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## No Child Left Behind Rules Raise Student Performance

In the summer of 2004, the Charlotte-Mecklenburg School District (CMS) in North Carolina determined that ten elementary schools and six middle schools had failed to make adequate yearly progress (AYP) for two consecutive years, and would face the first phase of sanctions under the federal No Child Left Behind Act (NCLB). By law, parents of children in those schools had to be allowed the opportunity to send their children to different schools.

CMS had recently introduced district-wide school choice. Each spring, since 2002, parents selected the schools they would like their children to attend in the fall. While the district provided many resources to help parents with the school choice process, including a family application center and a school choice application guide, objective information on academic achievement was not readily available. The application guide was 100 pages long, and contained descriptions of schools often written by the schools themselves and emphasizing the positive aspects of each school. The staff at the family application center encouraged parents to talk with their children and interview individual schools to identify which school would be the best for their specific child, since different schools are best for different children. However, obtaining objective

statistics on test scores, suspension rates, or racial compositions would require a lengthy school-by-school online search and comparison.

The NCLB Act requires that the districts provide parents in NCLB

choices in response to the new information about academic performance, and whether allowing them to make a more informed choice led to academic gains. The authors were given access to the district's administra-

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sanctioned schools with concrete information on the academic achievement at each of their school choice options. Hence, in the summer of 2004, the district notified parents of children in sanctioned schools that their school had failed to make AYP, and that they had the right under NCLB to choose to send their children to another school. They also sent parents simplified, objective, information about academic achievement at their children's school, and at every other school in the district. Parents then could apply to the school of their choice, although admission to schools then was determined by a lottery process.

In **No Child Left Behind: Estimating the Impact on Choices and Student Outcomes** (NBER Working Paper No. 13009), **Justine Hastings** and **Jeffrey Weinstein** use this natural experiment to explore whether parents changed their school

choices in response to the new information about academic performance, and whether allowing them to make a more informed choice led to academic gains. The authors were given access to the district's administrative records. As a result, their sample included information on the less informed school choice made in the spring of 2004 and the more fully informed school choice made in July of 2004. They also had information about school assignment procedures, attendance records, test scores, and student demographics. Of the 6,695 students in their sample, 1,092 students both filled out a new choice form in July and chose to attend a different school.

The authors find that the simplified NCLB notification doubled the fraction of parents choosing a different school, and those parents chose schools with strikingly higher academic achievement. Approximately 16 percent of “parents who received notification responded by choosing schools with test scores that were an average of 1 standard deviation higher than the school that they had chosen to attend just a few months

earlier.”

A key determinant of whether a parent chose to opt out of a failing school was the existence of higher quality alternatives nearby. Higher test scores at nearby schools significantly increased both the probability that a parent would choose another school, and the test score at the school chosen. The authors find

evidence that winning admission to a chosen school reduced serious suspension rates, and that students who gained admission to schools with test scores substantially above their failing school experienced significant improvements in test scores. The authors conclude that proximity to high scoring substitute schools and simplified information are important

parts of a successful choice component and that the positive effects of school choice under NCLB may be elusive in “school districts with large geographic densities of low-performing schools.”

—Linda Gorman

## Effects of Immigration on African-American Employment and Incarceration

Almost everybody knows that in the past 40 years, the real wages and job prospects for low-skilled men, especially low-skilled minority workers, have fallen. And there is evidence—although no consensus—that a rising tide of immigration is partly to blame. Now, a new NBER study suggests that immigration has more far-reaching consequences than merely depressing wages and lowering employment rates of low-skilled African-American males: its effects also appear to push some would-be workers into crime and, later, into prison.

“Remarkably, as far as we know, no study has examined if there is a link between the resurgence of large-scale immigration and the employment and incarceration trends in the black population,” co-authors **George Borjas**, **Jeffrey Grogger**, and **Gordon Hanson** write in **Immigration and African-American Employment Opportunities: The Response of Wages, Employment, and Incarceration to Labor Supply Shocks** (NBER Working Paper No.12518). The authors are careful to point out that even without increased immigration, most of the fall in employment and increase in jailed black men would have happened anyway. Nevertheless, the racially disproportionate effects of immigration on employment are striking.

