SOCIAL SECURITY, TIME FOR REFORM

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The social security system is currently the object of intense public concern and academic scrutiny. This concern reflects the enormous growth in social security taxes and benefits in the last 20 years as well as prospects for substantially higher social security taxes in the near future. Since 1960 the combined employee and employer social security tax rate has doubled from 6 percent to 12.1 percent. Over half of the nation's income recipients now pay more social security taxes than federal income taxes.[1] During this period the number of social security recipients has more than doubled and benefit payments including retirement, disability and old age health insurance payments have almost quadrupled in real terms. In the past year Congress has passed and the President signed major new social security legislation requiring substantially higher social security tax contributions for many Americans and radically changing the formula under which social security benefits will be calculated in the future. The new law represents the most important social security legislation enacted since the program was established in 1935: it spells out the nature of the social security system through the turn of the century and beyond. However, public reaction to the higher social security payroll taxes provided in the new law has led some members of Congress to propose its repeal. Thus the future nature of the social security system is still quite undecided. The social security system stands today at a cross-roads. The

paths lying before it branch out according to the choice of financing and the size and structuring of benefits. Each path has different implications for economic efficiency and interpersonal equity. A prudent choice of paths requires knowledge of the purpose and history of the social security system as well as an examination of its impact on the efficiency and equity of our economy.

This chapter will briefly discuss the rationale for the social security system and sketch the structure and enormous historic growth of the program. Next I outline the provisions of the new social security legislation. This information will provide a background for consideration of three major social security issues, the extent of interpersonal fairness or equity within the system, the effect of social security on savings and aggregate capital accumulation, and the extent to which social security reduces labor supply. In the final section of the paper I suggest reforms that would increase both the equity and efficiency of the social security system.

The Role of and Rationale for the Social Security System

While the social security system provides disability and health insurance, engages in inter- and intra-generational income redistribution and provides supplemental welfare payments to the aged, its main role is to force people to accumulate for their old age. It is important to keep this primary function of social security -- requiring people to save for their old age -- in mind when considering proposals to "reform" social security. Some proposals and indeed some provisions of the current legislation contravene the main purpose of social security.

Social security was initiated in 1935 in the middle of the great depression. The high unemployment rates of the time and the failure of financial institutions resulted in large numbers of indigent aged people. Social security was designed to protect future generations of aged from the vagaries of macro economic fluctuations and the concommitant loss of employment by requiring savings in the form of payroll tax contributions when young; these contributions would then be returned in the form of annuitized benefits when old. While the system was not set up on a strictly individualized basis guaranteeing a return of principle plus interest on tax contributions, the original concept and the actual system is today strongly individually based. The system is not now and has never been simply a tax transfer scheme in which benefits received are unrelated to past tax contributions.

Social security both requires savings of individuals who might otherwise imprudently but with full knowledge arrive at retirement with no means of support as well as insures individuals against the uncertain length of one's working life. An unexpected decline in health (short of complete disability), motivation, or stamina, the loss of relative productivity due to unanticipated technological change, as well as economic recessions all make the exact age of retirement uncertain for many individuals.

While much more empirical work must be done to determine conclusively the extent to which individuals "irrationally" under-save and hence "need" social security to save for them, Peter Diamond has presented some initial evidence pointing in that direction.[2]

Diamond analyzes the asset positions of individuals at the age of
retirement and finds that over 35% accumulated substantially less
wealth than appears prudent. There is also evidence suggest-
ing that the exact age at which one retires is highly uncertain. I
compared the 1966 expectations of retirement age of 1787 working men
aged 45 to 59 with their actual behavior and new retirement expecta-
tions in 1973; over 52 percent of these men either retired earlier
than they expected in 1966, failed to retire in accord with their
1966 expectations or changed their expected age of retirement.[3]
Whether due to myopic planning or unanticipated random events
forcing early retirement, many individuals might find themselves
destitute in old age in the absence of social security.

The Structure of Social Security Taxes

Since its inception social security benefit payments have been
financed by a proportional payroll tax on labor earnings up to a
specified ceiling. The inaugural legislation called for a one
percent tax contribution from both employers and employees on earn-
ings up to $3000. Today the OASDHI (Old Age Survivors, Disability
and Health Insurance) tax is 6.05 percent each for both employer
and employee on earnings up to $17,700. Of the combined 12.1
percent payroll tax 1.10 percent is used to finance the HI, medicare,
portion of social security.

There is virtually universal agreement among economists that
the distinction between the employee and employer contribution has
no long run economic significance. Whether the employer mails
in the social security tax check or the employee mails in the tax
check, total labor costs facing the employer equals the employee's

after social security tax wage plus the combined social security tax payment. Employers take the total of labor costs into account when determining how much labor to employ. Assuming competitive conditions and fixed supplies of capital and labor, increases in either the employee's or employer's social security tax will reduce the net wage received by labor; in economic jargon, the burden or incidence of the tax will fall on labor. As will be discussed below, however, social security may alter the long run supplies of both labor and capital in such a manner as to shift more than 100% of the tax onto labor; i.e., the long run gross (before tax) wage may be reduced because of social security.

