Editors' Summary

THE BROOKINGS PANEL ON ECONOMIC ACTIVITY held its ninetieth conference in Washington, D.C., on September 16 and 17, 2010, just as the economy was struggling to recover from the Great Recession. The *Brookings Papers* has always strived to provide timely policy analysis, and five of the papers in this volume study aspects of the causes and consequences of this slump. These papers examine the effects of the business cycle on the incomes of the very richest Americans; welfare, welfare reform, and poverty during recessions; the failure of modern macroeconomic models to adequately forecast economic conditions; the role of shadow banking in the financial crisis and the appropriate regulatory response; and expenditures by state and local governments over the business cycle. The remaining paper studies the impact of the No Child Left Behind Act, a far-reaching education reform that will shape the skills of the labor force for years to come.

IN THE FIRST PAPER, Jonathan A. Parker and Annette Vissing-Jorgensen study the cyclicality of income at the very top of the income distribution. The conventional wisdom has been that the brunt of recessions falls on less educated, lower-income workers. Parker and Vissing-Jorgensen show, however, that households in the top 1 percent of the income distribution see their income rise steeply in booms and fall sharply in busts, much more so than the average household. This pattern is robust: it appears regardless of the occupation of the high-earning households and is not driven by the timing of exercising stock options. It is not even confined to the United States: the authors present evidence of similar patterns in Canada. Importantly, they find that consumption as well as income moves with the business cycle among those at the top.

These results do not mean that the conventional wisdom was entirely wrong, however. It remains true that less educated households also suffer disproportionately during recessions, largely because of increased unemployment. The impact of recessions on income is therefore U-shaped across the income distribution: many low-income households are adversely affected, the middle of the distribution is less affected, and the very top of the distribution is hit hard.

Parker and Vissing-Jorgensen's new results are driven in part by their examination of post-1982 data. In earlier years, when top incomes were not so extraordinarily high, they were also less cyclical. Thus, an increase in the cyclicality of high earners corresponded with an increase in their relative incomes. Parker and Vissing-Jorgensen show that this pattern holds across different income groups, across decades, and even across countries: the more unequal the income distribution, the more cyclical is the income of the rich. The authors conclude by developing a theoretical model linking income cyclicality with income inequality. The model suggests that one source of their findings may be progress in information and communications technology, which has enabled very high ability entrepreneurs to leverage their talents, earning them more in good times but exposing them to plummeting demand in bad times.

IN THE SECOND PAPER, Marianne P. Bitler and Hilary W. Hoynes take the opposite perspective from Parker and Vissing-Jorgensen, exploring the cyclicality of well-being among the poorest. The United States has historically protected its poorest citizens from economic fluctuations through a patchwork system of welfare and social insurance programs: Aid to Families with Dependent Children provided cash assistance to poor families with children, while the food stamp program and Medicaid, among others, provided in-kind benefits. Welfare reform in the 1990s overhauled the cash assistance system (now called Temporary Assistance for Needy Families), and researchers have found that participation in this and some other welfare programs has declined since the reform. An unexplored—but currently pressing—question is whether welfare reform has weakened the social safety net, so that it no longer insures poor Americans against large income swings.

Bitler and Hoynes marshal an impressive array of evidence to attack this question, analyzing decades of data and studying numerous indicators of adult and child well-being. They find some evidence that welfare reform has weakened the safety net: poverty (using the official measure, which excludes noncash transfers) has risen more sharply with the unemployment

rate in the years after reform than it did in the years before. On the other hand, the authors also find that welfare reform has had no impact on the cyclicality of food consumption, food insecurity, health insurance coverage, household crowding, or health. Reconciling these results, Bitler and Hoynes report that participation in noncash safety net programs generally, and especially the food stamp program, has become much more responsive to economic conditions in the years since welfare reform. On the other hand, participation in cash assistance programs has, if anything, become less responsive to the business cycle. Overall, therefore, Bitler and Hoynes find that cash welfare reform weakened the safety net, but that the food stamp program picked up much of the slack.

IN THE THIRD PAPER, Thomas S. Dee and Brian A. Jacob evaluate the signature education legislation of the last several decades, the No Child Left Behind Act of 2001. This policy brought dramatic changes to the education landscape by instituting regular, high-stakes assessments of students in public schools. Proponents of No Child Left Behind hoped that these high-stakes tests would motivate school districts to improve educational outcomes, thereby aligning the interests of schools and teachers with those of voters and parents. Critics, however, worried that high-stakes testing would distort teacher incentives even further, encouraging them to teach to the test, ignore nontested subject matter, inappropriately place low-achieving students in special needs classrooms, and neglect high-achieving students.

In their thorough evaluation, Dee and Jacob find support for both the proponents and the critics. The authors focus on tests that are not part of the high-stakes tests under No Child Left Behind, and thus are unlikely to be substantially distorted by teaching to the test. They find that No Child Left Behind appears to have had a positive impact on math learning, especially at lower grades and for students from traditionally disadvantaged populations. They find no evidence of an adverse impact on math achievement at either the top or the bottom of the ability distribution; indeed, the evidence suggests that No Child Left Behind had a roughly constant impact across the ability distribution. On the other hand, the policy appears not to have improved reading performance.

Several mechanisms contributed to the improvement in math learning. No Child Left Behind induced schools to spend about $600 more per student per year, Dee and Jacob estimate, with much of the extra money coming from state and local rather than federal sources. This money supported additional instruction as well as education support services. The legislation also led to an increase in the share of teachers with master's degrees.