Changing technology, government programs, and a stagnant real minimum wage have all been blamed for the poor labor market performance of low skilled and minority workers. Another key reason, the authors show, is immigration.

“The 1980–2000 immigrant influx, therefore, generally ‘explains’ about 20 to 60 percent of the decline in wages, 25 percent of the decline in employment, and about 10 percent of the rise in incarceration rates among blacks with a high school education or less.”

Using census data from 1960–2000, the authors trace the evolution of wages, employment, and incarceration rates for particular skill groups in the black and white populations. They then relate the trends observed in these variables to the increases in immigration experienced by each skill group. The observed correlations suggest that immigration is an important underlying factor influencing the observed trends. In particular, their analysis finds that a 10 percent rise in immigrants in a particular skill group significantly trimmed the wages of black and white men alike. For African-Americans, the decline was 3.6 percent. For whites, it was actually slightly higher: 3.8 percent. Beyond that, however, the black-white experience differed markedly, especially for low-skilled workers. Take employment rates: from 1960 to 2000, black high school dropouts saw their employment rates drop 33

percentage points—from 88.6 percent to 55.7 percent—the authors found in their analysis of census data from 1960 to 2000. The decrease for white high school dropouts was only roughly half that—from 94.1 percent to 76.0 percent.

One reason, the authors argue, is that black employment is more sensitive to an immigration influx than white employment. For white men, an immigration boost of 10 percent caused their employment rate to fall just 0.7 percentage points; for black men, it fell 2.4 percentage points.

That same immigration rise was also correlated with a rise in incarceration rates. For white men, a 10 percent rise in immigration appeared to cause a 0.1 percentage point increase in the incarceration rate for white men. But for black men, it meant a nearly 1 percentage-point rise.

Why would a boost in immigration effectively put more men, especially black men, behind bars? The authors put forward a straightforward theory: immigration causes wages and employment to fall for black workers. When this happens, some of those workers—especially those with the lowest skills—turn

to crime to increase their income. Certainly, the census data reveal a statistical link: as immigration began to increase, beginning in the 1980s, so did the institutionalization of low-skilled black men. While the Census Bureau defines institutions to include mental hospitals, the 1980 census — and Justice Department data — suggests that the majority of young men who were institutionalized were, in fact, in prison or in jail.

The rise in incarceration is most dramatic for the lowest-skilled black men. In 1980, it was just 1.3 percent; by 2000, it had skyrocketed to 25.1 percent. Even blacks with a high school diploma saw incarceration rates increase from 0.5 percent to 9.8 percent in the same time period. Why the increase? One reason, the authors suggest, is crack cocaine. Cheap to produce, it first appeared in the 1980s and had spread widely by the early 1990s. African-Americans became heavily involved in trafficking it because existing black gangs already controlled many of the urban spaces where it could be easily distributed and sold, the

authors say, citing recent research. The surge in drugs caused police to step up enforcement and states to enact tougher sentencing laws. The result: a quarter of low-skilled black men were incarcerated by 2000.

But crack alone can't explain that spike, the authors say. Using an already-developed "crack index," which combines the effects of crack busts, arrests, emergency hospitalizations, and deaths, and skewing it so that the crack epidemic affected only younger, low-skilled workers, the authors still find that immigration boosted incarceration rates of black, low-skilled workers. In fact, factoring in crack barely changed the results.

While that outcome backs up the authors' theory, it doesn't prove it. The crack index isn't a perfect measure for the crack epidemic because it deals with indirect effects rather than causes. So, testing their thesis further, the authors compare their national results of immigration's impact with state-level results.

