# **Rochester Center for**

# **Economic Research**

Program Targeting Options and the Elderly

Hanushek, Eric and Roberton Williams

Working Paper No. 114 December 1987.

<u>University of</u> <u>Rochester</u>

## PROGRAM TARGETING OPTIONS AND THE ELDERLY

by

#### Eric A. Hanushek and Roberton Williams\*

Working Paper No. 114

December 1987

#### ABSTRACT

The current emphasis on federal deficit reduction has led to a renewed interest in more precisely targeting governmental programs to reach the intended recipients. The targeting of benefits is not always easy, however, even when the objectives of programs are well defined. The case of programs for the elderly is both important for current policy and a good example of applied targeting.

Income criteria are frequently advocated for targeting in transfer programs, but practical difficulties can be very significant. For example, measurement problems are particularly important in programs for the elderly because of the importance of in-kind benefit programs. Further, the lack of appropriate administrative data on individuals in various programs implies that implicit targeting through overall program choices is the only feasible approach. When the distributional effects of currently discussed options are considered, the differences among alternatives are seen to be very large. It also is apparent that expenditure-side targeting is a much cruder instrument than tax-side targeting, at least given the nature of current programs and data.

\* University of Rochester and Congressional Budget Office, respectively. The analysis and conclusions in this paper are those of the authors and do not necessarily represent those of the Congressional Budget Office. Many people provided helpful comments and contributions including Nancy Gordon, Bruce Jacobs, Richard Kasten, and Ralph Smith.



## Program Targeting Options and the Elderly

by Eric A. Hanushek and Roberton Williams

## I. Introduction

As federal budgetary pressures increase, the idea of more precise targeting of outlays becomes increasingly attractive. The notion is that by refining the distribution of outlays to direct benefits toward the more needy, the harm of any program reduction can be minimized. Of course, this presumes that it is possible to define and measure "most needy" in some reasonable manner related to the program under consideration. This paper considers alternatives in the targeting of programs for the elderly.

Discussions of targeting have taken place at a variety of levels. One major theme has been the improvement of income measures used to determine program eligibility and benefit levels. Central to these discussions is accounting for noncash benefits that individuals might receive along with cash income. Whether and how these benefits are counted, often linked to the measurement of poverty, can significantly affect the determination of who the needy are, and consequently the distribution of benefits across population subgroups. It is particularly significant in comparing the elderly to the nonelderly because of the substantial average noncash benefits of the elderly through the Medicare system.

A second theme of these discussions relates to the distribution of benefits among the elderly themselves. Current budgetary pressures have forced consideration of a wide range of options--both programmatic changes and tax revisions--to reduce the federal deficit, many of which would affect primarily the elderly. Most frequently discussed are program

changes that would reduce benefits. While attempts have been made to design proposals with distributional effects in mind, it must be recognized that working within the constraints of current program structures can make accurate targeting difficult. Finally, as an alternative to changing programs, tax revisions can also be used to reduce the deficit, but again, the implicit targeting of any revenue changes must be kept in mind.

#### II. Targeting Program Benefits to Individuals

Programs that provide benefits to individuals use eligibility criteria to determine who gets aid. In principle, these criteria direct benefits to those whom the programs are intended to help, while denying assistance to others. This targeting serves a number of purposes. First, it is a means of allocating scarce federal funds "efficiently," not in the economist's sense of the word but rather in the sense of getting funds to where they will be most effective in meeting the program's aims. The asset test in the Food Stamp program, for example, focuses aid on the most needy by denying benefits to households that are otherwise eligible but whose liquid assets could be used to buy food. Second, targeting can be used to exclude people who might change their behavior in undesired ways if they were eligible for benefits. This is the case in the Supplemental Security Income (SSI) program where participation is restricted to people who are aged, blind, or disabled; because these groups are not expected to work, these categorical criteria limit reductions in work effort that the program might otherwise cause. Third, in the case of appropriated programs, targeting criteria determine the distribution of benefits, at least in the short run; in the longer run, targeting may influence the level of program

support, since funding may depend on the program's image in terms of getting aid to those for whom it is intended.

