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## Social Security Causes Earlier Retirement

Give male workers in industrial nations enough pension money to retire early, and they do. Delay the age at which they are eligible for retirement under national social security programs, and many older employees will keep working. Those are key findings of the second stage of an international research project to study the relationship between social security provisions and retirement. The project relies on the analyses of a large group of economists in 12 countries: Italy, Belgium, Denmark, Netherlands, France, United Kingdom, Germany, Spain, Canada, Sweden, Japan, and the United States.

A first stage of this project showed a strong relationship across countries between social security program incentives to retire and the proportion of older people out of the labor force. In **Social Security Programs and Retirement Around the World: Micro Estimation** (NBER Working Paper No. 9407), NBER Research Associates **Jonathan Gruber** and **David Wise** report on the second stage of the project, which investigates the effect of social security retirement incentives on retirement decisions within each of these 12 nations.

Despite very different programs, cultural histories, labor-market institutions, and other social characteristics, the results consistently show that program incentives accord strongly with retirement decisions in all 12 countries. In all nations, there is a sharp jump in the number

of workers who retire in the year after they can first receive Social Security benefits, despite variation in that age across nations. Such a “spike” in retirement occurs, for example, at age 60 in France, but age 62 in the United States; in both cases, this accords with the initial availability of benefits. In general, those workers who face the strongest disincentive to continue work, in terms of lost Social Security

of older employees,” the authors note.

Another simulation looked at an illustrative “common reform” for the 12 nations, with eligibility for early retirement set at 60, normal retirement age at 65, and an actuarial reduction in benefits between ages 65 and 60. This plan would have very disparate effects on retirement across the countries, but the results square with what might be

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benefits, are the ones most likely to retire. And the authors consistently find that those who have larger Social Security entitlements retire earlier than their national counterparts with lower entitlements.

Mathematical simulations for each country show that, on average across all 12 countries, a reform that delays first eligibility for benefits by three years would likely reduce the proportion of men aged 56 to 65 who are out of the labor force by between 23 and 36 percent. This may interest policymakers trying to figure out what to do about an anticipated difficulty in covering pension costs in the future. “Changes in the provisions of social security programs would have very large effects on the labor force participa-

expected considering the provisions in the current social security programs of each nation. For instance, in the United States, age 62 is currently when men can first receive a Social Security pension. So the reform, pushing retirement back to age 60, would encourage more men to retire early. In Italy, the Netherlands, Belgium, France, and Germany, benefits are available well before age 60. So setting 60 as an age for early retirement would keep men in the labor force longer. Canada has an entitlement age of 60 for social security benefits, but at such a low level that the reform plan’s actuarial provision would significantly increase benefit levels, inducing more retirements.

— David R. Francis

## Do Incentives Cause Teachers to Cheat?

In the last decade, the states and the federal government have begun using student scores on assessment tests to evaluate public school performance. For teachers and administrators, the stakes are high. In California, teachers in schools with large increases in test scores may be eligible for merit pay increases of as much as \$25,000. In other states, years of abysmal test results have resulted in entire school staffs being required to reapply for their jobs. Such high stakes give teachers and other school officials a growing incentive to cheat on school accountability tests.

In **Rotten Apples: An Investigation of the Prevalence and Predictors of Teacher Cheating** (NBER Working Paper No. 9413) and **Catching Cheating Teachers: The Results of an Unusual Experiment in Implementing Theory** (NBER Working Paper No. 9414), co-authors **Brian Jacob** and **Steven Levitt** use Iowa Test scores from 3rd through 7<sup>th</sup> grade students in the Chicago public schools to develop and test a statistical technique for identifying likely cases of teachers or administrators who cheat by systematically altering student test forms. Their results suggest that such cheating occurred in 3-5 percent of the elementary classrooms in their sample, and that relatively small changes in incentives

affect the amount of cheating. The authors conclude that school accountability programs based on testing would be well advised to institute safeguards against teacher cheating.

The authors' cheating algorithm relies on the fact that students in cheating classrooms will likely "experience unusually large test

ing unusual test score gains and highly suspicious answer patterns. The second, the "good teachers," had large test score gains but normal answer patterns. The third was a randomly chosen control group.

On the closely monitored retest, the classrooms that the algorithm identified as likely cases of cheating had score declines of more than a

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"On the closely monitored retest, the classrooms... identified as likely cases of cheating had score declines of more than a full grade equivalent."

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score gains in the year of the cheating, followed by unusually small gains or even declines in the following year." Just as important, answers within a cheating classroom will also display unusual patterns, such as identical blocks of answers for many students, or cases in which students answer difficult questions correctly but get easier ones wrong.

In Spring 2002, the Chicago Public Schools invited Jacob and Levitt to identify classrooms suspected of cheating so that they could be included in its regular quality control retest program. The 117 classrooms chosen for retesting fell into three groups. The first, and largest, consisted of classrooms that the algorithm identified as hav-

ing full grade equivalent. In reading, the good teacher classes actually registered small increases in the retest, and the randomly selected group had a slight decline. Chicago Public Schools is investigating the 29 cases with suspicious answer patterns and the greatest test-retest score declines. The authors caution that their method catches only the most obvious of the many ways to cheat on high stakes tests, and they urge careful consideration of the trade-offs between the "real benefits of high-stakes testing and the real costs associated with behavioral distortions aimed at artificially gaming the standard."

