

## A Revival of the PACE Survey

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December 8, 2014

The American Economic Association Committee on Economic Statistics has asked me to write an assessment of the research needs that would be met by a revival of the Pollution Abatement Costs and Expenditures (PACE) survey. This survey is an extremely valuable source of data for evidence-based policy evaluation and related research that cannot easily be replaced.

The PACE survey is the most comprehensive source of data on expenditures related to environmental protection for the United States manufacturing sector. The survey collects facility-level data on pollution abatement capital expenditures and operating costs associated with compliance to local, state, and federal regulations, and voluntary or market-driven pollution abatement activities. The facility-level responses are then aggregated in various ways to provide industry level, state level, and national estimates of pollution abatement costs. The PACE survey was conducted annually between 1973 and 1994, but was discontinued after 1994 by the U.S. Census Bureau for budgetary reasons. Recognizing the need for this type of data, the EPA provided the necessary funding for the 1999 survey and, after undertaking an extensive evaluation and redesign, funded the survey again in 2005.

The PACE Survey provides a truly unique source of data that can be used to perform evidence-based policy evaluations of the costs of complying with environmental regulations. The Census Bureau's Center for Economic Studies has enhanced this value by merging the PACE data with data from the Census of Manufacturers and Annual Survey of Manufacturers. The combined data have allowed government and academic researchers in the United States to evaluate the effectiveness of environmental programs using facility-level data and, in turn, to improve the design and performance of these programs.

The PACE data have been used in projects analyzing a number of important questions that have led to more than 80 peer-reviewed journal articles. Some of the issues examined in these articles include: how abatement costs affect the competitiveness of U.S. manufacturing, as well as employment and productivity levels across plants; how abatement costs affect the opening, closing and re-location of manufacturing facilities; how abatement investment affects other capital investment; how effective abatement spending is in reducing emissions; whether abatement costs are related to local benefits from pollution abatement; and whether environmental regulations have led to environmental injustice. In the future, the PACE survey can be augmented to collect information on costs related to reductions in greenhouse gas emissions in both the electric power and manufacturing sectors, thus providing additional opportunities for research.

The value of the data collected through the PACE Survey is significantly enhanced when the data are collected over time, on a consistent basis. Furthermore, the relatively low cost of the

PACE Survey, combined with the analytical benefits EPA and other agencies—including the Commerce Department and the Department of Energy—gain from the data suggest the U.S. government receives a significant return on its investment in collecting these cost data.