Considered in isolation the social security payroll tax is regressive since tax payments as a fraction of earnings fall for levels of earnings above the taxable ceiling. However, since the social security benefit schedule rewards low earner contributors at the expense of high earner contributors, the system taken as a whole is much more progressive.[4] Some economists favor replacing the payroll tax with more progressive general revenue financing through the federal income tax.[5] Such a procedure would undermine the individually oriented nature of the system and have serious disincentive affects on labor supply. While the relationship between taxes paid in and benefits received has changed over time, workers paying into the system could in the past and can today anticipate the return of at least principal if not interest on their marginal tax contributions. If the payroll tax were replaced by higher income taxes and benefits received were not tied to taxes paid in, then

payments to social security would be perceived as taxes rather than as a form of savings. The return to marginal labor efforts are already highly taxed under federal, state and city income taxes; under the current federal income tax a married male with two children earning an annual income of $18,000 faces a marginal federal income tax rate of about 22 percent. Marginal state income tax rates average about 2 percent. If we now add a 12.1 percent rate increase for social security the individual will end up paying 36¢ in taxes on the last dollar earned. Maintaining the link between social security taxes paid and benefits received and the perception of these taxes not as taxes but as a form of saving will be even more important in the future. The new social security amendments call for tax rate increases up to 15.3 percent by 1990. To the extent that additional income redistribution is politically desirable the federal income tax rather than the social security payroll tax is the proper vehicle.[6]

Social Security Benefits

The Social Security Adminstration calculates retirement benefits on the basis of an average of monthly covered earnings (earnings subject to taxation) over the worker's lifetime. (The current computation uses the years after 1950 or after age 21 if later.) A primary insurance amount, PIA, is computed which constitutes the worker's own benefit. In addition dependent and survivor benefits are available for spouses and children under 18.[7] Dependent benefits equal 50 percent of the worker's PIA for each dependent up to a maximum family benefit. The survivor benefit equals 100% of the deceased spouse's PIA and is available to the surviving spouse and children

as well. If both spouses have work histories dependent and survival benefits are available only to the extent that they exceed the amount the worker could collect on her (his) own account.

Workers may retire at age 62 or beyond and collect permanently lower benefits. For early retirement before age 65 benefits are "actuarially" reduced 5/9 of 1 percent for each month of early retirement. For recipients younger than 72 social security benefits are subject to an earnings test. In 1978 beneficiaries could earn up to $4,000 without foregoing benefits. Beyond the $4,000 the beneficiary loses one dollar of his annu. PIA for every two dollars he earns. When he earns enough to exhaust his PIA he loses all his dependent benefits as well. Beyond age 65 the social security earnings test presents individuals with a 50 percent marginal tax rate on earnings in excess of $4,000 (up to twice the annual PIA) -- this 50 percent tax is in addition to the regular social security tax, and federal, state, and city income taxes.[8] For some individuals the combined marginal tax rate on the 4001st dollar exceeds 100 percent.

Historical Growth of the System

The 1935 Social Security Act provided compulsory coverage for all private sector (non-railroad) employees in commerce and industry. Over the years coverage has been extended to include the self-employed, members of the armed services and farm workers. Today about 90 percent of jobs are covered under social security; the residual 10 percent corresponds primarily to federal, state, and local government employment.

The original 1935 legislation authorized the accumulation of a large trust fund from tax contributions. This trust fund was meant

to invest tax contributions and distribute the principal plus interest
in the form of social security benefits to past contributors upon
retirement. However, the goal of fully funding social security
was essentially abandoned with the 1939 amendments. These amend-
ments provided for the payment of benefits to aged persons who had
paid little or nothing into the system. In addition the link between
individual tax contributions and individual benefits received was
weakened by the provision of dependent benefits. Today the system
is essentially unfunded. The 1977 OASDHI trust funds of $49.4
billion were smaller than that year's $84.3 billion OASDHI expendi-
tures; the trust funds are a minor fraction of the more than $1
trillion outstanding social security liabilities.[9] The unfunded
social security financing has been called "pay as you go"; young
workers pay into the system and their tax payments are immediately
paid out as current social security benefits. The entire scheme
is quite analogous to a chain letter; the benefits that each genera-
tion of old people receive depend critically on the willingness of
the corresponding young generation to continue the chain by continu-
ing to pay in taxes. When the number of young workers is large
relative to the number of retirees and benefit levels are modest
the tax contribution required from each young worker is small.
Within the past few years, however, real benefit levels have risen
markedly due in large part to the 1972 over-indexation of benefits
to inflation. In addition, the national fertility rate which reached a
post-World War II high of 3.7 children born per woman in 1957 has
fallen dramatically; the 1976 figure was 1.8. The lower fertility

rates imply that the ratio of workers to retired beneficiaries will fall from a current level of 3.2 to about 2 by the middle of the next century.[10] The reality of a $3.2 billion excess of benefits over tax receipts in 1976 and the prospects for large short-run and even larger long-run deficits prompted the 1977 legislation.

The 1977 Social Security Amendments

The new social security legislation addresses both the short-run problem of the proper indexation of benefits for inflation as well as the longer run problem of a declining ratio of workers to beneficiaries. A new formula will calculate benefits on the basis of average indexed monthly earnings (AIME). The procedure automatically adjusts for inflation; in addition the structure of replacement ratios, the ratio of real benefits to past real earnings, will remain constant over time as the economy grows. Hence as real wages rise due to increases in the productivity of labor real retirement benefits will rise proportionately. Inflation by itself will not affect any real variables.

