The MBER Digest

NATIONAL BUREAU OF ECONOMIC RESEARCH

June 2007

IN THIS ISSUE

- TV Appearance and Electoral Success
- The Impact of Terrorism on the Office Real Estate Market
- Teacher Incentives and Student Performance
- Drug Co-Payments Increase Hospital Outpatient Spending
- Welfare Recipients Respond to Complex Incentives
- Has Globalization Changed Inflation?

TV Appearance and Electoral Success

Forget the campaigns. Disregard the position papers and attack ads. One of the best ways to tell who's going to win an election is to see the candidates on TV, watching them for 10 seconds and keeping the sound off. That's how more than 260 Harvard undergraduates, watching gubernatorial candidates in 58 races, compiled a rather impressive record of forecasting elections. They picked the winner an average 58 percent of the time, according to Thin-Slice Forecasts of Gubernatorial Elections (NBER Working Paper No. 12660). The students were more accurate than any economic measure that the paper's co-authors, Daniel Benjamin and Jesse Shapiro, tested. They were far more accurate than the Harvard students who actually heard what the candidates had to say.

If this gut-level, insta-pick method seems disturbing, take heart. At least Americans aren't alone in skin-deep politics. A study of the 1996 presidential race in Romania found that people could predict the outcome of the first round of voting based merely on photographs and video clips of the candidates. A study last year of Finnish elections found that ratings of candidates' physical attractiveness predicted their success better than ratings of their competence.

Following these foreign and other similar U.S.-based studies, the NBER paper offers several new insights. It quantifies how much of a role per-

sonal appeal plays in relation to other economic and political factors. It tries to single out the quality behind such appeal. It suggests, strikingly, that the less one hears a candidate, the better one can assess his or her chances of winning. That last finding "may help to The results were consistent. Students who saw silent videos picked the right candidate 58 percent of the time, whereas those viewers who heard full sound or muddled sound were only right 52 and 48 percent of the time, respectively, no better than the results

"Students who saw silent videos picked the right candidate 58 percent of the time, whereas those viewers who heard full sound or muddled sound were only right 52 and 48 percent of the time, respectively, no better than the results of random guessing."

explain why expert forecasters, who are highly informed about and attentive to policy matters, are often found to perform no better than chance in predicting elections," the authors write.

The thrust of the NBER research was to ensure that the subjects knew as little as possible about the candidates they were seeing. None of the 264 students in the study were shown videos of candidates from his or her home state. Since virtually all of the students were from Harvard, all Massachusetts races were eliminated as well. The authors dropped responses from any student who recognized a particular candidate.

To minimize any bias from lighting or staging, the researchers used 10-second videos of opposing candidates from the same televised debate. Sometimes these clips included full sound; sometimes the sound was purposely muddled (so students could make out the candidates' tone but not their words). Most of the videos were silent.

of random guessing. Moreover, the predictions from the no-sound videos closely mirrored the results of the actual elections. So, the larger the majority of students that a candidate "won," the larger the share of voters he or she was likely to have won at the ballot box.

Their forecasts were far more accurate than elections based on various economic measures of voter well-being, such as per capita income, unemployment, or state fiscal health. Even when such state and local data was significantly better or worse than national trends, the predictive power of economics was limited.

But if it's not "the economy, stupid"—if, indeed, Bill Clinton was wrong about the key to a winning campaign message—then what winning quality were the Harvard students detecting when they picked winning candidates?

The authors looked at the influence of candidates' race, gender, and

height to see if students were swayed by these factors. Gender and race weren't a factor, since students were just as accurate predicting races involving two white males as they were in the races overall. Height played a small role but was statistically insignificant. So were qualities such as likeability and physically attractiveness. Candidates the students judged to be good leaders had a slightly better chance of winning than those not rated as good leaders, but the correlation was marginal. Finally, the researchers looked into whether a candidate's confidence influenced students. But in the 22 races that were considered close, where presumably the two candidates were equally confident (and where there were more than 30 student raters, constituting a large sample), the students' accuracy in picking winners was roughly on par with the overall sample.