But some of the critics' fears were justified: schools reduced instruction in social studies and science—nontested subjects—and increased instruction in tested subjects, especially reading.

In the fourth paper, Rochelle M. Edge and Refet S. Gürkaynak study the forecasting performance of the dynamic stochastic general equilibrium (DSGE) models currently fashionable among macroeconomists. DSGE models' emphasis on deep structural parameters, such as individuals' preferences, the available technology, and resource constraints, means that—if the models' underlying assumptions about economic behavior are correct—they are immune to the Lucas critique (that is, the possibility that forward-looking behavior can cause previous patterns to break down in response to policy changes or other developments). Yet their success in predicting macroeconomic movements remains largely unexplored.

The authors focus on the forecasts of the most prominent of these DSGE models for the United States over the period 1992–2006. Consistent with previous evaluations, they find that DSGE models yield forecasts that tend to be less biased and more accurate than the professional forecasts, the Federal Reserve's "Greenbook" forecasts, or purely statistical forecasts. But this is a limited success, as Edge and Gürkaynak find that the DSGE forecasts do *relatively* well only because the performance of all of these forecasts is quite poor. Indeed, the absolute performance of even the DSGE forecasts suggests that, for example, the 95 percent confidence interval around that model's forecasts of annual inflation is 4 percentage points wide, and that most of the time its forecast of annual GDP growth cannot rule out anything from a near-recession to a boom. The slight edge that DSGE forecasts have over other forecasts is therefore not particularly noteworthy, since it involves comparing one weak forecast with others.

The authors argue that the poor performance of all forecasting techniques reflects the time period they study. Because they focus on the Great Moderation period, there is little variation in inflation or GDP growth, and therefore little to forecast. A final thought experiment drives this point home. They ask whether a policymaker considering the 1992–2006 period would have done better adopting any of the forecasts they consider, or, assuming that the policymaker knew the actual mean for that period, using that mean as the forecast. It turns out that the simple average predicts better than any of the forecasts, confirming that none of the forecasts is providing much information.

A more telling evaluation of DSGE models' usefulness must therefore await assessments of their performance in less stable environments. As a step in this direction, Edge and Gürkaynak take a preliminary look at the Great Recession. They present suggestive evidence that the DSGE forecasts were remarkably slow to provide any information concerning the fall in output as the recession unfolded, and that they were outperformed by the other available forecasts in this episode.

IN THE FIFTH PAPER, Gary Gorton and Andrew Metrick examine the "shadow" banking system and consider how it should be regulated. The shadow banking system refers to arrangements or institutions that are economically similar to traditional banking but that operate outside traditional banking arrangements—and, crucially, outside traditional regulation.

Gorton and Metrick begin by documenting the magnitude and sources of the rise in shadow banking and its role in the financial crisis. They describe how a combination of regulatory restrictions on traditional banks, implicit government subsidies of shadow banking (notably through free implicit insurance of money market mutual funds), and financial innovation led to an explosion of shadow banking over the past three decades. They emphasize that one key force behind the growth of shadow banking is special bankruptcy provisions for repurchase agreements ("repos"), which give financial institutions access to a highly liquid source of short-term funding. They also describe how the conjunction of short-term liquid liabilities and long-term illiquid assets left shadow banking vulnerable to panics similar to traditional bank runs, and how such panics were critical in the financial crisis that erupted in the fall of 2008.

The authors then offer both some general principles for regulating shadow banking and a specific proposal to implement those principles. They point out that the critical role of the special bankruptcy provisions for repos gives regulators a powerful lever: by restricting the circumstances under which the bankruptcy safe harbor applies, regulators can shape the system. They argue that much of shadow banking involves sensible arrangements for handling large financial transactions, and thus that regulators should not try to use their powers to force a return to the traditional system. Instead, drawing on lessons from history, they argue that regulation should involve explicit insurance of money market mutual funds that guarantee stable asset values, and stronger collateral requirements for repos and securitization. The specific set of proposals they put forth involve creating new classes of narrow financial institutions for money market mutual funds and for the holding of securitized assets.

In the final paper, James R. Hines, Jr. studies expenditure by state and local government over the business cycle. As Hines observes, more than 40 percent of total government expenditure comes from state and local rather than federal government. Since fiscal policy is a key tool for managing aggregate demand, how states and local governments respond to recessions is a key component of the fiscal policy response to the business cycle.

Whereas federal expenditure is clearly countercyclical, rising during recessions and falling (relative to GDP) during booms, Hines shows that aggregate state and local government expenditure hardly responds when GDP falls below its potential. Unlike the federal government, most states have balanced budget requirements that limit their ability to borrow during recessions. Countercyclical state fiscal policy therefore requires strong discipline; states need to save during the good times so they can spend in the bad.

Hines suggests, however, that poor governance in some states contributes to making their expenditure actually procyclical. States that rank higher in corruption, a proxy for more general incompetence, tend to have especially procyclical expenditure. Corroborating this story, Hines finds further evidence that states in general lack strong discipline in the fact that they have a high propensity (perhaps 80 percent) to spend out of federal grants. Whereas a rational state government would save the federal money, states apparently cannot help but spend the cash they have on hand. But this policy vice suggests a policy remedy: federal grants to state governments may be an effective way to stimulate aggregate demand during recessions.