Such comparisons have been problematic in the past because local-

level studies have found far less of a wage impact from immigration than national-level studies. That's because the local data doesn't capture the response of native workers, who often leave the area for higher-wage opportunities elsewhere. But by adding that data to national-level immigration trends, the effects of immigration appear consistent with what the authors had found by looking at national-level statistics alone.

The authors stress that immigration is only one factor in the worsening labor situation of low-skilled African-American men. "The 1980–2000 immigrant influx, therefore, generally 'explains' about 20 to 60 percent of the decline in wages, 25 percent of the decline in employment, and about 10 percent of the rise in incarceration rates among blacks with a high school education or less," they write.

That's significant enough to demonstrate immigration's impact. It's small enough to suggest there's far more their data can't explain.

—Laurent Belsie

## Cigarette Regulations Reduce Cases of Sudden Infant Death Syndrome

Sudden Infant Death Syndrome (SIDS) is the unexplained, sudden death of an infant under one year of age. SIDS is the leading cause of mortality among infants aged 1–12 months, and is responsible for thousands of infant deaths every year, according to the Centers for Disease Control (CDC). Rates of SIDS in the United States have been declining steadily since 1980, from 1.53 per 1000 live births to 0.53 per 1000 live births in 2003. But the difficulty in identifying the causes of SIDS makes it difficult to attribute the reasons for the decline. The "Back to Sleep" campaign, which recommends that infants should be put to sleep in a supine position, has been widely cited

for achieving significant reductions in SIDS in the United States. However, given that this campaign began in the mid-1990s, there is still much unknown about the trends, causes, and prevention of this syndrome.

"More stringent cigarette regulations have a distinct and direct impact in reducing SIDS deaths. The largest reduction in deaths comes from changes in the monetary price of cigarettes. Each 10 percent increase in the real price of cigarettes reduces the average number of SIDS deaths by a range of 6.7 to 7.4 percent."

Much of the current research on SIDS focuses on identifying the risk factors that are consistently observed to be associated with elevated risks of SIDS. The CDC summarizes seven

primary risk factors: 1) tummy or side sleeping; 2) soft sleep surfaces; 3) loose bedding; 4) overheating; 5) smoking; 6) bed sharing; and 7) pre-term and low birth weight. For many of these risk factors, public educa-

tion campaigns may be the only way to encourage the behaviors that will reduce SIDS. However, for smoking, the policymakers have a variety of tools to use besides public educa-

tion. Cigarette taxes and laws regulating indoor smoking are known to be strong predictors of smoking behaviors among all adults and pregnant women. If smoking is truly a causal determinant of SIDS, then policies that reduce smoking should have the added benefit of reducing SIDS cases.

In **The Effectiveness of Cigarette Regulations in Reducing Cases of Sudden Infant Death Syndrome** (NBER Working Paper No. 12527), author **Sara Markowitz** examines the direct effects of changes in cigarette prices, cigarette taxes, and clean indoor air laws in explaining changes in the incidence of SIDS over time in the United States. She takes a new approach to studying the prevention of SIDS by combining the lessons from epidemiology and economics. Epidemiological studies have shown that prenatal maternal smoking and postnatal environmental smoke are major risk factors for SIDS deaths. Research in economics has shown that smoking is influenced by the determinants of the demand for cigarettes, including the monetary price and restrictions on smoking in public places. By combining these two relationships, Markowitz shows that more stringent cigarette regulations have a distinct and direct impact in reducing SIDS deaths.

The largest reduction in deaths comes from changes in the monetary price of cigarettes. Each 10 percent increase in the real price of cigarettes reduces the average number of SIDS

deaths by a range of 6.7 to 7.4 percent. A 10 percent increase in the real taxes on cigarettes reduces SIDS deaths by a range of 1.56 to 1.79 percent. The difference in the magnitude of the price and tax effects is not surprising, since taxes make up only a portion of cigarette prices.