Thus, the research suggests that some factor beyond the students' own preferences or the vagaries of a particular race—the authors call it candidate charisma or personal appeal—is communicable, even during a 10-second silent video clip.

Two political factors turned out to be more accurate than the students' picks. One is incumbency, which accounted for about 23 percent of the voting outcome compared with about 20 percent for the student predictions.

Campaign spending was even more accurate, accounting for about 33 percent of the outcome.

These findings come with their own chicken-and-egg complexity. If good fundraising causes election success, then candidates' charisma plays a smaller though still significant role in predicting their success. But if good fund-raising is caused by other factors, as other researchers have found, then charisma may play a larger role than this research suggests. The same dilemma conundrum applies to incumbency. The best that can be said is that charisma and ballot box success are related in ways that economic factors cannot come close to matching.

— Laurent Belsie

The Impact of Terrorism on the Office Real Estate Market

♣ he 9/11 attacks drastically increased the perceived risk of largescale terrorist attacks in Central Business Districts and placed particularly large pressures on major financial centers, like New York, London, and Chicago. From the point of view of an economist, the increased threat of large-scale terrorist attacks in Central Business Districts has profound potential implications, given the crucial role of Central Business Districts in economic activity. In Is Terrorism Eroding Agglomeration Economies in Central Business Districts? Lessons from the Office Real Estate Market in Downtown Chicago (NBER Working Paper No. 12678), economist Alberto Abadie and real estate analyst Sofia Dermisi investigate the economic impact of an increase in the perception of terrorist risk induced by the 9/11 attacks on the office real estate market, using data from downtown Chicago.

The Central Business District of Chicago, the authors explain, "provides the perfect laboratory to investigate the effects of an increase in the perceived risk of terrorism on a major financial

center." The attacks of 9/11 reduced drastically the available office space in New York's financial district. Unlike New York City, the city of "Chicago was not directly affected by the destruction of the 9/11 attacks. However, the 9/11 attacks induced a large increase

Hancock Center) and other nearby office buildings within a 'shadow' area of 0.3-mile around each landmark building to the evolution of vacancy rates of office buildings located outside the shadow areas of the three landmark buildings." The authors select the

"After 9/11 office properties in the three main Chicago landmark buildings and the surrounding areas experienced more severe increases in vacancy rates than office properties not located in the vicinities of landmark buildings."

in the perception of terrorist risk in the Chicago Central Business District, which includes the tallest building in the U.S. (Sears Tower) and other landmark buildings." Therefore, the case of Chicago allows the authors to separate the impact of an increased perception of terrorism threat in Central Business Districts after 9/11 from the direct impact of the destruction caused by terrorist attacks on available office space.

To investigate the effect of an increase in the perception of terrorist risk in Chicago after 9/11, Abadie and Dermisi compare "the evolution of vacancy rates at the three main landmark buildings of Chicago (the Sears Tower, the Aon Center, and the

Sears Tower, the Aon Center, and the Hancock Center as "anchor" buildings because their landmark stature makes them preferred targets of terrorism. The authors' choice of a 0.3-mile radius for the shadow areas is motivated by the spread of the massive debris fields created by the collapse of the World Trade Center on 9/11. The study employs quarterly data on vacancy rates and other building characteristics for a sample of high-end office buildings in the downtown Chicago area during the period 1996–2006.

The results of the article show that before 9/11 vacancy rates in the three main Chicago landmark buildings and the surrounding areas had evolved simi-

larly to vacancy rates for buildings not located in the vicinities of the three main Chicago landmark buildings. The data show also that in the wake of the 9/11 attacks office vacancy rates increased in downtown Chicago. Most importantly, office properties in the three main Chicago landmark buildings and the surrounding areas experienced more severe increases in vacancy rates than office properties not located in the vicinities of landmark buildings.

