

## IN THIS ISSUE

- Social Security Induces Early Retirement Around the World
- Minimum Wage Reduces Jobs for Low-Wage Workers in France and U.S.
- U.S. Anti-Boycott Legislation Works
- Inflation Targeting Has Been A Successful Monetary Policy Strategy

## Social Security Induces Early Retirement Around the World

In almost every industrialized country, the population is aging rapidly and individuals are living longer. These demographic trends have placed enormous pressure on the financial viability of the social security systems in these countries. This is compounded by another trend: in virtually every country, employees are leaving the labor force at younger and younger ages. That trend is most evident for men, but participation is also declining for older women, in spite of large increases in the labor force participation of younger women. In some countries, the labor force participation rates of 60-to-64 year old men have fallen by 75 percent over the past three decades, increasing substantially the proportion of retired persons to those in the labor force.

One explanation for the striking decline in labor force partici-

pation, emphasized by NBER Research Associates **Jonathan Gruber** and **David Wise**, is that social security provisions themselves provide enormous incentives to leave the labor force early, thus exacerbating the finan-

sions and retirement in eleven industrialized countries: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Spain, Sweden, the United Kingdom, and the United States.

In the early 1960s, the labor

---

“In the early 1960s, the labor force participation rates of men 60 to 64 were above 70 percent in all but one of the countries and above 80 percent in several countries. By the mid-1990s, the rate had fallen to below 20 percent in Belgium, Italy, France, and the Netherlands and to about 35 percent in Germany and 40 percent in Spain. The U.S. decline from 82 percent to 53 percent was modest in comparison to the much more precipitous decline in these European countries.”

---

cial problems. They emphasize this aspect of social security plan provisions in **Social Security Programs and Retirement Around the World** (NBER Working Paper No. 6134), which summarizes evidence produced in an NBER project on social security provi-

force participation rates of men 60 to 64 were above 70 percent in all but one of the countries and above 80 percent in several countries. By the mid-1990s, the rate had fallen to below 20 percent in Belgium, Italy, France, and the Netherlands and to about

### NBER Working Papers On-Line

A complete list of all NBER Working Papers with searchable abstracts, and the full texts of Working Papers (issued since September 1994) are available at <http://www.nber.org/wwp.html> to anyone located at a university or other organization that subscribes to the (hard copy) Working Paper series.

If you believe that your organization subscribes, but you cannot access the on-line Working Paper service, please e-mail the NBER at [wwp@nber.org](mailto:wwp@nber.org) for more information and assistance.

35 percent in Germany and 40 percent in Spain. The U.S. decline from 82 percent to 53 percent was modest in comparison to the much more precipitous decline in these European countries. Japan stands out with the smallest decline of all the countries, from about 83 percent to 75 percent.

Gruber and Wise emphasize the foregone productive capacity of older employees who leave the workforce. One measure of foregone capacity is the proportion of persons out of the labor force, which for men age 55 to 65 ranges from 67 percent in Belgium to 22 percent in Japan. It is 37 percent in the United States.

Two features of social security plans have an important effect on labor force participation incentives: The first is the age at which benefits become available. The collective evidence for all countries combined shows that statutory social security eligibility ages contribute importantly to early departure from the labor force. In addition, unemployment and disability programs serve as early retirement programs in many countries. Very few persons retire before benefits are available.

The second feature is the change in the present value of future benefits if a persons continues to work, once benefits are available. This is called the benefit accrual. If the accrual is positive, it adds to total compensation from work-

ing an additional year; if the accrual is negative, it reduces total compensation. The ratio of the accrual to wage earnings is an implicit tax on earnings if the accrual is negative and an implicit subsidy to earnings if the accrual is positive. A negative accrual discourages continuation in the labor force; a positive accrual encourages continued labor force participation. As it turns out, the pension accrual is typically negative at older ages: continuation in the labor force implies a reduction in the present discounted value of pension benefits. That is, in most countries, because of insufficient actuarial adjustment for fewer years of pension receipt, combined with generous earnings replacement rates for retirees and high social security payroll taxes for workers, there is an implicit tax on work and an incentive to leave the labor force. The magnitude of the accrual, and the corresponding tax, differ greatly from country to country.

