

**14.41 Public Economics, 2002**  
**Handout #7**

**Effects of Social Security on Saving (based on Feldstein 74)**

1. crowdout : saving decrease
2.  $n+g < r$  : saving increase
3. retire earlier : saving increase
4. Ricardian Equivalence : saving increase
5. precautionary saving crowded out : saving decrease

Theoretical effect of Social Security on saving is ambiguous.

**Summary of J. Gruber and D. Wise, “Social Security Programs Around the World”**

Almost every industrialized country has a population which is quickly aging and is also living longer on average. At the same time, the average retirement age has been lowering. These factors are placing great strains on the Social Security systems in these countries. This introduction explores the possibility that it is the S.S. systems themselves which are causing the decline in labor force participation among the elderly.

The set of countries discussed in the volume – Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, United Kingdom and the United States - all had very high rates of elderly labor force participation (LFP) in 1960, with rates ranging from .7 to .85 for men aged 60 to 64. Over the period 1960 – 1995, the LFP rate plunged in most of these countries, Japan being the single exception. By 1995, Belgium had a rate of .2, while the U.S. had a rate of .5.

**Incentive Effects of Plan Provisions:**

Two features of S.S. plans have important effects on the LFP rate. The first is the age when benefits are first available – in most of these countries few people are still working at the ‘normal’ retirement age, although the age of normal retirement is also important. The second feature is the pattern of benefit accrual. This concerns how wealth evolves with continued work. Social Security Wealth (SSW) is the present discounted value of expected benefits. The difference in SSW for an extra year of work is referred to as the S.S. accrual. Working an extra year may increase the benefits paid when the individual retires, but lowers SSW by the amount the individual would have received in S.S. benefits that year if he had retired. In most countries, the S.S. accrual is negative at older ages – working an extra year lowers the individuals SSW. Negative accrual rates impose an implicit tax on work which discourages elderly LFP. A final important incentive to consider is the interaction of other government and private programs with S.S. These programs, and their effects, tend to vary by country. In the U.S. private pensions are important, while in Europe the provision of elderly disability insurance is important.

## **Comparison of France, Germany and the U.S.:**

In all three countries, the changes in the elderly LFP rate closely mirror institutional changes in the country's S.S. system. In particular, at the introduction of early retirement benefits, spikes in retirement developed at the early retirement age. In France and Germany, departure rates (from the labor market) at the social security early retirement age are 60%, while the U.S. has a rate of 25%. The difference is likely explained by the implicit tax on earnings past the early retirement age. In France the implicit tax is close to 70%, Germany's is 40%, whereas the U.S.'s is close to 0%. By age 70, however, the implicit tax in the U.S. reaches 50%, primarily because the actuarial adjustment rate at this age is far below the fair rate. All three countries also experienced an increase in retirement prior to the early retirement age. In the U.S. this was due to private pension provision early retirement dates, which are often from 55 – 60. In France and Germany, the increased provision of unemployment and disability insurance is likely responsible.

### **Evidence Across all Countries:**

A comparison of the data for all the countries considered in the study generates three primary conclusions.

1. As in the three country comparison above, there is a strong correlation between S.S. early and normal retirement ages and departure from the labor force.
2. Most countries S.S. plans place a heavy implicit tax on elderly LFP. These implicit taxes provide a strong incentive for the elderly to exit the labor force.
3. The magnitude of the implicit tax and the level of benefits varies greatly across these countries and there is a corresponding variance in retirement behavior. This can be seen by roughly dividing the countries into 3 groups by the elderly male LFP rate, from lowest to highest. (1) Belgium, France, Italy, the Netherlands and the United Kingdom (2) Germany, Spain and Canada (3) United States, Sweden and Japan. The first group has an average replacement rate of 78% at the early retirement age and an implicit tax of 92% on work in that year. The third group has an average replacement rate of 50% at the early retirement age and a 25% implicit tax on work in that year.

The introduction concludes by admitting it is possible that S.S. rules merely reflect established retirement norms in the countries studied and are not themselves responsible for elderly LFP rates. The authors feel this is highly unlikely due to the clear historical correlation between S.S. rule changes and retirement behavior within the individual countries.