# Alternative Targeting Devices

A wide range of characteristics can be used as targeting devices. Some programs base eligibility on physical status, offering aid, for example, only to those nonelderly who are blind or disabled. Others specify age: Medicare, for example, is available to essentially all Americans age 65 or older. Family composition can determine who is helped, as in the Aid to Families with Dependent Children (AFDC) program which, in half the states, assists only those families with children in which either there is only one parent or one parent is incapacitated. Veterans' benefits are distributed on the basis of prior military service. And many programs direct aid to those whose economic well-being is below some threshold, defined in terms of income or some other dimension of need. Moreover, programs often use combinations of these characteristics to assess eligibility; for example, SSI is available to people over age 65 and to younger disabled people, but only if both their incomes and their liquid assets are below fixed limits.<sup>1</sup>

Targeting criteria are often determined by the nature of the specific programs. Participation in programs intended to assist the elderly is naturally limited to people at least 62 or 65 years old, while programs aimed at children generally restrict benefits to families with members

<sup>&</sup>lt;sup>1</sup>Another way in which benefits can be targeted is through the federal personal income tax. If some or all benefits are made taxable--as is now the case for Social Security payments to those with high enough incomes, for example--existing progressive tax rates will skew net benefits toward those with lower incomes. This effect can be increased by making larger percentages of benefits taxable for those above the thresholds. This approach is addressed further later in the paper.

under 18 years of age. Other programs may have less obvious bounds, and their eligibility criteria may seem to reflect this. For example, some veterans' benefits are available only to people who served in the armed forces during specified periods.

#### Poverty and Income as Targeting Criteria

Programs for which eligibility is based on poverty or low-income criteria have two general purposes. First, they are designed to alleviate current problems such as hunger, lack of shelter, or medical needs, that are expected to be short-term in nature. In this sense, assistance treats the symptoms of poverty but not its root causes. Dealing with the latter forms the second aim: helping the poor to support themselves in the Some programs--such as job training--are aimed at poor adults future. with the goal of providing them with skills that will make them self-sufficient. Others--such as Head Start--focus on poor children, trying to help them past the barriers that being poor establish and on to adult lives out of poverty. Straddling the line between these two general aims--helping with current needs and curing long-term problems--are programs for the elderly, who are not expected to become independent but will have specific daily care needs that are likely to last for the rest of their lives.

Programs that address these problems--both short-term and long-term--use income criteria for eligibility, not so much because income is necessarily the correct measure of need, but rather because low income serves as a proxy for other conditions. Ideally, targeting ought to be done through a general specification of social priorities and choices. It is not always possible, however, to find operational indicators that assess directly

whether or not to aid a particular person or family. We might want to offer job training to people whose work skills are too limited for them to earn non-poverty wages, but we identify eligible candidates through observing their incomes and not by examining their skills.<sup>2</sup> We might want to help disadvantaged children to be able escape poverty when they grow up: yet we target cash, food, housing, and educational aid based on their parents' incomes, not on more direct measures of specific deprivation or on whether they are unlikely to make it on their own as individuals.<sup>3</sup> Of course, some programs with income eligibility criteria are intended for people with low incomes, regardless of cause. Food stamps are available, at least in part, because as a society we feel that no one should go hungry.

Whether or not a poverty measure--as opposed to some simple income limit--is needed or appropriate as an eligibility criterion depends on the nature of the program in question.<sup>4</sup> Programs for which only specific kinds

<sup>3</sup>Providing for the immediate needs of children through food or shelter is, of course, an additional motivation independent of any long run goals.

<sup>4</sup>The official poverty measure has two basic strengths in assessing financial need. First, it provides a way to compare the well-being of families of different types and sizes or in different circumstances. Because there are separate income thresholds for families with varying numbers of adult and child members, we can aggregate poverty status across families. Second, because it is defined at the national level, the poverty measure is consistent across states. While this is also a shortcoming, it does allow program eligibility to be defined uniformly throughout the country.

The weaknesses of the official poverty measure have been frequently discussed. The omission of in-kind income is particularly important. Underreporting of income, particularly in the cases of interest, dividends, and rental income, is known to be serious. Wealth, except to the extent

<sup>&</sup>lt;sup>2</sup>Income criteria for job training programs may have a quite different purpose, identifying not those with inadequate skills, but rather those least able to finance their own training.

of families can qualify may not need an aggregate measure of well-being across family types; for example, among the non-disabled, SSI offers benefits only to single people or couples age 65 and over, so there is no need for the more complex set of poverty thresholds that provide comparisons across family groupings with other characteristics.