— Linda Gorman

## Union Membership and Wage Variation

Union membership rates have been declining in the United States, the United Kingdom, and Canada. Since the mid-1950s, for example, union membership in the United States has slipped to under 15 per-

cent. During the same period, wage inequality has risen in these three industrialized nations.

In **Unionization and Wage Inequality: A Comparative Study of the U.S., the U.K., and Canada**

(NBER Working Paper No. 9473), co-authors **David Card**, **Thomas Lemieux**, and **W. Craig Riddell** explore the impact of unions on wages in light of the rise in earnings inequality in several industrialized

nations. They find that, for men, unions tend to have an equalizing effect on wages across skill groups. However, unions do not reduce wage inequality for women. These trends were remarkably similar in all three countries over the past twenty years.

The authors studied these three countries because the institutional arrangements governing unionization and collective bargaining are relatively similar there and all three now collect comparable data on wages and unions. Bargaining is highly decentralized in the three countries and the fraction of the workforce covered by collective bargaining is relatively modest, allowing for comparisons of workers covered by union contracts with those who are not.

Union coverage tends to be concentrated in the middle of the skill distribution for men in the three countries and union wages tend to be compressed relative to non-union wages. This implies that unions systematically reduce the variance of wages for men in all

three countries.

Three factors appear to account for the fact that unions do not reduce income inequality among women. First, unionized women are more concentrated in the upper end of the wage distribution than their

nearly equal in all three countries, marking a sharp departure from the historical pattern. However, the modest decline in union coverage for women had little impact on their wage inequality.

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male counterparts. Second, the union wage gap is larger for women than for men, resulting in a larger “between-sector” effect. Third, unions have about the same impact on wages of women in different skill groups, whereas they tend to raise wages more for men at the bottom of the income distribution.

The authors also find that the decline in unionization of women has been much smaller than that of men. As a consequence, unionization rates of men and women are

unionization rates fell in all three countries, with the most rapid decline in the United Kingdom, followed by the United States and Canada. These trends contributed to rising male wage inequality, particularly in Britain. The authors estimate that the precipitous fall in unionization in the United Kingdom explains up to two-thirds of the difference in the trend in male wage inequality between Britain and the United States.

— Les Picker

## Personal Bankruptcy Rules Change Entrepreneurial Activity

Exemption levels, which determine the amount of assets a person declaring bankruptcy may retain, are the only aspect of U.S. bankruptcy law that varies from state to state. In **Personal Bankruptcy and the Level of Entrepreneurial Activity** (NBER Working Paper No. 9340), co-authors **Wei Fan** and **Michelle J. White** examine how variations in exemption levels affect incentives to launch, to own, and to end small businesses.

The authors consider the most common personal bankruptcy procedure, Chapter 7, which is particularly favorable to small business owners. Under it, all of debtors’ unsecured business and personal debts are discharged when they file for bankruptcy. Debtors must give up all of their assets above the state’s exemption level, but their future earnings are entirely exempt from the obligation to repay (the “fresh start” in bankruptcy). Fan

and White show that the bankruptcy system provides entrepreneurs with partial wealth insurance, since they can keep wealth up to the exemption level in their state if their businesses fail. Assuming that potential entrepreneurs are risk averse, this makes going into business more attractive because the consequences of failure are not as bad. Since states with higher exemption levels provide higher levels of wealth insurance, the

authors show that potential entrepreneurs are more likely to go into business if they live in states with high rather than low exemptions.

Fan and White use data from The Survey of Income and Program Participation (SIPP), which gives information on whether families contain one or more workers who are self-employed. The authors estimate models explaining whether the decision to be self-employed depends on the exemption level in the family's state of residence. States have several types of exemptions, but the authors focus on the homestead exemption since it is the largest and most variable. Homestead exemptions range from zero in two states to unlimited in eight states (including Florida and Texas). Because homestead exemptions benefit homeowners more than renters, the authors estimate separate effects for the two groups.

The results show that home-owning families are 35 percent more likely to own businesses if they live in states with high or unlimited homestead exemptions rather than low homestead exemptions. Families who rent are 29 percent more likely to own businesses if they live in

high exemption states — and both differences are statistically significant. The authors also show that bankruptcy exemptions affect the decision to start a business: home-owning families are 28 percent more likely to start businesses if they live in states with unlimited rather than low homestead exemptions. But Fan and White find no significant rela-

reforms would bar debtors who earn more than the median income from filing for bankruptcy under Chapter 7. Fan and White caution that such a change could reduce the attractiveness of going into business, since owners of businesses that fail might be forced to use their future earnings to repay old business debts. And lenders would be

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tionship between exemption levels and whether families end their businesses.

Finally, Fan and White note that personal bankruptcy law is currently under review in Congress, largely for the purpose of reducing abuse of the bankruptcy system by well-off debtors. But the proposed bankruptcy reforms may have unintended consequences for small business. For example, the proposed

loath to lend to once-failed business owners who want to start new businesses, because those owners have little incentive to work hard if any additional earnings mainly benefit their old creditors. All of this, Fan and White warn, could reduce the number of small businesses and could slow the overall growth rate of the U.S. economy.

— Matt Nesvisky

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