To finance these high and rising benefit levels the legislation calls for increases in the payroll tax rate from its current 12.1 percent value to 15.3 percent by 1990. The major increment in taxes will come, however, from increases in the ceiling on taxable wages. The current ceiling of $17,700 will rise to $31,800 by 1982. Thereafter the ceiling will increase with increases in average earnings in the economy. This constitutes a very hefty tax increase for the middle class. Assuming a 7% inflation rate from now till 1982, $31,800 in 1982 corresponds to $24,275 1978 dollars. Social security taxes paid in 1978 on earnings of $24,275 are $2,141.70. Using the

1982 tax rate and ceiling, the tax liability on $24,275 is $3252.85, representing a real tax increase of 52 percent or $1111.15 1978 dollars.

Even these massive tax increases may prove quite insufficient to finance the program through the first half of the 21st century. A. Robertson, the Chief Actuary of the Social Security Administration projects that if the current law is maintained up to the year 2025 tax rates would have to increase by over 8 percent to meet benefit payments.[11] Of course projecting far into the future is a hazardous business; still, forecasts of a 23% or greater social security tax in 2025 do not augur well for a continuing social security chain letter.

The new law earns points for preserving and strengthening the link between individual contributions and benefits; the higher ceilings on taxable earnings increase the progressivity of the system; and Congress has finally figured out how to correctly adjust benefits for inflation; the new benefit formula is quite simple and permits workers, for perhaps the first time, to calculate with some precision their expected return on tax contributions. On the other hand, the law makers appear unwilling to reduce benefits or even their rate of growth in order to mitigate the tax increases. Some leveling off of benefits appear preferable to the massive tax increases now ordained and may be necessary to maintain public acceptance of the program. In addition growth in real benefits is tied to growth in real wages, rather than growth in the real tax

base. While the real tax base may increase with average real wages,
it need not. For example, a reduction in the labor supply of young
workers would raise real wages and thus benefits; at the same time
the tax base could fall depending on the elasticity of labor demand.
Higher benefits and a lower tax base spell only one thing, higher
tax rates.

Social Security -- The Issue of Equity

The redistribution of income both within and across generations
has been and is today a major feature of social security. The
intergenerational redistribution from young to old is associated
with the start up of the system and the unfunded financing.
Rather than accumulating a large trust fund, social security
tax contributions were immediately paid out as benefits to
elderly retirees who had spent few years paying taxes into
the system. For single males retiring at age 65 in 1940, 98%
of benefits received were unearned, i.e., exceeded the return
of their tax contributions plus the market rate of interest.
For a single male retiring in 1970, 68 percent of benefits were
unearned. The annual size of this intergenerational transfer has
been enormous, comparable in magnitude to the total of all other
government public assistance programs.[12] The intergenerational re-
distribution is, however, a steadily diminishing feature of the
system. Current age 62 retirees were age 21 in 1937 and some
have paid in taxes for 41 years.

The intragenerational transfers are, on the other hand, an
enduring feature and can, in many instances, be characterized
as grossly unfair. Within a generation the system redistributes

from males to females, from blacks to whites, from working women
to non-working women, from single people to married couples,
from employees to the self-employed, from non-government workers
to government workers, and from working elderly age 65-72 to non-
working elderly age 65 to 72.

The male-female and black-white redistribution results from the
shorter life expectancy of males relative to females and blacks
relative to whites. Using current life tables, the average white
male age 26 will live to age 72, while the average white female
age 26 will live to age 79. For blacks the respective figures
are 67 and 75.[13] In Table 1 I estimate the rate of return different singl
workers will receive on their tax contributions under the new
law. The table assumes that work begins at age 26 in 1978 and
retirement at age 62; earnings grow from the initial age 26
values at a 2 percent real annual growth rate. The table reports
the rate of return the workers would realize if she(he) enjoyed
the typical life span for her(his) sex and race.

Table 1

Projected Rates of Return from Social Security

Annual Earnings at Age 26	Male		Female	
	White	Black	White	Black
$7,000	.020	-.015	.038	.030
$10,000	.015	-.021	.033	.025
$15,000	.008	-.031	.028	.019
$25,000	-.005	-.050	.017	.007

These numbers are based on assumptions which, if anything, make them uniformly somewhat high.[14] The first point to make is that even under these favorable assumptions the historically high rates of return arising from the intergeneration transfer will not continue into the future. White single males can anticipate a 2% real rate of return on their social security contributions; while not strikingly high, 2% compares favorably with the negative real return available today on most saving accounts.

There is a 2.5 percent difference in the rate of return for a white male with initial earnings of $7,000 and a white male with initial earnings of $25,000. This reflects the overall progressivity of the tax-benefit structure. The male-female and black-white differences are quite large. The dollar equivalents of these different rates of return depend on how one compares dollars receivable in the future with dollars received today, i.e., on the choice of discount rates. At a zero percent discount rate the redistribution from black to white males age 26 earning $10,000 initially is $36,580. In other words, the social security system can be thought of as handing the typical white male $36,580 more than the typical black male at age 26. At a 5 percent discount rate the redistribution is $4,167 and at 10 percent it is $477. Hence, exactly what one makes of these different rates of return depends on the choice of discount rate. Correcting these distributional anamolies by paying higher benefits to or collecting lower taxes from males relative to females and blacks relative to whites appears infeasible. Since the extent of the redistribution is proportional to the scale of the system, these comparisons are, therefore, ver

important for choosing the optimal size of social security.

