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## Megan's Law Hits Local Property Prices

If a registered sex offender, reformed or not, moves into your immediate neighborhood, it's bad financial news. The potential price for your home likely has been trimmed substantially.

Economists **Leigh Linden** and **Jonah Rockoff** measure the impact of living in close proximity to such a convicted criminal in **There Goes the Neighborhood? Estimates of the Impact of Crime Risk on Property Values from Megan's Laws** (NBER Working Paper No. 12253). They combine data from the housing market with data from the North Carolina Sex Offender Registry to find that when a sex offender moves into a neighborhood, houses within a one-tenth mile area around the sex offender's home fall by 4 percent on average (about \$5,500), while those further away show no decline in value. "These results suggest that individuals have a significant distaste for living in close proximity to a known sex offender," the authors conclude.

Crime is predominantly a local issue, with the majority of both violent and non-violent offenses taking place less than one mile from a victim's homes. Most government expenditures on police protection are local. They add up to more than \$50 billion a year across the nation. Residents can

respond to more crime by voting for anti-crime policies, or by moving away.

One popular anti-crime effort is a body of legislation known as Megan's Laws. In 1994, a seven-year-old girl named Megan Kanka

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"When a sex offender moves into a neighborhood, houses within a one-tenth mile area around the sex offender's home fall."

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was brutally raped and murdered by her next-door neighbor. The man had been convicted in 1981 for an attack on a five-year-old child and an attempted sexual assault on a seven-year-old. But none of his neighbors knew these facts. Megan's Laws require the notification of the public regarding the location and description of convicted sex offenders. By the imposition of such a post-prison requirement, these laws represent a significant change in the legal practice of dealing with convicted criminals after they have been released from jail. This provision has made these laws extremely controversial and subject to numerous court challenges. Two cases reached the Supreme Court. It upheld the relevant laws as legitimate civil regulation, rather than retroactive criminal punishment, in response to the recidivism threat imposed by sex offenders on the communities in

which they live.

A 1994 federal law, the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Program, created a mandatory state requirement for the registration of sex

offenders. It threatens non-complying states with a reduction of federal grants for state law enforcement efforts. The legislation was extended in 1996 to require the dissemination of information in the registry.

By now, all 50 states maintain a registry making some information available to the public. However, the method of compliance varies significantly. Forty-six provide public Internet access to the offender registry. Louisiana has perhaps the most aggressive notification law. It requires offenders to, "give notice of the crime for which he was convicted, his name, and his address to at least one person in every residence or business within a one mile radius of his residence in a rural area and a three tenths of a mile radius in an urban or suburban area."

In North Carolina, the "Amy Jackson Law" requires all individ-

uals released from prison on or after January 1, 1996 — the date of the law — for offenses of kidnapping, prostitution, sexual exploitation of a minor, or sexually violent offenses against anyone, to register. It applies equally to individuals convicted in other states who move to North Carolina. Offenders are required to register within 10 days of release from prison and for 10 years after being released from prison.

Linden and Rockoff focus on Mecklenburg County where there were 518 registered offenders. They excluded offenders with addresses that could not be located on a map, offenders living in a jail or halfway-house, and offenders who had been living in their current residence for just a short period of time. Some 63 percent of the crimes of the registered sex offenders in that county are classified as Indecent Liberty

with a Minor, sometimes referred to as “child molestation,” and do not involve physical force or violence. Some 11 percent of the sexual offenses involved force or violence, 10 percent were rape.

The other important source of information came from the Mecklenburg County Division of Property Assessment and Land Record Management. The paper uses very detailed data on the locations of convicted sex offenders and the dates on which they moved into a neighborhood and variations over time in values of homes sold in the specific locations in which an offender chooses to live. The authors estimate that a single offender depresses property values in the immediate vicinity by \$4,500 to \$5,500 per home. Altogether, the presence of sex offenders has shrunk property values in the County by about \$58

million.

Assuming that individuals are reacting to the increased probability of being victimized by a neighboring sex offender, the authors estimate that the victimization costs of sex offenses total more than \$1 million per case. That is far in excess of estimates by economists cited in the criminal justice literature. The authors note that this large figure could be driven partially by individuals overestimating the probability of victimization, or by other costs associated with living near a sex offender (such not allowing children to play outside). Either way, Linden and Rockoff conclude there is a great willingness in the public to pay for policies that would shield residents from sexual offenders.