High implicit tax rates are common in European countries, with tax rates over 50 percent in many instances and in one case as high as 141 percent. Gruber and Wise find that the relationship between the implicit social security tax on work is strongly related to the labor force participation of older persons. A simple measure of the tax incentive for early retirement is the sum of the implied tax rates

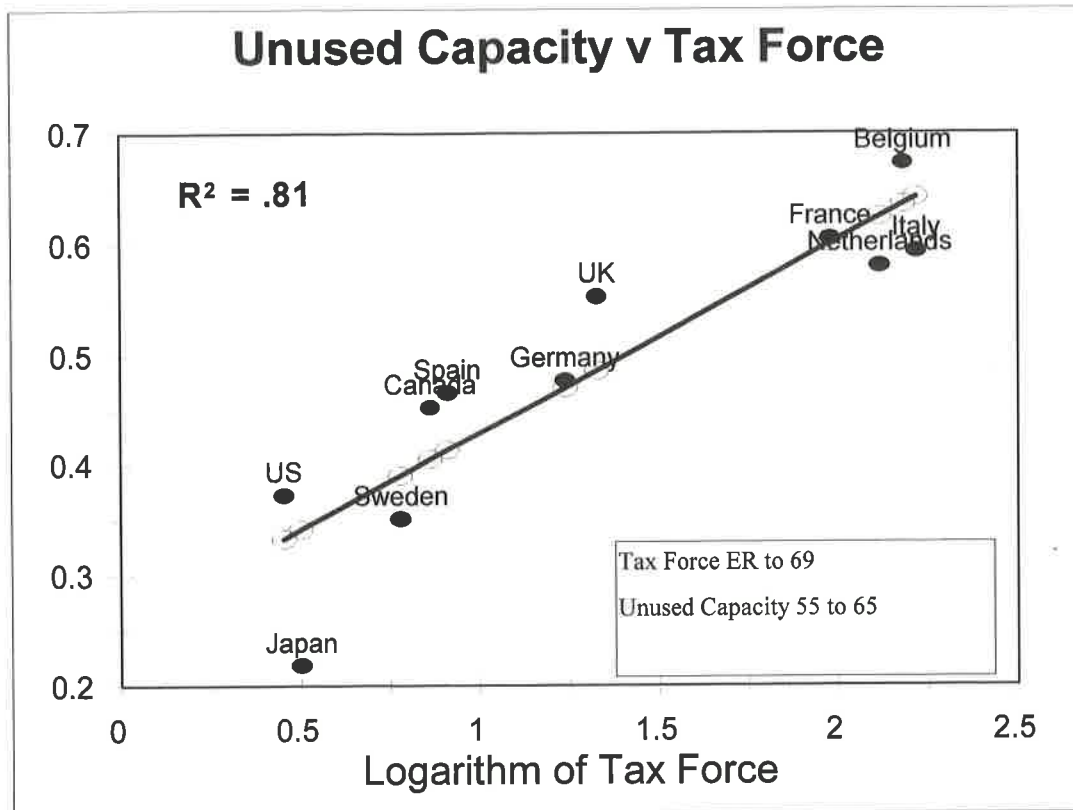
on continued work beginning at the early retirement age running through age 69, which the authors call the "tax force" to retire. The measure ranges from less than 2 in Japan to over 9 in Italy. (A measure of 10, for example, would imply a 100 percent tax rate on all earnings beginning at age 60.)

The relationship between this "tax force to retire" and unused labor force capacity (between ages 55 and 65) is shown in the figure. There is a strong correspondence between the tax force to retire and unused labor capacity, and the relationship is not very sensitive to alternative age ranges for measuring either the tax force or unused capacity.

Putting the evidence together, it is clear that there is a strong correspondence between the age at which benefits are available and departure from the labor force. The authors conclude that social security program provisions have indeed contributed to the decline in the labor force participation of older persons, reducing the potential productive capacity of the labor force. And, if the trend to early retirement is to be reversed, as will almost surely be dictated by demographic trends, changing the provisions of social security programs that induce early retirement will play a key role.

—David R. Francis





## Minimum Wage Reduces Jobs for Low-Wage Workers in France and U.S.

**E**conomists have long believed that minimum wages destroy jobs for low-wage workers. Nonetheless, many studies have

and the United States (NBER Working Paper No. 6111), **John Abowd, Francis Kramarz, Thomas Lemieux, and David Margolis** find that the minimum wage has had very large negative

the last five decades. Between 1951 and 1994, the French minimum wage rose from 1.95 francs an hour to 6.92 francs an hour in 1994, both measured in 1970 francs, an increase of 255 percent. The French minimum wage in 1994, measured in 1997 dollars, was over \$6.50 an hour.