Then, Abadie and Dermisi repeat the analysis using alternative measures of the susceptibility of each particular office building to terrorism attacks, finding identical results: in the post-9/11 era vacancy rates increased more for buildings with a high perceived vulnerability to large-scale terrorist attacks than for buildings that are not perceived as preferred targets for terrorist attacks. Moreover, Abadie and Dermisi argue that the larger increases in vacancy rates in the shadow areas of trophy buildings after 9/11 cannot be explained by an increase in the supply of office space there. In fact, after 9/11 the increase in total rentable office area in the vicinities of trophy buildings was smaller than away from those buildings.

Given those facts, Abadie and Dermisi interpret the results of their investigation as evidence that "the 9/11 attacks created centrifugal forces that influenced the location decision of

high-end office tenants in downtown Chicago." Abadie and Dermisi call their conclusion "particularly unsettling," given the critical role that most analysts assign to cities as engines of economic growth. On the other hand, the authors explain that their analysis focuses on a period during which the perceived threat of terrorism in Central Business Districts was particularly elevated. They conjecture that "if the perception of terrorist risk in cities were to return to the pre-9/11 levels, the long-run growth of cities would not be affected by the 9/11 attacks."

— Matt Nesvisky

Teacher Incentives and Student Performance

espite the growing interest in merit pay for teachers in American schools, the first U.S. evidence of a positive correlation between student test scores and financial incentive systems that reward individual teachers appears in Individual Teacher **Incentives and Student Performance** (NBER Working Paper No. 12627) by David Figlio and Lawrence Kenny. Up until now, the large school-survey datasets that underlie so much research in education typically have provided little or no information about teacher incentive pay. To overcome this problem, Figlio and Kenny conducted their own survey of school personnel practices in 2000. They surveyed schools represented in the National Education Longitudinal Survey (NELS); they also matched the NELS to the less detailed information on the use of merit pay in the 1993 Schools and Staffing Survey (SASS). Their final dataset contained information on 4,515 students from 502 schools.

Student achievement was measured as the sum of scores on the four twelfth-grade tests in reading, mathematics, science, and history. Eighthgrade test scores were used to control

for unmeasured ability. The number of mathematics courses taken in high school and the number of days absent were used as proxies for motivation. Other control variables included famrienced teachers in the last three academic years.

The authors find that the Catholic schools were "more than twice as likely" as the public schools to dismiss

"Teacher salary incentives are associated with higher levels of student performance."

ily and school characteristics, including whether a student's school was unionized. Schools were classified as Catholic, non-Catholic private, or public.

To account for the possibility that merit pay systems that automatically reward large fractions of teachers probably do not improve performance, the authors constructed three measures of "merit pay exclusivity." The top fifth of merit pay systems had at least a 20 percent salary range and limited merit pay to no more than 5 percent of teachers. Among the bonus systems, bonuses were limited to no more than 7 percent of teachers. As it turned out, the non-unionized schools were more than twice as likely to offer teacher incentive programs. The schools in the sample also were classified by whether they either fired or encouraged the resignation of at least one or more expenovice teachers and were more than three times as likely to fire experienced teachers. Otherwise, they were indistinguishable from the public schools. The non-Catholic private schools were different from the public schools in nearly "every measured dimension of teacher incentives."

Figlio and Kenny find that teacher salary incentives are associated with higher levels of student performance. They cannot be certain whether the test score improvement is driven by teacher incentives or whether the incentives are proxy variables for unobserved school quality. In general, they find, teacher salary incentives are associated with a 1.3 to 2.1 point rise in test scores, about the same increase associated with increasing maternal education by three years. The correlation exists in schools with predominantly low- and middle-income students.