— David R. Francis

## Canada’s Universal Childcare Hurt Children and Families

The percent of mothers who work in the paid labor force in North America has been rising, and the increased demand for childcare accompanying the rise of two-earner couples has captured the attention of public policymakers. In both Canada and the United States, there are large subsidies for early child care for low-income families, with modest tax subsidies for middle- and upper-income families for either childcare or pre-school. But interest has been growing in moving towards more universal subsidies towards early childcare along the lines of many nations in Europe. In Canada, the province of Quebec introduced universal subsidies to childcare over the period 1997–2000, and a major point of contention in

the recent Parliamentary election was the extension of similar programs nationwide. In the United States, universal pre-school programs have been passed by states

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“Children’s outcomes have worsened since the program was introduced along a variety of behavioral and health dimensions.”

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such as Georgia, New York, and Oklahoma, and there is a major battle shaping up over a ballot initiative for universal pre-school in California. Unfortunately, these debates are raging largely in an evidence vacuum.

In **Universal Childcare, Maternal Labor Supply, and Family Well-Being** (NBER Working Paper No. 11832), authors **Michael Baker, Jonathan Gruber,** and **Kevin Milligan** measure the

implications of universal childcare by studying the effects of the Quebec Family Policy. Beginning in 1997, the Canadian province of Quebec extended full-time kin-

dergarten to all 5-year olds and included the provision of childcare at an out-of-pocket price of \$5 per day to all 4-year olds. This \$5 per day policy was extended to all 3-year olds in 1998, all 2-year olds in 1999, and finally to all children younger than 2 years old in 2000. Since welfare reform and other changes were occurring for single mothers over this time period, the authors focus on the effects of this policy on the married and

cohabiting women and their children who received most of the new subsidies under this policy. They use data from the National Longitudinal Study of Canadian Youth (NLSCY), a large longitudinal survey of children inside and outside of Quebec, to develop the first comprehensive analysis of a universal subsidized childcare program, following its impact from childcare use through employment and finally to children's and parent's outcomes.

The authors first find that there was an enormous rise in childcare use in response to these subsidies: childcare use rose by one-third over just a few years. About a third of this shift appears to arise from women who previously had informal arrangements moving into the formal (subsidized) sector, and there were also equally large shifts from family and friend-based child care to paid care. Correspondingly,

there was a large rise in the labor supply of married women when this program was introduced.

Disturbingly, the authors report that children's outcomes have worsened since the program was introduced along a variety of behavioral and health dimensions. The NLSCY contains a host of measures of child well being developed by social scientists, ranging from aggression and hyperactivity, to motor-social skills, to illness. Along virtually every one of these dimensions, children in Quebec see their outcomes deteriorate relative to children in the rest of the nation over this time period. Their results imply that this policy resulted in a rise of anxiety of children exposed to this new program of between 60 percent and 150 percent, and a decline in motor/social skills of between 8 percent and 20 percent. These findings represent a sharp break from pre-

vious trends in Quebec and the rest of the nation, and there are no such effects found for older children who were not subject to this policy change.

The authors also find that families became more strained with the introduction of the program, as manifested in more hostile, less consistent parenting, worse adult mental health, and lower relationship satisfaction for mothers.

The authors caution that their results are subject to a number of interpretations that highlight the importance of future work in this area. Most importantly, it is not clear whether the negative child outcomes are short-run transitions or long-term effects. Nevertheless, they caution that this subject requires more study before recommendations can be made about the long-run benefits of universal childcare.

— Les Picker

## The Safety and Efficacy of the FDA

In virtually all developed countries, regulatory authorities provide public oversight of the safety and efficacy of prescription drugs prior to their being approved for marketing. In the United States, the Food and Drug Administration (FDA) conducts such oversight. A central tradeoff facing the FDA involves balancing two goals: fulfilling its mission set by Congress to assure the safety and efficacy of drugs, while at the same time advancing the public health by not slowing down or disabling the innovative process by which new medical products reach the market.

Critics argue that the FDA is not taking enough time in evaluating new drugs, thereby allowing unsafe drugs to be marketed; oth-

ers have argued that the agency is taking too long, therefore inflicting harmful effects on innovative returns and patient welfare. Surprisingly, little quantitative evidence has been put forward to evaluate the degree to which the speed and safety tradeoff facing the FDA is being resolved efficiently. More generally, there seems to be no suggested quantitative methodology or framework for assessing the economic efficiency of the agency's specific tradeoff. Despite the FDA's strict adherence to evidence-based evaluation of products overseen, there is far less evidence of its own safety and efficacy. Put differently, no product application would pass the FDA approval process with the quality and type of evidence that

currently exists for evaluating the FDA policies themselves. The welfare consequences of this lack of methodology and systematic evidence may be quite substantial, as the FDA is estimated to regulate markets accounting for about 20 percent of consumer spending in the United States.