“To check for an effect of the minimum wage, the authors tracked the employment of workers whose wage, just prior to the increase, was above the previous minimum wage but below the new higher minimum wage. For French men aged 25 to 30 who were in this marginal category, an increase of 1 percent in the minimum wage reduced their probability of keeping their job by 4.6 percent.”

To check for an effect of the minimum wage, the authors tracked the employment of workers whose wage, just prior to the increase, was above the previous minimum wage but below the new higher minimum wage. Such workers, they reason, would be most likely to be priced out of work by the increase in the minimum wage. The authors find

found that the effects of minimum wages are small, even for young workers. But in a recent NBER study, **Minimum Wages and Youth Employment in France**

effects on the group of French and American youths whose low wages put them most at risk.

In France, the minimum wage has been rising in real terms in

that, for French men aged 25 to 30 who were in this marginal category, an increase of 1 percent in the minimum wage reduced their probability of keeping their job by 4.6 percent.

In the United States, on the other hand, the minimum wage stayed constant at \$3.35 an hour from 1981 until the late 1980s, which means that, adjusted for

inflation, the minimum wage fell. Therefore, the authors took the opposite tack with U.S. data, examining the employment records in earlier periods of workers earning the minimum wage in later periods. They speculate that many such workers are likely to be priced into the labor market as the real minimum wage falls, after having previously been un-

able to find jobs at the earlier high real minimum. The evidence confirms this: Abowd and his co-authors conclude that a 1 percent decrease in the real minimum wage increases by 2.2 percent the probability that a young man employed at the minimum wage was out of work in the previous period. —David R. Henderson

## U.S. Anti-Boycott Legislation Works

The Arab League boycott of Israel has been in effect since 1945, making it one of the longest lasting in modern history. American firms receive approximately 10,000 requests each year to participate in that boycott, the most visible of all on the international scene. The U.S. government requires companies to report all requests to participate in such boycotts. U.S. anti-boycott legislation, passed in 1976, aims at reducing American companies' participation in boycotts of Israel, imposing stiff tax and civil penalties on those that comply. Despite these penalties, American companies report that they comply with approximately 30 percent of such requests.

The Arab League boycott not only presents companies with the choice of doing business either with Arab countries or Israel, it also extends the boycott to companies doing business with supporters of Israel. That prohibition prevents companies from using intermediaries and adds to the cost of doing business with Israel. Of course, there are also costs to

the United States in opposing the boycott of Israel, including strained relations with Arab countries, lost economic opportunities, and encouraging opposition to U.S.-led boycotts of countries such as Cuba, China, and North Korea.

Even so, as a strong supporter of Israel, the United States passed anti-boycott legislation in 1976. Penalties for American firms that

are effective in reducing corporate compliance with boycott requests. He examines the available data from 1977 to 1982 and 1986, which show that most boycott requests are refused and that most companies categorically refuse all requests. However, the evidence also indicates that participation in boycotts is related inversely to the magnitude of U.S. tax penalties. In other words, as

---

“Participation in boycotts is related inversely to the magnitude of U.S. tax penalties.”

---

comply with the boycott include the loss of foreign tax credits, thereby making their effect on companies a function of local tax rates. That fact also provides a way to determine the effectiveness of the 1976 anti-boycott legislation, by measuring compliance as a function of how hard the penalties financially hurt American corporations.

In **Taxed Avoidance: American Participation in Unsanctioned International Boycotts** (NBER Working Paper No. 6116), Research Associate **James Hines** examines whether such tax penalties

foreign tax rates cause a company's bottom line penalties to increase, its likelihood of participating in a boycott decreases. Tax rate differences of 10 percent result in a 6 percent difference in boycott compliance, Hines finds.

The evidence indicates that U.S. anti-boycott legislation is, in fact, effective. It significantly reduces the willingness of American firms to participate in the boycott of Israel, lowering participation rates by between 15 and 30 percent. —Les Picker

---

## Inflation Targeting Has Been A Successful Monetary Policy Strategy

**T**he key issue facing central banks as we approach the end of the twentieth century is what strategy they should pursue in the conduct of monetary policy. One choice of monetary strategy that has become increasingly popular in recent years is inflation targeting, which involves the public announcement of medium-term numerical targets for inflation with a commitment by the monetary authorities to achieve these targets. How well has inflation targeting worked in countries that have adopted it?