The table assumes that black and white mortality is independent of income. This may be invalid; to some extent the lower black life expectancy may reflect the lower income levels of blacks. There is very little solid evidence on the relationship between mortality and income, but what evidence is available suggests that poor people do have much shorter life spans.[1] Until we understand more fully the relationship between income and longevity it will be difficult to appraise the overall progressivity of the social security system. For example if "poor" white males earning initially $7,000 have the same life expectancy as black males do on average, then the "poor" white males' rate of return of -.015 would lie below that of the richer ($25,000) white males of -.005. Differences in life expectancy by income might offset the progressive benefit schedule by enough to make the entire system regressive.

Dependent and survivor benefits still mandated under the new law can give rise to gross inequities of the following type. Consider two families A and B. In family A Mr. A and Mrs. A both work and both initially earn $10,000 at age 26. In family B Mr. B works and Mrs. B doesn't. Mr. B starts out earning $20,000 at age 26. All four spouses are the same age, the three workers all enjoy a constant 2% real wage growth, pay in yearly 12% or more of their earnings in taxes and retire at age 62. Although the two families pay exactly identical taxes for 36 years, family B receives $1,305 (in real 1978 dollars) more in

yearly benefits than family A as long as all four people remain alive. If Mr. A and Mr. B die at the same time the surviving Mrs. B will receive $3,309 more each year in benefits than the surviving Mrs. A. The story behind these numbers is the following: When the two A's and the male B retire at 62, the two A's collect $7,318 each in benefits. Mr. B receives $10,627 in benefits on his own account and $5,314 in dependent benefits for his wife. The combined benefits of the B's of $15,941 exceeds that of the A's of $14,636 by $1,305. When Mr. A and Mr. B die Mrs. A continues to receive benefits of $7,318 based on her own earnings record while Mrs. B is eligible for the survivor's benefit which equals 100% of her deceased husband's benefit, $10,627. While Mrs. A is in theory eligible for survivor benefits her survivor benefits are reduced dollar for dollar by benefits she collects on her own account.

Not only can two families pay in identical taxes and receive different benefits under social security, but two families can receive identical benefits having paid in different amounts in taxes. Let Mr. A and Mr. B both earn $15,000 and Mrs. A earn $5,000. Upon reaching age 62 Mrs. A can collect $4,697 as a dependent which exceeds the $4,689 she can collect on her own account. The A's and the B's will receive identical benefits although Mrs. A has paid in 12% or more of her earnings each year to social security for 36 years! Since Mrs. A receives no additional benefits for her thousands of dollars of social security contributions, those contributions are perceived not as

savings but as taxes on her labor supply. This implicit taxa-
tion of female labor supply (or male labor supply if the female
earns substantially more than the male), may be reducing
the work efforts of millions of females. In 1975 there were 33.7
million husband-wife families where the husband was between the ages
25 and 65. Of these 17.3 million or 51.3% were families in
which both husband and wife worked. The typical wife's earnings
represented between 1/4 to 1/3 of the total family income
putting most wives in the range of the implicit social security
tax bite.[16]

Although the ranks of the self-employed include doctors,
lawyers, dentists, accountants, and economic consultants, the
government grants the self-employed a 4.0% (4.55% by 1990) lower
tax rate than other covered workers. For self employed workers
with earnings above the ceiling, the tax break equals $708 in
1978. While their taxes are lower by 34% the benefits the self-
employed receive are calculated as if they had had no tax break.[17]
The rationale for this tax break presumably arises from the
employee-employer tax distinction. Since the self-employed
have no employer paying in taxes for them, why should they have to
pay the full tax? The answer is that the non-self-employed workers
pay the full tax. The requirement that the employer pay 6.05%
of wages to social security means that the amount he can afford
to pay to his workers is 6.05% less than it would otherwise be.
The employer-employee tax distinction is a fiction -- it has no
economic significance. While this point is demonstrated in every

decent introductory economics course using simple supply and demand curves, the message apparently has not yet reached the Congress. As a result many of the richest members of our society enjoy a social security tax advantage which can be justified by neither economic logic nor social justice.

Eligibility for social security payments requires only 40 quarters, 10 years of covered employment. Government workers who are not covered under social security can quit their jobs at age 52, work for 10 years in the private sector, and begin collecting benefits at age 62. Alternatively, they can work part time in the private sector for 40 quarters and become eligible. To the social security administration these government employees appear as poor workers since their computed averages of indexed monthly covered earnings, AIME, are very low. These workers then become eligible for the fairly high minimum social security benefit which was designed to redistribute to lifetime low earners. Having worked just a few years under social security and having paid in very little in taxes, past government employees can collect today the minimum annual benefit of $1,461 plus dependent benefits. The number of retired federal workers who take advantage of the system is large. Fully 43% of retired federal workers receive both civil service and social security benefits.[18] Fortunately the new law freezes the minimum benefit at the 1978 level; hence, the minimum benefit will be a smaller source of inequity as time passes. Even so, the progressivity of the new benefit schedule with respect to tax contributions

will still give government workers high rates of return on their low levels of tax contributions.