In **Assessing the Safety and Efficacy of the FDA: The Case of the Prescription Drug User Fee Acts** (NBER Working Paper No. 11724), authors **Tomas Philipson**, **Ernst Berndt**, **Adrian Gottschalk**, and **Matthew Strobeck** estimate the welfare effects of a major piece of legislation affecting this tradeoff, the Prescription Drug User Fee Acts (PDUFA). These acts allowed the agency to charge user-

fees to companies while at the same time imposing performance goals on the agency in terms of faster delivery of approval decisions.

The authors find that PDUFA raised the private surplus of producers, and thus innovative returns, by about \$11 to \$13 billion. The authors find that PDUFA raised consumer welfare by between \$5 and \$19 billion; thus, the combined social surplus was raised by between \$18 and \$31 billion.

Converting these economic gains into equivalent health benefits, the authors find that the more rapid access to drugs on the market enabled by the PDUFA saved the equivalent of 180 to 310 thousand life-years. Additionally, the authors estimate an upper bound on the adverse effects of the PDUFA, based on drugs submitted during PDUFA I/II and subsequently withdrawn for safety reasons: they find an extreme upper bound of about 56 thousand life-years lost.

Because of the innovative nature of this analysis, the authors offer several cautionary notes. Their methodology only relies on the most common form of data available surrounding the drug approval process, namely, the distribution of approval and withdrawal times of drugs as well as the distribution of sales of the approved drugs. Further, their analysis is based on

a number of assumptions and limitations. First, their benefit-cost and social surplus calculations are aggregated over all drug classes. They suggest that further research might fruitfully focus on disaggregating into specific therapeutic areas and “blockbuster” products.

Second, this analysis ends with submissions to the FDA by the end of September 30, 2002 and approved by the FDA up through May 2004. It could be useful to update this approval data.

Third, the authors limit their study to U.S. sales only. Foreign sales of those drugs that are sold in the United States are typically 75 percent to 100 percent of U.S. sales. The authors’ calculations did not incorporate the extent to which accelerated approval in the United States affected international approvals and launch dates.

Fourth, to the extent that accelerated FDA approvals resulted in an increase in the duration of patent protection prior to patent expiration, it is possible that the authors’ calculations understate producers’ benefits from the PDUFA. Two considerations suggest that any such impact is likely to be rather small. First, patent expiration typically takes place 12 or so years following product launch (“effective patent life”) and thus, viewed in present value terms at the begin-

ning of PDUFA in 1992, such end-of-product-life benefits are likely to be very small when discounted. Second, under the Hatch-Waxman Act, the maximum amount of time a drug could enjoy market exclusivity was set at 14 years (with possible 6-month extensions for sponsors proving efficacy in the pediatric population). Precisely how many of the drugs in the authors’ sample would have run into this exclusivity ceiling is unclear, but the number is likely to be significant. To the extent that this would occur, accelerated FDA approval would not translate into longer effective patent life.

A final limitation of the study is that the authors did not separately analyze so-called “fast track” options of the agency, which are available to speed up the approval of those drugs the agency determines are more important and urgently needed. However, the authors believe that the impact of this omission is likely to be relatively minor: preliminary analyses by several researchers suggest that the differential impact of such options, and of FDA status on approval times, is small and, in some cases, fast track may even lengthen approval times.

— Les Picker

## Why Poverty Persists

Over the past 45 years, the United States has experienced an ever-growing standard of living, with real GDP per capita more than doubling between 1959 and 2004. In contrast, living standards among some populations in the United States seem to have stagnated. Between 1970 and 2003 the non-elderly poverty rate rose from

10.7 to 12.8 percent. This is in spite of dramatic increases in female labor force participation and overall education levels, and an almost 50 percent increase in cash and in-kind welfare spending per capita. All of these factors should have put substantial downward pressure on poverty rates in the United States, yet they have remained relative-

ly stable. In **Poverty in America: Trends and Explanations** (NBER Working Paper No. 11681), co-authors **Hilary Hoynes**, **Marianne Page**, and **Ann Stevens** seek to understand why this is the case. They examine post-war trends in American poverty, the work habits and family structures of the non-elderly poor, and the likely

effects of immigration, and they attempt to estimate the effects of the various government programs designed to alleviate poverty.