Mishkin and Posen show that Germany is best thought of as a “hybrid” inflation targeter, in that it has an explicit numerical inflation goal and has more elements in common with the features of an inflation targeting regime than with a rigid application of a monetary targeting rule. Key elements of a successful targeting regime—flexibility and transparency—have been present in Germany and are also essential elements in inflation targeting regimes in other countries.

New Zealand was the first country to implement inflation targeting formally starting in 1990

1991) suggests that an inflation-targeting framework with a less rigid institutional structure can also be highly successful. Inflation targeting has worked to keep inflation low and stable in Canada even though accountability is to the general public rather than specifically to the government through specified contracts. As in Germany and New Zealand, a key component of Canada’s success with inflation targeting has been a strong and increasing commitment to transparency and the communication of monetary policy strategy to the public. As part of this strategy, the Bank of Canada has emphasized that inflation targeting can help dampen business cycle fluctuations because the floor of the target range is taken as seriously as the ceiling.

The United Kingdom adopted inflation targets in 1992 in the aftermath of a foreign exchange crisis in order to restore a nominal anchor and to lock in past disinflationary gains. Until May 1997, inflation targeting was conducted under severe political constraints—that is, under a system in which the government, not the central bank, set the monetary policy instruments. Despite this handicap, British inflation targeting helped produce lower and more stable inflation rates. The success of inflation targeting in the United Kingdom can be attributed to the Bank of England’s focus on transparency. The Bank of England led the way in producing innovative ways of communicating with the public,

---

“Inflation targeting appears to have been successful in increasing the transparency of monetary policymaking and in lowering significantly the rate of inflation in these countries, without any negative consequences for output.”

---

**In Inflation Targeting: Lessons from Four Countries** (NBER Working Paper No. 6126), Research Associate **Frederic Mishkin** and coauthor **Adam Posen** examine this question by analyzing the experience in the first three countries that have adopted inflation targeting—New Zealand, Canada, and the United Kingdom—as well as in Germany which adopted many elements of inflation targeting even earlier. Inflation targeting appears to have been successful in increasing the transparency of monetary policymaking and in lowering significantly the rate of inflation in these countries, without any negative consequences for output.

and it has been highly successful: this country, which was prone to high and volatile inflation before the inflation-targeting regime was adopted, has emerged from this experience as a low-inflation country with high rates of economic growth. However, the New Zealand experience indicates that strict adherence to a narrow inflation target range can lead to movements in policy instruments that may be greater than the central bank would like and can create unnecessary instances in which credibility can be damaged even when the underlying trend inflation is contained.

The Canadian experience with inflation targeting (adopted in

especially through its *Inflation Report*. Indeed, the Bank of England's achievements in communication have been emulated by many other central banks pursuing inflation targeting.

Mishkin and Posen conclude that the design choices of the inflation targeting countries have tended to converge over time, suggesting that a consensus is emerging on best practice in the operation of an inflation-targeting regime. Transparency and flexibility, properly balanced in operational design, appear to create a

sound foundation for a monetary strategy in pursuit of price stability. Inflation targeting has been successful in enabling countries to maintain low inflation rates, something that they have not always been able to do in the past. Furthermore, inflation targeting has not required the central banks to abandon their concerns about other economic outcomes such as the level of the exchange rate or the rate of economic growth. Indeed, there is no evidence that inflation targeting has produced undesirable

effects on the real economy in the long run; instead it has likely had the effect of improving the climate for economic growth. However, Mishkin and Posen caution that inflation targeting is no panacea: it does not enable countries to eliminate inflation from their systems without cost, and anti-inflation credibility is not achieved immediately upon the adoption of an inflation target. Indeed the evidence suggests that the only way for the central bank to gain credibility is the hard way: they have to earn it.

---

## NBER

---

*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  
Chief Executive Officer  
Sam Parker—Director of Finance  
and Corporate Secretary  
John H. Biggs—Chairman  
Carl F. Christ—Vice Chairman  
Gerald A. Polansky—Treasurer*

*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 suggestions 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.*

*Preparation of the Digest is under the supervision of Donna Zerwitz, Director of Public Information.*

*Abstracts of all current NBER Working Papers appear in the NBER Reporter. 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 paper requested. Outside of the United States, add \$10.00 per order for postage and handling. Advance payment is required on all orders. MasterCard and Visa are accepted. Please do not*

*send cash. To order, call the Publications Department at (617) 868-3900. Please have the Working Paper Number(s) ready.*

*Subscriptions to the full NBER Working Paper series include all 300 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 \$1480; for academic libraries and faculty members, \$750. Higher rates apply for foreign orders.*

*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.*