FRBSF ECONOMIC LETTER

Number 2008-27, September 5, 2008

Summer Reading: New Research in Applied Microeconomics

Conference Summary

This Economic Letter *summarizes several papers presented at the Federal Reserve Bank of San Francisco's Applied Microeconomics Summer Conference, held June 25–27, 2008. The papers are listed at the end and are available at http://www.frbsf.org/economics/conferences/0806/index.html*

This year's conference included papers on a number of topics, including analyses of the impacts of government programs and insights into the behavior of businesses. All the papers shared a common approach of applying detailed, microeconomic data to understand behavior and to distinguish causation from correlation.

Assessing the impacts of public policy

One of the primary focuses of applied microeconomic research is analyzing the effects of government programs, sometimes called program evaluation. This year's conference contained several papers of this type; one examined the effects of changes in public assistance programs on labor market outcomes, another examined consumer responses to how taxes are posted, and a third explored the impact of the Food Stamp Program on health outcomes.

Very few microeconomists conduct independent randomized trials to analyze behavioral responses. However, microeconomists frequently use randomized trials conducted by states or the federal government for program evaluation. Bitler, Gelbach, and Hoynes used data from one of these experiments, Connecticut's Jobs First program, to learn more about the potential impact of welfare reform.

During the early to mid-1990s, before passage of the national welfare reforms of 1996, about half of the states in the U.S. were granted a waiver to experiment with alternatives to the longstanding national program, Aid to Families with Dependent Children, provided that those alternatives underwent careful evaluations. To facilitate those evaluations, some states set up experiments where program participants (in this case, women on welfare) were randomly chosen either to stay with the traditional welfare program or to participate in the new, alternative program. The alternative program could then be evaluated by following participants in both programs over time and examining differences in average outcomes across the two groups. Connecticut's Jobs First program was so designed, producing excellent data for studying incentives, behavior, and outcomes. This program shared many elements with the national welfare reforms passed in 1996, such as time limits (how long an individual could ever receive assistance) and work requirements. In previous research, the authors found that, on average, the participants in Jobs First were more likely to be employed and to have higher earnings than their counterparts in the traditional welfare program several years after the experiment began. An important aspect of their more recent research is that they also dig deeper into the data to examine differences in outcomes; that is, although it may be true that Jobs First participants enjoyed higher earnings *on average* relative to participants in the traditional welfare program, it does not follow that everyone in Jobs First fared better than everyone in the traditional program. In fact, the authors found that even within narrowly defined subgroups (distinguished by, for example, race, marital status, or number of children), not all Jobs First participants fared well in the labor market. An important lesson from these results is that comparing the average outcome, even across subgroups, may not tell us very much about the distribution of outcomes across all participants and that estimators like those used in their paper may be more appropriate for interpreting the data.

Chetty, Looney, and Kroft used several data sets to examine differences in consumer responses depen-

ding on whether sales taxes are clearly marked on products or whether they are not clearly marked but are assessed at checkout. The first data set comes from an experiment where a supermarket posted the total price of a good (that is, a price that also explicitly incorporates sales tax) for a subset of items for three weeks. Perhaps surprisingly, the authors found that the demand for items where the total price was displayed dropped by about 8% compared to regularly marked goods.

The authors also examined changes in demand when there is a change in the tax on a product and the tax is embedded in its price. In the case studied, the tax is an excise tax, and the product is beer. The authors found that the demand for beer dropped in response to increases in excise taxes, and the drops in demand are of similar magnitude to the drops in demand for the goods in the supermarket example. While these results provide evidence that consumers behave differently depending on whether taxes on goods are part of the posted price or charged at the register, the explanation for that behavior is less clear. One explanation may involve inattention and imperfect optimization; that is, when shopping, consumers are flooded with information about products and prices, and therefore they do not consciously compute the prices that would include sales tax. Regardless of the reason, these results suggest that the way policymakers tax goods can have notable effects on the consumption of those goods.

