

Productivity down, costs down?

At the broad economic level, it is difficult to imagine a situation where a decline in productivity would lead to an increase in profit. If other variables are kept constant, as is often done in economic discourse, lower productivity would raise costs and, because competition keeps prices from rising, profits would therefore be lower. Richard B. Freeman and Morris M. Kleiner in their recent article, “The last American shoe manufacturers: Decreasing productivity and increasing profits in the shift from piece rates to continuous flow production,” in the latest *Industrial Relations*, say that even when changes in human resource management that have a clear impact on productivity are implemented, they often come as part of a broader package of changes. They write, “The attempt to isolate a particular human resource fails to capture that changes in a particular policy occur not on a *ceteris paribus* basis, but *mutatis mutandis* in conjunction with many other practices within the firm.”

Freeman and Kleiner examine the case of a large American shoe manufacturer that had traditionally used a piece-rate compensation policy for most of its shop floor employees. As Freeman and Kleiner document, many analysts agree that piece-rate compensation induces greater productive effort than does time-rate compensation. There are, however, things that have to be watched for—workers might skimp on quality or use excessive material to make a higher production number. This leads to constructing a costly quality control and inspection apparatus—an apparatus that is not counted as part of the shop floor head count upon which productivity is assessed.

In any case, after the manufacturer made the difficult and contentious switch from piece rates to time rates, they did, in

fact, find that productivity fell. However, the reduced cost of quality assurance, reduced aggregate wage costs, greater flexibility of production, and reduced materials wastage, and even reduced workers’ compensation costs, more than made up for the drop in individual productivity. As Freeman and Kleiner conclude, “Our within firm analysis shows that the higher productivity associated with piece rate pay was insufficient to make piece rates and its complementary management policies economically desirable in the shoe industry. Because piece rate pay raises nonlabor costs and workers’ compensation, requires extra monitoring of workers, and makes it expensive to adjust to changing styles, time rates have come to dominate the U.S. shoe sector.” As a footnote, Freeman and Kleiner provide data to show that shoemaking was the largest employer in the U.S. prior to the Civil War, slipped to seventh of 15 industries surveyed just prior to World War II, and was down to 80th out of 94 by the mid-1990s.

Discount rate or learning curve?

Even the best and latest wage equations, estimated using the best and latest data, generally explain a relatively small fraction of individual wage levels and wage growth. Lalith Munashinghe and Nachum Sicerman, in their recent National Bureau of Economic Research Working Paper “Wage dynamics and unobserved heterogeneity: Time preference or learning ability?” explore some of the sources of unobserved heterogeneity that might explain some portion of the remainder.

Munashinghe and Sicerman suggest there are two general classes of heterogeneity: differences in individual productivity and differences in individual preferences. Their research aimed at seeing which of these might be more im-

portant by selecting a variable that is correlated with wages, but cannot be thought to have a significant causal impact on wages. Such a variable, they assert, may be a proxy for an unobserved factor such as learning ability or time preference. The variable they found was whether or not an individual smokes. Smokers systematically earn less than nonsmokers, but it is not likely that the difference is caused by the direct effects of smoking (such as poorer health).

The relationship between smoking and wages, according to Munashinghe and Sicerman, might then reflect differences in time preference (nonsmokers value the future more) or learning ability (more able learners will tend to better understand the evil effects of smoking and be nonsmokers). Their test of which is the more important factor is constructed on the basis of the theoretical implications of time preference and learning ability—the correlation between the individuals starting wage and subsequent wage growth will be very different.

Specifically, the negative correlation between first wage and wage growth is stronger among smokers if learning ability is held constant. Conversely, if time preference is held constant, the trade off will be weaker among smokers. “As a consequence,” say Munashinghe and Sicerman, “the discounting and learning hypotheses predict a different sign on the interaction term between smoking and the first wage in a wage growth equation.”

Munashinghe and Sicerman use data from the National Longitudinal Survey of Youth to test their model. They find that the interaction term in their equations are negative, that the result supports the time preference alternative, and that the result is robust across several model specifications and controls. Thus, they conclude that research on the sources of individual discount rates would be a fruitful direction for wage research to follow.