There is no compelling reason for excluding government workers from the program during their years of government employment. The fact that government workers have their own pension plans is not persausive since a large fraction of the private workforce is covered under non-social security pensions. To the extent that social security is engaged in redistributing from the lifetime rich to the lifetime poor, all the lifetime rich including rich government employees should be obliged to contribute to all the lifetime poor which includes poor government employees.[19]

Of all the problems of fairness cited above, the unequal treatment of working persons age 65 to 72 and non-working persons 65 to 72 is the most visible and troubling to retired persons themselves. Prior to age 72 (age 70 after 1981 under the new law) the social security earnings test reduces or eliminates benefits for many working aged. Why should elderly people who have worked and contributed to social security for years and years receive no benefits between 65 and 72 simply because they desire to continue working and contributing to the productivity of the nation? Not only do these aged workers forgo benefits but they receive no return on social security taxes they continue to pay.

The earnings test was designed in the 1930's as a mechanism to help reduce the over 20 percent rate of unemployment existing at the time. The idea was to induce old people to retire, thus opening up jobs for young workers. Economic conditions and economic

understanding of unemployment have changed considerably since the 1930's; the unemployment rate has averaged about 5 percent over the last 25 years and is simply not related to the social security earnings test.

The earnings test has also been justified as a means test, the notion being that people who earn more than a certain amount are well off and don't need social security. In 1978 the earnings test begins at $4,000. Individuals working 40 hours for 52 weeks earning the minimum wage of $2.65/hr. can hardly be called well off, yet they must forego $756 of social security benefits. If a means test is really desirable, it should be based on all income, not simply wage income and start at a much higher income level. Our current system takes $756 in benefits from the age 65 minimum wage full time employee while giving full benefits to retirees who have million dollar dividend incomes.

The only sensible argument for the earnings test arises from viewing social security as a form of insurance. In the case of fire insurance one receives payments only in the event of fire; equivalently, it is argued, one should only receive benefits after the uncertain event, namely retirement, has occurred. While more research is needed to determine exactly how uncertain retirement is, there is an acute problem of the availability of this "retirement insurance" generating adverse incentives to retire early. The problem of adverse incentives, called moral hazard by economists, seems so severe in this case that the goal of structuring social security as a pure insurance scheme should be abandoned.

Social Security and Savings

The past few years have witnessed a growing concern over an aggregate capital shortage. The debate has identified the unfunded social security system as a potentially major factor in reducing the nation's savings and the capital stock since its introduction in 1935. Martin Feldstein has pioneered research on the effect of social security on savings. In a provocative 1974 article Feldstein suggested that the social security program may have reduced aggregate savings and the long run capital stock by 38%.[20] Since capital and labor are the primary factors of production in our economy, a 38% reduction in one of these inputs has enormous implications for the level of per capita income.

The unfunded financing of social security is central to this debate. Had the government taken tax dollars from the young, invested them in a trust fund and returned the principal plus interest as benefit payments to the actual contributors, then social security would simply have substituted public for private savings with no affect on total savings. This, however, did not occur; instead, at the start up of the program, taxes paid in were immediately paid out as benefits to elderly people who had contributed very little or nothing. This intergenerational transfer, the argument goes, leads to greater consumption by the elderly than would otherwise have been the case. The initial (startup) generation of young people, on the other hand, treat their tax contributions as equivalent savings since they anticipate receiving benefits in return for their past tax contributions when old. Rather than saving privately, the young feel that they are saving through social

security. The substitution of public for private savings does not lead the initial generation of young to alter their consumption. Since the consumption of the initial generation of young is not affected but the consumption of the start up generation of old people is increased, total consumption increases and aggregate savings falls. Aggregate savings is not only reduced in the short run, in this scenario, but it is permanently lowered; under "pay as you go," unfunded financing, young people are forever handing their savings (tax contributions) over to old people as benefits; the old people consume these benefits; hence the savings of the young never get invested in the economy and hence never augment the capital stock.

Robert Barro has raised a major theoretical objection to this view.[21] Barro points out that intergenerational transfers occur in the absence of social security; these transfers take the form of support by young people of their older relatives as well as bequests and gifts from the elderly to younger cohorts. Barro suggests that the imposition by social security of a forced transfer from young to old may simply lead to an offsetting change in private voluntary intergenerational transfers with no affect on any real variables. The unearned benefits the initial (start up) generation of old receive are handed back to the young as gifts or bequests; alternatively, benefits paid to the old reduce private voluntary transfers from the young to the old dollar for dollar resulting in no change in consumption by either young or old and no change in aggregate savings. While the range of estimates vary, Michael Darby has estimated that over 70% of the U.S. capital stock can be attributed to savings for bequests;[22]

this fact adds considerable strength to Barro's argument.

Since 1974 much research has been conducted on the question of social security and savings. I have examined the long-run (Feldstein) impact of unfunded social security within a model of a growing economy.[2] The findings suggest that at current scale of the social security system the maximum possible reduction of the capital stock in an economy closed international capital flows is more on the order of 20%. While smaller than 38%, 20% is still quite large. However, when one takes into account the openness of the U.S. economy to the importation of capital from abroad, the theoretical reduction in the U.S. capital stock is much smaller. In an international context capital may be imported from abroad offsetting to some degree the reduction in capital brought about by unfunded social security.