Incentive programs that awarded bonuses to very large fractions of teachers were not correlated with higher student achievement. The authors point out that principals rated four out of five teachers as "good" or "excellent" in the 1993–4 SASS, and that even higher fractions of Florida teachers were worthy of state-funded merit pay in 2000. They caution readers that the benefits of merit pay will likely prove illusory as long as most teachers receive it.

— Linda Gorman

Drug Co-Payments Increase Hospital Outpatient Spending

In the past 15 years, national spending on prescription drugs has grown dramatically, far outpacing the growth rate of spending on hospitals and physicians. In response to these rapid spending increases, many health insurance plans have reduced the generosity of their prescription drug benefits. Consequently, patients have been paying substantially more out of their own pockets for prescription drugs. Ostensibly, the benefit designers are seeking to reduce drug spending by increasing the prices, or co-payment, faced by consumers.

In Is Drug Coverage a Free Lunch? Cross-Price Elasticities and the Design of Prescription Drug Benefits (NBER Working Paper No. 12758), authors Martin Gaynor, Jian Li, and William Vogt use a large dataset of health insurance claims, together with information on benefit design, to identify the effects of changes in workers' employer-provided prescription drug benefits on drug spending, outpatient spending, and inpatient spending. Their study differs from previous work because they allow for dynamic adjustment by consumers; they explicitly control for selection; they use a large, nationally representative dataset; and, they address substitution between drugs and other types of health care.

There are two central findings of the research: first, there is substantial cal cost sharing than at the time of the change.

In total, the authors find that the expenditure savings on prescription drugs are substantially offset

"Higher drug co-payments save money on drug spending, but cost money on outpatient spending and have much smaller effects on overall spending."

substitution between use of prescription drugs and use of outpatient care. Increases in out-of-pocket drug prices lead to decreases in the demand for drugs but to sizeable increases in both demand and spending on outpatient care. The authors do not find detectable changes in inpatient spending as a result of increases in drug co-payments, however. Second, the researchers find strong evidence of dynamic adjustments on the part of consumers: the effects of one year after an increased co-payment are substantially larger than the contemporaneous effects.

Further, consumers substitute outpatient care for drugs in response to rising drug prices. These effects, too, have a significant dynamic component: there is substantially more substitution to outpatient care one year after an increase in pharmaceuti-

by increases in outpatient spending. A \$1 increase in drug price reduces drug spending by \$23.62 in the first year, and \$32.57 by the second year. However, total medical spending decreases by far less than that amount: \$20.88 in the first year and \$21.23 by the second. Thus, in the long run, total spending falls by about 65 percent as much as drug spending; that is, 35 percent of the savings achieved by reductions in drug spending are offset by consequent increases in other medical spending. Therefore, higher drug co-payments save money on drug spending, but cost money on outpatient spending and have much smaller effects on overall spending. These findings suggest that high consumer costsharing might not be as effective a mechanism for controlling spending as has previously been thought.

— Les Picker

Welfare Recipients Respond to Complex Incentives

During the 1990s, the Canadian government funded a large-scale social experiment to evaluate the feasibility of a high-powered earnings subsidy for those leaving the welfare system. The program, known as the Self Sufficiency

Project (SSP), was targeted to single parents who had been on public assistance for at least a year.

One concern with a benefit like SSP is that it encourages people who would otherwise leave welfare quickly to prolong their stay, offsetting the intended goal of the program. To measure this effect, an innovative experiment was conducted on new welfare applicants as part of the SSP evaluation. This "treatment group" was told

that they would become eligible for SSP if they remained on public assistance for a year; a randomized control group instead entered the regular welfare program. The results from this experiment provide the first experimental evidence on the magnitude of the "entry effects" attributable to program benefits offered to welfare recipients.

In addition to the one-year waiting period for potential eligibility, the SSP subsidy offer had a second important time limit: individuals who were still on welfare after a year had only 12 months to find a full-time job and leave welfare. Those who did so became entitled to receive subsidy payments in any month they were working full-time and were off welfare during the next three years. Those who did not lost all future eligibility for SSP and returned to the regular welfare system. Data for the treatment and control groups of the Applicant Experiment were collected for seven years after random assignment, providing information on the short-term and longer-run impacts of the program on welfare participation and labor market outcomes.