Almond, Hoynes, and Schanzenbach examined the effectiveness of the Food Stamp Program (FSP), one of the mainstays of the 1960s War on Poverty. This program was intended to boost nutrition to low-income families; however, the authors considered whether it also may have had other potentially beneficial effects, and therefore analyzed the relationship between the rollout of the FSP in the 1960s and early 1970s and newborn outcomes, particularly birth weight. The FSP may be related to birth weights because birth weights are related to maternal nutrition; if the FSP increases maternal nutrition, then the fraction of newborns with low birth weight could be reduced. To explore this issue, the authors examined changes in birth weights across counties and how those changes are related to the introduction of FSP in those counties. They found that the introduction of the FSP was associated with a reduction in babies with very low birth weights, especially for babies of unmarried mothers and nonwhite mothers.

Causation or correlation?

A theme of papers presented at the conference was an attempt to distinguish between correlation and causation. A good example of this is in the health and education literature, where it is well documented that education and health tend to be positively correlated; that is, the more education an individual has, the more likely that individual will be healthier later in life. If higher education "causes" better health outcomes, then there could be room for health policies that promote education. One way to test whether education "causes" better health is to look for instances when education suddenly increased and then examine the differences in health between those with higher education compared to those with lower education. One such instance was in 1947, when the United Kingdom increased the minimum age for leaving school from 14 to 15. Using this change in policy, Clark and Royer compared health outcomes of individuals who were the last to face the 14-year age limit to individuals who were the first to face the 15-year age limit. The logic behind this exercise is that these two groups of individuals should be very similar, with the only primary difference being education. Clark and Royer foud that the change in the education law did result in increased education and in increased subsequent earnings. However, the authors found that those first to face the 15-year age limit had only slightly better long-run health outcomes than their younger, less educated counterparts. Therefore the strong correlation between health and education seems likely driven by other mechanisms.

Microeconomic analysis of firms' behavior

In the papers discussed above, much of the data used focused on individuals. However, applied microeconomic researchers also focus on the behavior of businesses, and the conference contained two such papers.

The first paper, by Kremer, Lee, and Robinson, estimated the marginal rate of return on inventories in order to ask how much profit would change if inventories were increased slightly. Estimating the marginal rates of return on inventories is very difficult, mainly because of the unavailability of adequate data. To overcome this data hurdle, the authors developed a data set on the sale of phone cards from a sample of retail shops in western Kenya. The shops were asked periodically how many cards they had sold and if they had sold out; if the shops had sold out, then that implies

that potential customers were turned away, resulting in lost profit. Using these data, the authors estimated that many of the shops did frequently sell out of phone cards. Why this happened is puzzling and would be a fruitful subject of future research. Although it is difficult to know the reasons behind these results, this research certainly raises many questions about small business practices in developing countries.

Not surprisingly, applied microeconomists also use business data from more advanced economies. One area of active research has been on the role of increased trade on economies, especially trade between less developed and more developed countries. To gain better insights into how an advanced economy responds to increased trade with China, Bloom, Draca, and Van Reenen examined the history of 30,000 manufacturing establishments spanning 14 European countries. The authors examined whether or not these establishments survived, and, if they did survive, how they changed in response to increased trade competition from China. The authors found that establishments in sectors that were subject to increased import competition from China were more likely to close than establishments in other sectors. Additionally, those establishments that closed were not as technologically intensive as those that remained open. Further, those establishments that did remain open tended to increase their technology intensity. With these facts in hand, the authors concluded that increased trade with China is responsible for only a small portion of the overall increase in technology intensity, implying that other forces may be more important in the increase in overall technology intensity.

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Conference papers

Almond, Douglas, Hillary Hoynes, and Diane Schanzenbach. "Food Stamps and Infant Health."

Bitler, Marianne, Jonah Gelbach, and Hillary Hoynes. "Can Subgroup-Specific Mean Treatment Effects Explain Heterogeneity in Welfare Reform Effects? Evidence from Connecticut's Jobs First Experiment."

Bloom, Nicholas, Mirko Draca, and John Van Reenen. "Trade Induced Technical Change? The Impact of Chinese Imports on Technology and Employment."

Chetty, Raj, Adam Looney, and Kory Kroft. "Salience and Taxation: Theory and Evidence."

Clark, Damon and Heather Royer. "The Effect of Education on Adult Mortality and Health: Evidence from the United Kingdom."

Kremer, Michael, Jean Lee, and Jonathan Robinson. "The Return to Capital for Small Retailers in Kenya: Evidence from Inventories."

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