The authors first review some basic facts about the nature of poverty in the United States: according to the March Current Population Surveys, poverty rates are generally higher among children than among adults. In 2003, children were approximately 29 percent of the non-elderly population but they constituted 40 percent of the non-elderly poor; 17.6 percent of all children lived in households with incomes below the poverty line. Overall, only 7 percent of those living in households headed by a married individual were poor, whereas households with an unmarried head and children present — 83 percent of which were headed by women — had poverty rates of 40.3 percent. Likewise, the probability of being poor varies tremendously by race: blacks and Hispanics are much more likely to be poor than whites, even though most of the poor are white.

The persistence of poverty also depends strongly on individual and family characteristics. Among those beginning a spell of poverty, about 83 percent of white children living in two-parent households headed by someone with at least a high school education will escape long-term poverty. In contrast, only 10 percent of poor black children in a household headed by a single woman without a high school diploma will avoid it.

To explore the determinants of trends in poverty, the authors use data on state poverty rates over the period 1967-2003. Possible explanations for changes in poverty include: changes in labor market opportunities, female labor force participation, family structure, and government assistance for the poor, and immigration. Hoynes and her co-authors show that labor market opportunities are *the* major deter-

minant of poverty.

Specifically, they find that the unemployment rate, median wages, and wage inequality in the lower half of the wage distribution all are significant determinants of poverty rates. Overall, increasing the unemployment rate by 1 percentage point increases the poverty rate by 0.4 to 0.7 percentage points. Increasing the median wage by 10 percent decreases the poverty rate by about 2 percentage points. Increasing the ratio of the median wage to the average weekly wage in the 20 percentile of the wage distribution (a measure of inequality) by 10 percent increases the poverty rate by roughly 2.5 percentage points.

The strength of the relationship between these business cycle and labor market indicators and

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the poverty rate has declined in the past two decades, though. After 1980, the effects of unemployment, median wages, and wage inequality were about half their pre-1980 magnitudes, the authors estimate. Predicted poverty rates based on coefficients estimated with data from the entire period (1967 through 2003) are significantly higher than the actual poverty rate.

In contrast, actual poverty rates are very close to the predictions for the post-1980 period. This close correspondence between the actual poverty rate after 1980 and the poverty rates predicted by unemployment, median wages, and wage inequality in part solves the mystery of why poverty rates have not declined by more. The “answer” is familiar to those acquainted with trends in inequality over this period: poverty has not fallen despite robust economic growth

because this growth did not result in rising wages at the median and below.

Missing from this analysis of labor market opportunities and poverty, though, is the dramatic increase in female labor force participation over this period (a rise from 57 percent in 1970 to 76 percent in 2000). Once the authors incorporate female labor supply into their poverty rate models, the puzzle returns. Specifically, after 1980 actual poverty rates are substantially higher than predicted poverty rates.

The period after 1980 saw large changes in family structure — notably a doubling of the percent of families headed by a single woman. Because poverty rates among female-headed families are typically 3 or 4 times the level in the

overall population, such changes in the distribution of family types can have potentially large effects on poverty. The authors find that these changes in family structure can account for a 3.7 percentage point increase in poverty rates, more than the entire rise in the poverty rate, from 10.7 percent to 12.8 percent since 1980.

Using Census data for 1960-2000, the authors find that the increase in the U.S. immigrant population has had only a marginal effect on poverty. Even though recent immigrants are “poorer than their predecessors, their fraction of the population is simply too small to affect the overall poverty rate by much.” These results do not, however, take account of the possibility that a rising immigrant population could directly affect the wage opportunities of natives.

Finally, the authors consider the effects of welfare spending on

poverty, using four measures of welfare generosity. Overall, their results consistently show that increases in welfare spending have produced only modest reductions in poverty, and that their effect has become more modest over time. This result is partially driven by the nature of the official poverty definition, specifically the fact that increments to aftertax income (as resulting, for example, from the significant expansions in the Earned Income Tax Credit) or provision of in-kind benefits will not be reflected in poverty rates based on pretax cash income definition. Furthermore, the lack of an effect on official poverty does not mean that these programs have not sig-

nificantly improved the well being of the poor.

Taken together, the results suggest that the lack of improvement in the poverty rate reflects a weak-

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“Increases in welfare spending have produced only modest reductions in poverty, and their effect has become more modest over time.”

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ened relationship between poverty and the macroeconomy. The lack of progress despite rising living conditions is attributable to the stagnant growth in median wages and to increasing inequality. Holding all else equal, changes in female labor supply should have reduced poverty, but an increase in the rate of female-headed families may have worked in the opposite direction.

Other factors often cited as having important effects on the poverty rate do not appear to play an important role — these include changes in the number and compo-

sition of immigrants and changes in the generosity of anti-poverty programs. Future work should focus on understanding why the poverty rate’s responsiveness to macroeconomic indicators has changed over time.

— Linda Gorman

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