Restrictions on smoking in public places also may save babies' lives. Markowitz finds that each additional restriction placed on smoking decreases the average quarterly SIDS count by 0.92 for private workplace restrictions, by 1.2 for restaurant restrictions, and by 0.39 for child care center restrictions. The effectiveness of higher cigarette prices and taxes and more stringent restrictions on smoking in public places holds whether these factors are evaluated contemporaneously with the SIDS cases, or lagged one year to represent the policies that existed during the prenatal period.

While this study sheds light on the relationship between smoking and SIDS, a number of studies, from the United States and other countries around the world, have established both prenatal and postnatal smoking as major preventable risk factors for SIDS. One comprehensive review of the literature found that maternal smoking doubles the risk of SIDS. A 2006 U.S. Surgeon General's report on the Health Consequences of Involuntary Exposure to Tobacco Smoke concurred that the evidence was "...sufficient to infer a causal relationship between exposure to sec-

ondhand smoke and sudden infant death syndrome."

Postnatal smoking by either the mother or other household members also has been shown to be a risk factor for SIDS. Many studies have found a positive relationship between postnatal smoking and SIDS, even after controlling for other risk factors such as maternal characteristics, prenatal smoking, and, in some studies, sleep position. The risk of death is also found to rise with increasing levels of smoking. One meta-analysis of postnatal maternal smoking found that smoking after pregnancy increases the risk of SIDS by 94 percent.

Smoking by fathers and other household members is also believed to be associated with an increased risk of SIDS, although the evidence is not consistent across studies. These studies are all case-controlled, matching families of infants who died to a sample of control families with similar characteristics. Many studies are population based, but often have small sample sizes and focus on restricted geographic areas.

The results of this paper contribute to the evidence for the causal relationship between smoking and SIDS, while avoiding the potential bias caused by omitted unobserved variables. The findings that higher cigarette prices and stricter clean indoor air policies reduces SIDS are consistent with the theory that smoking causes SIDS.

— Les Picker

## Simplification Raises Saving Rates

Criticisms of America's low national savings rate often hinge on the assumption that this low savings is driven by Americans' proclivity for excessive spending. But in **Simplification and Saving** (NBER Working Paper No. 12659), authors

**John Beshears, James Choi, David Laibson, and Brigitte Madrian** find that the complexity of establishing a savings plan can also play a role in deterring saving.

These authors looked at two companies that greatly simplified

the process of enrolling in a workplace retirement savings plan; they found that the changes dramatically boosted employee participation. They also report that making it simpler for already-enrolled employees to raise their plan contribution rates

is another mechanism for increasing savings in the plan. “Many financial decisions that individuals face are complicated and daunting for those who are not financial experts,” they write. “One important consequence of this complexity is that individuals procrastinate in making these decisions.”

The two companies in the study—referred to as Company A and Company B—adopted a program called Quick Enrollment. Employees who checked a box on a Quick Enrollment card and returned it to the employer were enrolled in the retirement savings plan at a single contribution rate and asset allocation pre-selected by the employer. Company A also implemented a Web-based Quick Enrollment. Employees remained able to enroll at any of the many contribution rates and asset allocations allowed in the plan by using the previously available phone or Internet channels.

The results are powerful evidence for the ability of simplicity to accelerate savings. The program tripled participation rates among new hires at Company A. Among existing employees at Company A, 25 percent of previous non-participants opted to join the 401(k) retirement plan after being offered Quick Enrollment during a four-month period. At Company B, offering Quick Enrollment to existing

employees once a year for three years caused 45 percent of non-participants to sign up.

The authors observe that “Quick Enrollment substantially increases

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savings plan participation relative to the standard opt-in enrollment regime, although these increases are not nearly as large as those obtained by firms that automatically enroll their employees in a savings plan.” They also note that, once in the plan, few employees—no more than 4 to 5 percent of those using the Quick Enrollment option—stop participating.