Empirical investigations of the impact of social security on savings may be succinctly summarized by one word, inconclusive. In addition to Feldstein, three other economists (Munnell, Barro, and Darby) have examined time series data relating U.S. savings to social security variables. The estimated effect of social security on savings is quite sensitive to the choice of statistical specification. These estimates range from no impact to Feldstein's 38% figure and are generally statistically insignificant. The main problem with the time series analysis is that social security variables are highly correlated with other variables that affect consumption such as the unemployment rate. Hence, it is difficult to disentangle a separate social security effect from the data.

Studies using cross sectional micro data have not fared much better. Here the paucity of data on earnings and tax contributions over an individual's lifetime is a constraining factor.

In my own investigation of cross sectional data I found little support for the notion that social security has reduced national saving.[24] Large differences in lifetime wealth generated by the intergenerational transfer do not appear to influence savings. Those differences in lifetime wealth are, however, highly correlated with earnings, marital status, age structure of the family, and working status of the wife. As with the time series studies, it is not clear whether the social security effects obtained in our statistical procedures really reflect social security or whether they are proxying for closely related variables.

To summarize, there is no hard empirical evidence that social security has reduced the nation's saving and its capital stock. One hopes that better data will become available in the near future to resolve this important issue. We should be aware, however, that any future increases in the scale of the social security system that are associated with additional intergenerational transfers may greatly reduce savings and economic growth. Some economists are so concerned about the issue of social security and savings that they have proposed using social security to increase savings; they suggest raising taxes above their current high values to accumulate a trust fund thereby increasing aggregate savings. While greater national savings may be desirable, it is by no means clear that the social security system is the appropriate tool to achieve that result. There are alternative mechanisms such as the investment tax credit and accelerated depreciation allowances that can be employed to generate increased capital accumulation.

Social Security and Labor Supply

Social security was established to raise the relative income position of the aged. Despite the massive growth of the program the relative income position of aged families with household heads 65 and over is lower today than it was 30 years ago. Between 1947 and 1976 median nominal family income increased by a factor of 4.77 for families with heads 65 and over. For other age groups over age 24 the increase ranged from 5.03 to 5.53.[25] It is ironic that the social security system may, itself, be largely responsible for this relative decline in the income position of the elderly. Evidence is mounting that the social security earnings test is a major deterrent to labor supply by the aged.

Labor force participation rates of the elderly have dropped dramatically since 1940. Most of this reduction has been concentrated in the post age 62 group who face the social security earnings test. In 1940 the participation rate for males age 55 was 89.5%; in 1976 it was 83.4%. For 61 year olds the corresponding figures are 81.4% and 70.1%. While the 11.3% reduction for 61 year olds is impressive, for 62 year olds there is a 20.8 percentage point drop, from 79.7% to 58.9%. For 65 year olds there is a 32.7 point reduction from the 1940 value of 66.9% to the 1976 figure of 34.2%.[26] Certainly rising standards of living together with a desire for more leisure explain part of the general trend towards early retirement; but what besides social security can explain the differentially greater reduction in labor supply at age 62 than at age 61? One answer is that the ages 62 and 65 may simply have become institutionalized retirement ages in our economy and would have been critical ages with or without social security.

Using Current Population Survey data Anthony Pellechio and

I have generated more convincing summary evidence that the

social security earnings test distorts the labor supply decision

of the elderly.[27] Table 2 presents the distribution of aged workers

65 to 71 by $200 earnings brackets. In 1967 the earnings test

started at $1,500. From 1968 to 1972 the figure was $1,680; it

reached $2,100 in 1973 and $2,400 in 1974. Social security sub-

tracts a dollar of benefits for every two dollars of earnings

and thus imposes a 50% tax rate on marginal earnings above this

exempt amount.

The table clearly indicates that many aged workers adjust

their labor supply to work just up to this exempt amount and

no more. In 1967 with the exempt amount at $1,500, 11.5% of

males 65 to 71 earned between $1,400 and $1,600. In vivid

contrast only 1.9% earned $1,600 to $1,800. As the exempt amount

increases over time the porportion of both male and female workers

in the earnings brackets just under the exempt amounts increases

as well. Eliminating the earnings test would unquestionably in-

crease the incomes of many elderly as well as generate more payroll

tax revenue.

The social security earnings test significantly increases

the complexity of the retirement decision. A rational decision

about retirement now requires that workers fully understand

the complexities of the earnings test and the provisions for

actuarial reduction; they must also know the potential benefits

including dependent benefits they forego if they continue to work.