In The Dynamic Effects of an Earnings Subsidy for Long-Term Welfare Recipients: Evidence from the SSP Applicant Experiment (NBER Working Paper No. 12774), authors David Card and Dean Hyslop find that the offer of SSP raised welfare participation by 2 to 3 percentage points at the end of the waiting period. In subsequent months, however, the welfare participation rate of the SSP group fell below that of the control group, with a peak impact of about minus 11 percent-

age points in the period from 24–30 months after initial entry. This impressive gap faded over time, though, and by 84 months out the welfare participation rates of the treatment and control groups were nearly equal.

to the "establishment" incentive, with about two-thirds of the peak impact attributable to this incentive.

The authors' results helped reconcile the relatively large peak impact observed in the SSP Applicant exper-

"The impact of the earnings subsidy persisted after the SSP payments ended. Sixty to ninety percent of the entitlement incentive effects persisted immediately post-entitlement, but faded relatively quickly, at a decay rate of about 3 percent per month."

The authors show that this experiment created three incentives: 1) an eligibility incentive - for new welfare entrants to remain on welfare for a year in order to become eligible for the subsidy; 2) an establishment incentive — to find a job and leave welfare within the next 12 months for those people who became eligible for the subsidy; and 3) an entitlement incentive—to work full time and remain off welfare over the 36 months that subsidy payments were available for those who established SSP eligibility. The authors report that experimental comparisons between the treatment and control groups could not separately distinguish these effects.

Their results further show that the time profile of the experimental impacts in the SSP Applicant study can be explained by a combination of an eligibility incentive (which increased welfare participation during the waiting period), an establishment incentive (which led to a rapid rate of welfare-leaving among members of the program group who satisfied the waiting period requirement), and longer-term entitlement incentives of the program. In particular, most of the impact of SSP soon after the waiting period was attributable

iment as compared to other welfare reform programs with universal eligibility. They also offer a simple interpretation for the decline from the 11-percentage point peak effect 27 months after initial entry into the program to about 6 percent by months 40–48. The authors also find that the impact of the earnings subsidy persisted after the SSP payments ended. Their results suggest that 60–90 percent of the entitlement incentive effects persisted immediately post-entitlement, but faded relatively quickly, at a decay rate of about 3 percent per month.

Finally, the authors conclude that nearly all of the people in the treatment group who delayed their initial exit from the program in response to the incentives left within two to three months of the end of the waiting period, and became entitled for the SSP subsidy. Although these delayed exiters were apparently responding to the incentives created by the SSP time limits, leading to an increase in the costs of the program, the authors' simulations suggest that the presence of the delayed exiters has a very small effect on the magnitude of the SSP impacts in later months.

— Les Picker

Has Globalization Changed Inflation?

Many observers have suggested that the behavior of U.S. inflation has been changed by the "globalization" of the economy. In 2005, for example, *The Economist* declared that recent experience "makes a mockery of traditional"

economic models of inflation, which ignore globalization." According to such commentators, globalization has helped to reduce inflation in the recent past and will help it to remain low in the future.

In Has Globalization Changed Inflation? (NBER Working Paper No. 12687), NBER Research Associate Laurence Ball questions this view. He reviews theory and evidence on the behavior of U.S. inflation, and con-

cludes that globalization has had little effect on the rate of inflation in the United States.

Ball first questions the extent of globalization. Commentators suggest that inflation has been influenced by increasing trade between the United States and other countries. While trade has increased, however, this has occurred slowly over many decades. The last quarter century, when U.S. inflation has been tamed, is not noteworthy for particularly rapid increases in trade.

