many times unknown degrees of accuracy and focus. In this context, how can statistical agencies best provide policy relevant information? Traditional approaches such as surveys and censuses are not always timely in their production of statistics. However, with their known quality characteristics they present the basis for benchmarking continuous near term projections. We propose a paradigm for official statistics, REVEAL, that leverages the strength statistical agencies possess the ability to effectively measure ground truth. The process is: **R**eassemble information from known sources such as the internet and administrative records; **E**stimate from benchmarks such as prior surveys or censuses; **V**alidate estimates with field operations; **E**valuate and describe measurement differences; **A**nalyze sources of error and determine if those data sources should be used in the future; and **L**ink quality measures and inferences back to improve the projection methodology. Rather than using estimates to weight current surveys, surveys validate current estimates.