Company B also implemented a program called Easy Escalation in an effort to make it simpler for employees to increase the percentage of their pay contributed to the company savings plan. Depending on company profitability, Company B matched anywhere from 50 to 125 percent of the first 6 percent of pay that employees contributed to their plan. But the Quick Enrollment pre-selected contribution rate was only 3 percent. Operating in a manner similar to Quick Enrollment, Easy Escalation allowed employees to boost their contribution to 6 percent by check-

ing a box on a card and returning it. The program prompted about 10 to 12 percent of “low contributors” to boost their contribution to get the maximum employer match.

The authors believe that such “interventions allow workers to psychologically collapse a complex, multidimensional savings and investment problem” into clear binary choices: save or don’t save, contribute more or not. In particular, they note that the addition of the Easy Escalation process can help avoid the problem of too many employees simply staying at the relatively low pre-selected contribution rate.

Once they joined a plan, participants in the Quick Enrollment process still demonstrated a reluctance to make active savings decisions. Compared to employees who joined the traditional way, Quick Enrollment participants were much more likely keep their contributions flowing to a pre-selected set of investment funds, rather than intervening and actively choosing their own asset allocation.

—Matthew Davis

## Higher Tax Rates Reduce Working Hours In OECD Countries

Hours of market work vary widely across OECD countries. For example, in European economies such as France and Germany, hours of work are currently about one third less than in the United States. These differences are almost an order-of-magnitude larger than those associated with business cycle fluctuations in the U.S. economy. The existence

of such large differences provides an excellent opportunity for us to learn about what factors have the most effect on hours of work. Moreover, understanding the factors that account for these large differences in economic outcomes is likely to have important policy implications.

In **Long-Term Changes in Labor Supply and Taxes: Evidence**

**from OECD Countries, 1956-2004** (NBER Working Paper No. 12786), co-authors **Lee Ohanian, Andrea Raffo, and Richard Rogerson** assess the role of labor and consumption taxes in explaining differences in hours of work across 21 OECD economies. The key finding of their paper is that differences in taxes across countries are a very

important piece of the explanation for the vastly different levels of hours of market work.

The starting point for their analysis is the observation that the current differences in hours of work across countries can be traced to very different evolutions across countries over the last 50 years. Although, on average, hours of work have decreased substantially across OECD economies since 1956, what is particularly striking is the difference in the size of this decrease across economies. For example, hours of work in the United States were roughly the same in 1956 and 2004, while hours of work in Germany decreased by about 40 percent over this same period. Ohanian, Raffo and Rogerson argue that a promising approach for developing an understanding of the large current differences in hours of work across economies is to understand the factors behind these very different trend changes in hours of work across economies. In particular, they seek to understand the role that differential changes in taxes on labor and consumption have played in

accounting for the differential trend changes in hours of work. Their key finding is that, for many countries, increases in taxes play a large role in

“Differences in taxes across countries are a very important piece of the explanation for the vastly different levels of hours of market work ... hours of work in the United States were roughly the same in 1956 and 2004, while hours of work in Germany decreased by about 40 percent over this same period.”

explaining why hours of work have decreased over time.

The analysis in the paper is carried out in the context of the standard one-sector neoclassical growth model, which is the standard model used to interpret trend changes in economic activity. The authors first show that if one ignores taxes, this model explains virtually none of the decreases in hours of work over the period 1956–2004. But once one incorporates taxes, the model can account for the bulk of the average decrease in hours of work over this period.

Although the authors find that, on average, changes in taxes explain the changes in hours of work, there are some episodes in particular coun-

tries that require another explanation. Specifically, in some instances hours decrease by more than what the changes in taxes can explain, while in

some other cases hours decrease less than would be predicted solely on the basis of changes in taxes. This work helps them to isolate those episodes that require additional attention.

While the main focus of the analysis here is on the effects of labor and consumption taxes on hours of work, the authors also consider some additional factors that are often suggested to be potentially important, such as unionization, employment protection, and generosity of unemployment insurance benefits. The authors find that once one incorporates taxes, these additional variables add little in terms of explanatory power.

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