Ball then turns to arguments about why increased trade might influence inflation, and finds them flawed. One argument, suggested by Kenneth Rogoff of Harvard, is based on the idea that globalization has changed the Phillips curve, the short-run tradeoff between output and inflation. In this story, the tradeoff has become less favorable, with a given increase in output causing a larger rise in inflation. In theoretical models of inflation, such a change reduces the incentive for the Federal Reserve to pursue expansionary policies, leading to lower inflation.

This argument is questionable on theoretical grounds, but the biggest problem is empirical. The literature on the Phillips curve suggests that this relation has changed, but in the wrong direction. A given change in output has a smaller effect on inflation today than it did in the 1970s or early 1980s. Therefore, if the slope of the Phillips curve (the output-inflation tradeoff) were a key determinant of inflation, we should have seen rising inflation in recent decades.

withstand careful scrutiny.

Finally, Ball examines the role of falling prices for imported goods. Many policymakers and journalists cite increases in imports of low-cost goods from countries such as China and India. To many observers, it seems obvious that lower prices for imports contribute

"Globalization has had little effect on the rate of inflation in the United States."

Ball then examines another claim about the effects of globalization, which also relates to the output-inflation tradeoff. This claim is that globalization has weakened the link between U.S. inflation and the level of output in the U.S. economy, with economic booms causing less upward pressure on inflation. According to this view, what matters for inflation is output in the entire global economy.

Once again, Ball raises questions about the alleged effects of globalization. Empirically, there continues to be a close association between the level of U.S. output and changes in U.S. inflation, with at most a secondary role for output in other countries. A well-known study from the Bank for International Settlements has reported large effects of foreign output, but the statistical claims in that study do not

to lower inflation, since inflation is an average of the economy's price changes.

However, this idea rests on a confusion between relative prices and the aggregate price level. As Milton Friedman pointed out long ago, changes in the price level—that is, the inflation rate—depend on monetary factors. Trade with China and India reduces the relative prices of certain goods, which increases U.S. living standards, but there is no obvious effect on inflation.

There appear to be some historical episodes, such as the oil-price increases of the 1970s, when changes in relative prices did affect inflation. However, these involved large, sudden shocks to the economy. The steady rise in foreign trade has caused downward trends in some relative prices, but such smooth changes are unlikely to significantly affect inflation.

MBBR

The National Bureau of Economic Research is a private nonprofit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:

Martin Feldstein — President and CEO
Susan Colligan — Vice President for Administration and Budget
Elizabeth E. Pailan. Chairman

Elizabeth E. Bailey — Chairman John S. Clarkeson — Vice Chairman

Contributions to the National Bureau are tax deductible. Inquiries concerning the contributions may be addressed to Martin Feldstein, President, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.

The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau's program of research. Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and sug-

gestions for revision. The **Digest** is issued for similar informational purposes and to stimulate discussion of Working Papers before their final publication. Neither the Working Papers nor the **Digest** has been reviewed by the Board of Directors of the NBER.

The **Digest** is not copyrighted and may be reproduced freely with appropriate attribution of source. Please provide the NBER's Public Information Department with copies of anything reproduced.

Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates. For all others, there is a charge of \$5.00 per downloaded paper or \$10.00 per hard copy paper. Outside of the United States, add \$10.00 per order for postage and handling. Advance payment is required on all orders. To order, call the Publications Department at (617) 868-3900 or visit www.nber.org/papers. Please have the Working Paper Number(s) ready.

Subscriptions to the full NBER Working Paper series include all 700 or more papers published each year. Subscriptions are free to Corporate Associates. For others within the United States, the standard rate for a full subscription is \$3200; for academic libraries and faculty members, \$2300. Higher rates apply for foreign orders. The on-line standard rate for a full subscription is \$1750 and the on-line academic rate is \$725.

Partial Working Paper subscriptions, delineated by program, are also available. For further information, see our Web site, or please write: National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.

Requests for **Digest** subscriptions, changes of address, and cancellations should be sent to **Digest**, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. Please include the current mailing label.