The ages and working decisions of spouses and children are essential

Table II: Social Security and the Earnings Test:
Percent Distribution of Workers 65 to 71 by
Amount of Earnings, 1967-1974

Year	1967		1968-1972		1973		1974	
Exempt Amount	$1500		$1680		$2100		$2400	
Earnings:	Men	Women	Men	Women	Men	Women	Men	Women
$1-200	9.08	19.06	7.82	13.46	7.08	14.76	4.54	13.57
201-400	6.12	11.44	4.84	9.89	5.09	8.28	3.81	10.00
401-600	4.33	8.66	4.33	8.61	4.46	6.71	5.86	6.67
601-800	4.86	5.03	4.19	4.56	4.06	8.28	4.39	7.14
801-1000	4.75	7.28	4.66	5.18	3.41	3.80	4.10	5.71
1001-1200	6.02	5.89	4.94	6.09	3.80	6.49	4.68	3.81
1201-1400	5.07	5.89	4.00	4.23	4.59	4.25	1.76	2.14
1401-1600	11.51	9.18	7.15	5.98	5.24	6.04	4.25	3.81
1601-1800	1.90	.35	7.62	6.35	4.85	3.58	4.39	1.90
1801-2000	2.01	2.60	2.27	2.30	6.03	6.26	5.56	4.76
2001-2200	1.06	1.91	1.43	2.19	7.60	6.26	3.95	6.19
2201-2400	1.69	.87	1.02	1.53	2.62	1.79	9.96	5.24
2401-2600	.42	1.04	1.02	1.68	.92	1.34	1.90	2.38
2601-2800	.74	.35	.90	1.39	.65	1.34	1.46	.71
2801-3000	2.32	3.47	1.51	1.60	1.31	1.12	2.78	.71
3001-3200	.42	1.21	.82	1.35	.26	1.12	1.46	1.19
3201-3400	.42	.52	.65	.98	1.31	1.12	.29	1.19
3401-3600	1.37	1.91	.90	1.09	.79	.45	1.17	.95
3601-3800	1.06	.35	.84	1.09	.52	.22	.44	.71
3801-4000	2.32	2.25	1.31	1.20	.92	.45	1.02	1.43
over 4000	32.53	10.74	37.78	19.25	33.68	16.34	32.23	19.79
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%
Sample Size	947	577	4895	2741	763	447	683	420

pieces of information since there are age requirements for
dependent benefits; in addition dependent benefits are reduced
by the social security earnings test not only if the main bene-
ficiary earns too much, but if the dependent earns too much as
well. All this information is relevant as well as knowledge
about the value of one's assets and one's life expectancy.

More sophisticated econometric modelling of this complex
retirement choice as well as better data are now being employed
to estimate the effect of the earnings test. Empirical analyses
by Boskin, Boskin and Hurd, and Pellechic strongly support
the story portrayed in Table 2. For example, Pellechio's results
using 1972 data indicate that eliminating the earnings test
would lead to an additional 151 annual hours of work for workers
65 to 72.[28] Using the current $5.53 average hourly wage in the
private non-farm sector, 151 additional hours would translate
into an additional $101 in payroll tax revenue per elderly worker.[29]
Since there are about 2,350,000 workers 65 to 72, roughly $237
million in annual tax revenue might be generated from this source
alone. About 8,800,000 people 65 to 72 do not work at all during
the year.[30] While no estimates are currently available, it seems
quite likely that a sizeable fraction of this group would return
to the labor force if the earnings test were eliminated. Many
of these people may currently be unable to find part time jobs
but would work full time if social security benefits were not
subtracted. The 62 to 65 age group is another major source of
additional payroll tax revenue. Despite actuarial reduction the earn-
ings test appears to be reducing labor supply for this group as well.

The costs of eliminating the earnings test do not appear
that large. While eliminating the test starting at age 62 would
mean paying benefits to many age 62 to 65 year olds not currently
collecting, actuarial reduction implies that for this group the
future savings because of permanently reduced benefits would es-
sentially offset the current cost. The real costs of eliminating the
earnings test arise from paying full benefits to workers 65 and
over who currently have their benefits partially or completely
eliminated by the earnings test. This group is not that large.
As of June 1977 only 544,856 persons 65 and above had benefits
completely withheld.[31] At most another 500,000 persons had benefits
partially withheld. Increased tax revenues from the additional
labor supply of the aged would offset a large proportion of
these costs of eliminating the earnings test.

Proposals for Reform

The current structure of the social security program can
easily be modified to eliminate existing inequities and labor
supply disincentives. The original purpose of requiring people
to accumulate for their old age should serve as a benchmark for
reform proposals. For example social security was not established
to redistribute from single people to married people. It was
established to insure that neither single nor married people
reach old age insolvent. Since more resources are required to
sustain two people than one, married couples should be required
to accumulate more through social security than single people.
In situations where one spouse does not work, contributions
of the working spouse should either be divided and counted as

separate contributions by each spouse, or additional tax contributions should be required to pay for the future survivor and dependent benefits available to the non-working spouse. This same philosophy of making people pay more if they are getting more extends to the case of married couples with children. Tax breaks to the self-employed cannot be justified and should be eliminated. Since redistribution to government workers is also not a founding principle of social security, government workers should be brought into the system as well.

These proposals would go a long way towards making social security fair and strengthening the individual nature of the program. They would simultaneously eliminate the taxation of female labor supply and reduce the perception of the social security contribution as a tax on labor effort rather than as a form of savings.

If we intend as a nation to maintain our level of per capita income in the face of enormous demographic changes, it will be necessary to reverse the trend towards early retirement. Congress has just passed a law eliminating mandatory retirement prior to age 70. The social security earnings test represents a remaining obstacle to fully utilizing the enormous talents and energies of the aged. The earnings test serves no useful purpose in our modern economy and should be eliminated.

