Monthly Labor Review

June 2014

Does the productivity of individual workers increase during recessions?

Yavor Ivanchev

It is now well established that aggregate productivity rose during the three economic downturns since 1990. Data from the Bureau of Labor Statistics indicate that in the most recent recession, which started in December 2007 and ended in June 2009, the percent decline in aggregate hours worked was larger than the decline in output, suggesting an increase in overall labor productivity. The causes of this upward dynamic, however, are not clear and remain the subject of considerable debate. Is it that changing labor market conditions in bad economic times induce a positive change in worker performance? Or is the observed rise in productivity associated with recession-driven effects unrelated to worker effort, such as employer hiring and retention decisions that may alter the quality composition of the workforce and thus shore up productivity?

In a paper titled "Making do with less: working harder during recessions" (National Bureau of Economic Research, working paper no. 19328, August 2013), Edward Lazear, Kathryn Shaw, and Christopher Stanton probe these explanatory possibilities with the use of formal modeling and employee-level productivity measures from a large U.S. services company for the period June 2006–May 2010. Putting theory to the test reveals that most of the growth in worker output during the recession came from increased effort on the job. The authors report that firm employees completed their daily tasks faster than they did before the recession, boosting productivity by about 5 percent over the recession period and keeping their slack time unchanged. This finding holds for various model specifications and for both the full sample of more than 23,000 workers spread out in company establishments across the country and a balanced sample restricted to those who remained employed at the firm throughout the entire study period.

The authors also find that "laggards," or employees who were less productive than the median worker in the months before the recession, increased their effort the most, likely because they felt more vulnerable to prospective layoffs. At each point in time, effort also was stronger in establishments located in areas with higher local unemployment rates, suggesting that workers unambiguously respond to worsening labor market conditions. As the probability of finding alternative jobs declines and the threat of termination looms larger, the authors reason, rational workers will increase their level of effort and output.

By contrast, the study offers weaker evidence in support of the composition-based explanation of rising productivity, according to which the surge in per-worker output in economic downturns results from nonrandom shifts in the skill level of the workforce. Despite the substantial turnover during the recession, the researchers report that the quality differential between leavers and stayers, along with its effect on output, was minimal. Further, although it appears that the firm's hiring decisions favored more skilled and productive individuals after the recession hit, the small number of new hires had marginal effect on overall productivity. All told, the firm-level analysis offered in the paper lends support to the authors’ conjecture that the economic predicament brought about by the recession compelled workers to work harder, enabling employers to “make do with less.”