

What drives gasoline prices?

As everyone knows, gasoline prices have been high in recent years. Most people also understand that the price of gasoline is closely linked to the price of oil. But occasionally, the two diverge. Gasoline prices were rising in the spring of 2007, while oil prices were falling. Later in the year, crude prices were back up, but gasoline prices did not change. So, one might ask, what is it—other than the price of crude oil—that drives U.S. gasoline prices? In the October issue of the Federal Reserve Bank of Dallas *Economic Letter*, Bank economists Stephen P.A. Brown and Raghav Virmani attempt to answer this question by examining several other factors that affect gasoline prices. They build a succession of econometric models to isolate and quantify the various factors.

The first model uses two factors—crude oil prices and gasoline prices—and the authors state that the “model explains nearly 98 percent of U.S. gasoline prices.” To explain the other 2 percent, Brown and Virmani expand their model by adding factors one by one. Thus, for the second model, they add a seasonal component. Empirical data show that demand for gasoline is highest during the summer months, spikes around Thanksgiving and Christmas, and is lowest in February. The second model incorporates this pattern and explains some of the fluctuation between the prices of gasoline and crude oil. Next, the authors look at “aberrations,” nonseasonal factors such as Hurricanes Katrina and Rita, which “shut

down over a fourth of U.S. refinery capacity and sent gasoline prices skyrocketing” in 2005. They find that these nonseasonal aberrations have a measurable effect on gasoline prices. Because crude oil prices can vary by region in the short run, the last model incorporates this factor and finds that it too has some effect on the price of gasoline in the United States.

Wage structure over the long run

Since 1980, the wage structure in America has widened markedly. The upper end of the distribution has experienced rapid wage growth relative to the middle and lower parts. This has been in contrast to trends seen during most of the 20th century. Between 1915 and 1950, the wage structure narrowed substantially. Then in the 1950s and 1960s, there was a period of relative stability.

Claudia Goldin and Lawrence F. Katz of Harvard University examine these changing trends and the factors underlying them in, “Long-Run Changes in the U.S. Wage Structure: Narrowing, Widening, Polarizing” (NBER Working Paper 13568). They find that most of the increase in wage inequality that has occurred since 1980 can be explained by rising educational wage differentials. Some researchers have attributed the rise in educational wage differentials of recent years to skill-biased technological change. But Goldin and Katz observe that skill-biased technological change is not something new; as they state, “it has driven rapid secular growth in the relative demand for

more-educated workers for at least a century.” During part of that time, the supply of skills grew more quickly than the demand for them, mainly due to rising educational attainment. In recent decades, though, the supply of skills has grown more slowly. The high school graduation rate has been stagnant and the percentage of young adults graduating from four-year colleges has only increased modestly among those born after 1950.

Goldin and Katz also note that computerization, which is form of skill-biased technological change, has affected the relative demand for skill in a different manner than other such technological changes. They write: “Computers strongly complement the non-routine or abstract tasks of high-wage jobs, but they directly substitute for the routine tasks found in many traditional middle-wage jobs.” The non-routine manual tasks associated with many low-wage service jobs have not been impacted much by computers. The changes in skill demand due to computerization have contributed to the “polarization” of the wage structure since the late 1980s—employment has shifted into high- and low-wage jobs at the expense of middle-wage jobs. □

We are interested in your feedback on this column. Please let us know what you have found most interesting and what essential readings we may have missed. Write to: Executive Editor, *Monthly Labor Review*, Bureau of Labor Statistics, Washington, DC 20212, or e-mail, mlr@bls.gov