Finally I would suggest that some reduction in real benefits levels may be preferable to the substantial increases in social security taxes slated in the near future. This reform could be easily carried out by simply modifying the new benefit formula

while retaining the indexing procedure. Somewhat lower benefit levels may be the price we have to pay to insure that future generations of young do not break the social security chain letter.

Our current system is exceedingly complex; it needs to be streamlined. Eliminating the earnings test and tightening the relationship between individual payments andindividual benefits are important steps in that direction. The system should be structured so that contributors can easily understand what they have paid in and what they can expect to receive back.[32]

It is time to make the system fair; and it is time to make the system contribute to rather than subtract from the efficient operation of our economy. It is time to return to founding principles, to reassess and to reform social security.

* I wish to thank Robert Clower, Rita and John Riley, Harold and Vivienne Kotlikoff, Lawrence Summers and Lawrence Weiss for helpful comments.

1. Rita R. Campbell, Social Security, Promise and Reality, p. xiii.

2. Peter A. Diamond, "A Framework for Social Security Analysis."

3. Laurence J. Kotlikoff, "Essays on Capital Formation and Social Security, Bequest Formation, and Long Run Tax Incidence."

4. As I discuss below, the system has in the past generated massive transfers from younger to older cohorts. Since younger cohorts enjoy higher lifetime incomes because of general economic growth, these transfers have historically made the system very progressive in terms of the relative welfare of different age cohorts.

5. The idea is to set new levels of exemptions and deductibles appropriate to all taxation of income. Other proposals fall short of entirely eliminating the payroll tax; rather they seek to use general revenues to finance the disability and health insurance components of OASDHI.

6. Raising the earned income tax credit for low income families is one easy way to redistribute under the Federal Income Tax.

7. Children may collect through age 21 if they remain in an educational institution.

8. In a life cycle context the earnings test does not represent a tax on labor supply between ages 62 and 65 to the extent that the reduction in benefits for early (pre-65) retirement is actuarially fair. The loss in benefits due to working between age 62 and 65 is made up by permanently higher benefits available at age 65 and beyond. Given the extent of early retirement, it appears that for many the reduction of benefits because of early retirement is perceived as less than actuarially fair.

9. Michael J. Boskin, "Social Security, The Alternatives Before Us," in The Crisis in Social Security, p. 179.

10. Edward Cowan, "Background and History: The Crisis in Public Finance and Social Security," in The Crisis in Social Security, p. 7.

11. A. Halworth Robertson, "Financial Status of Social Security Program After the Social Security Amandments of 1977," Social Security Bulletin, March 1978, pp. 21-36.

12. Donald O. Parsons and Douglas R. Munro, "Intergenerational Transfers in Social Security," in The Crisis in Social Security, pp. 65-86.

13. "Vital Statistics," in Statistical Abstract of the U.S., 1977, p. 66.

14. I have assumed a constant 12% tax rate and ignored life cycle growth in earnings. Incorporating either the scheduled growth in taxes or the growth in earnings over the life cycle would lower slightly these projected rates of return.

15. See E. M. Kitagawa and P. M. Hauser, Differential Mortality in the U.S.: A Study in Socioeconomic Epidemiology and "Selected Vital and Health Statistics in Poverty and Nonpoverty Areas," H.E.W. Series 21 no. 26.

16. Alicia Munnell, The Future of Social Security, pp. 46-47.

17. This subsidy to self employment may bring forth a greater supply of self employed persons reducing to some extent the earnings of the self employed. Thus the net subsidy to the self employed may be less than 34% of the social security tax.

18. Rita R. Campbell, op. cit., p. 133.

19. Extending coverage to government workers must, however, be done carefully or else we will exacerbate rather than reduce redistribution to government workers. While there is no problem for young workers just entering government service, there is a transition problem of extending coverage to older government workers since they would receive very high rates of return under the current law. A separate benefit schedule could be used during this transition period to give current government workers a fair but not excessive return on their contributions.

20. Martin Feldstein, "Social Security, Induced Retirement, and Aggregate Capital Accumulation."

21. Robert Barro, "Are Government Bonds Net Wealth?"

22. Michael R. Darby, "The Effects of Social Security on Income and the Capital Stock," p. 30.

23. Laurence J. Kotlikoff, op. cit.

24. Ibid.

25. Current Population Reports, "Consumer Income," Series p. 60, no. 5 and no. 107.

26. The 1940 figures are obtained from U.S. Bureau of the Census, Census of Population, "1970, Employment Status and Work Experience," pp. 31-32. The 1976 figures are unpublished BLS data provided by Lawrence Summers, Harvard University.

27. The data used here are the March CPS files for 1968 through 1975.

28. Anthony Pellechio, "The Social Security Earnings Test, Labor Supply Distortions and Foregone Payroll Tax Revenue," in Social Security and Retirement Behavior, p. 41.

29.   BLS, "Current Wage Developments," p. 37.

30.   Examination of the CPS data indicates that about 30% of males
      and 14% of females age 62 to 65 are gainfully employed during
      the year. These proportions were applied to population figures
      obtained in "Population Estimates and Projections," p. 33.

31.   Social Security Bulletin, March 1978, p. 83.

32.   One way to increase understanding would be for social security
      to send yearly statements to contributors indicating their
      contributions to date and illustrating the benefit formula.

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