

Studies Offer Varied Approaches to Estimate Impact of Offshoring and Global Trade

<http://www.ssti.org/Digest/2008/080608.htm#Research>

Opportunities to secure jobs requiring specialized training and more educated workers - the same types of higher wage positions coveted by U.S. tech-based economic development practitioners - increasingly are appearing in other countries as companies look to enter new markets and reduce costs. As a result, offshoring and its effects on an ever-changing U.S. labor force are topics receiving a lot of play during this election cycle.

Offshoring is not being discussed only by politicians, however. What follows is a synthesis of four recent research reports shedding light on different angles or perspectives of the offshoring debate.

In their recent working paper, Runjuan Liu of the University of Alberta and Daniel Treffer of the University of Toronto explore certain cumulative effects of how the exchange of service jobs through China and India are impacting the U.S. labor market. In *Much Ado about Nothing: American Jobs and the Rise of Service Outsourcing to China and India*, the authors not only attempt to quantify the repercussions of outsourcing U.S. service jobs to these lower-wage countries from the years 1996 to 2005 but examine the service positions that are being insourced to the U.S. from these lower-wage countries.

By capturing both outsourcing and insourcing in regards to China and India, the authors find the net impact is measurably negligible. In fact, the authors estimate that if the economic expansion occurring in China and India from 1996 to 2005 is maintained at the same rates for the next decade, then U.S. workers whose business and technical service jobs are affected by outsourcing/insourcing patterns can be expected to switch jobs 2 percent less often than unaffected workers. In addition, affected workers would be unemployed 0.1 percent less often and would earn 1.5 percent more in wages than others.

In another paper which is less reassuring, Troy Smith and Jan Rivkin of Harvard Business School outline a computer-based exercise they performed earlier this year with 901 Harvard MBA students to assess the level of "offshorability" for nearly 800 occupations. Due to the structure of the experiment, each of the occupations was examined by, on average, more than 20 students. In *A Replication Study of Alan's Binder's "How Many U.S. Jobs Might Be Offshorable?"*, the students' answers collectively estimate between 21 and 42 percent of all current U.S. jobs are potentially susceptible to offshoring. This compares to work by Alan Binder in 2007 that estimates between 22 and 29 percent of U.S. jobs have the potential to be offshored in a decade or two. This estimate is based on Binder's subjective judgments of tasks and work activities associated with each of the myriad occupations comprising the U.S. labor market.

Both the 2008 student exercise and the 2007 Blinder working paper found that jobs requiring more years of educational attainment are actually the jobs more likely to be offshorable. Using the lower bounds of the percentage of working population susceptible to offshoring in both studies, the aggregate amount still comes out to more than 20 million U.S. employees.

Yet another report uses the U.S. trade deficit with China to estimate 2.3 million jobs were lost in the U.S. to China workers from 2001 to 2007. In *The China Trade Toll*, Robert Scott of the Economic Policy Institute uses trade flows and an input-output model to calculate the number of U.S. employees that could have been sustained if the trade imbalances did not exist.

Scott uses the amounts between import and export levels within various types of manufactured goods to present the number of net jobs created or displaced within certain industries. For example, \$78.3 billion more computer and electronic products were exported to the U.S. than were imported to China from 2001 to 2007, which was calculated to displace more than 560,000 U.S. employees nationwide. These computer and electronic products joined other manufactured goods, such as apparel and accessories and fabricated metal products, as experiencing the largest trade imbalances. The report finds Idaho, New Hampshire, South Carolina, Oregon and California led the country for the percent of total state employment reduced by the trade deficits.

Finally, the National Academy of Engineering released a report last week, collecting the findings of a committee brought together in 2006 to investigate the offshoring of engineering. *The Offshoring of Engineering: Facts, Unknowns, and Potential Implications* also includes papers commissioned by the committee and presentations from a workshop on the topic held by the committee in Washington, D.C. The effects of offshoring are discussed in the report for six specific areas: software development, the automotive sector, pharmaceuticals, computer manufacturing, construction engineering and services, and semiconductor development. The report calls for better data examining the impacts from offshoring, especially as it relates to the engineering workforce and the U.S. system of engineering education.

Much Ado About Nothing: American Jobs and the Rise of Service Outsourcing to China and India

is available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1142233

Smith and Rivkin's *A Replication Study of Alan's Binder's "How Many U.S. Jobs Might Be Offshorable?"* can be found at: <http://hbswk.hbs.edu/item/5975.html>

The China Trade Toll by Robert Scott of the Economic Policy Institute can be seen here:

<http://www.epi.org/content.cfm/bp219>

The Offshoring of Engineering: Facts, Unknowns, and Potential Implications released by the National Academy of Engineering is available at: http://www.nap.edu/catalog.php?record_id=12067