# Expanding the Definition of Income

It is generally recognized that ignoring in-kind benefits in measuring income understates the well-being of families. Less well understood are the effects of expanding the definition of income to include in-kind benefits. Much attention has been directed to the fact that changing the definition of income to count in-kind benefits and leaving any set of thresholds--such as those used for the official poverty measure--unaltered would lead automatically to significant reductions in the number of families with incomes below the thresholds. Data published by the Bureau of the Census, for example, show that the overall poverty rate would have been between 2.0 percentage points and 4.7 percentage points lower in 1985, depending on how in-kind income is valued.<sup>5</sup> This would reduce the number

that it generates cash income, is excluded. Taxes are ignored. And, geographic differences in cost of living are not considered. See Hanushek and Williams [1986].

<sup>5</sup>The in-kind benefits included were food stamps, housing assistance, medical benefits, and school lunches. See Bureau of the Census, <u>Estimates</u> <u>of Poverty Including the Value of Noncash Benefits: 1985</u>, Technical Paper 56, September 1986, p. 17. Similar differences were found for other years:

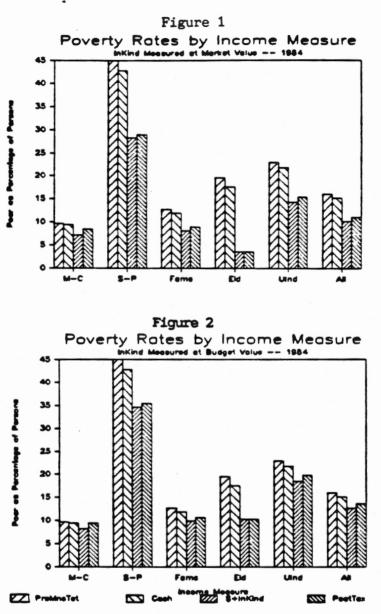
Difference	Between	Offici	al and	l Expar	ded Po	overty	Rates	
	(in	n perce	entage	points	;)			
Year	1979	1980	1981	1982	1983	1984	1985	
Range of Estimates								
Low	2.5	2.4	2.2	2.2	2.0	2.0	2.0	
High	4.7	4.9	4.7	4.7	4.7	4.6	4.7	

TABLE 1.	POVERTY RATES USING ALTERNATIVE DEFINITIONS OF INCOME BY FAMILY	
	TYPE, 1984 (in percents)	

Income Measure	Married Couples w/Child. under 18	Single Parents w/Child. under 18		Elderly Units	Unrel. Indivs.	All Persons
]	N-KIND BE	NEFITS ME	ASURED AT N	IARKET VALUE		
Pre-Means Tested All Cash Cash + In-Kind After Taxes	9.7 9.4 7.2 8.5	45.0 42.8 28.3 29.0	12.7 11.9 8.1 8.9	19.5 17.5 3.6 3.6	23.0 21.8 14.2 15.4	16.0 15.1 10.1 11.0
IN-KIND	BENEFITS	MEASURED	AT POVERTY	BUDGET SHARE	VALUE	
Pre-Means Tested All Cash	9.7 9.4	45.0 42.8	$\begin{array}{c} 12.7 \\ 11.9 \end{array}$	19.5 17.5	23.0 21.8	16.0 15.1

After Taxes 9.4 35.5 10.6 10.3 19.8 13.6	Cash + In-Kind After Taxes		-				
--	-------------------------------	--	---	--	--	--	--

- SOURCE: Eric A. Hanushek and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, <u>Proceedings of the Conference on the Measurement of Noncash Benefits</u>, Volume 1, December 1985, p. 113.
  - NOTE: For a discussion of alternative ways to value in-kind benefits, see Bureau of the Census, <u>Estimates of Poverty Including the Value of</u> <u>Noncash Benefits: 1984</u>, Technical Paper 55, August 1985.



Population Subgroups

M-C : married couples with related children under 18 years of age S-P : single parents with related children under 18 years of age Fams : all primary families and unrelated subfamilies Eld : all families and unrelated subfamilies with all members age 65 or

- over, plus all people age 65 and over not living with relatives.
- UInd : all unrelated individuals
- All : all people

SOURCE: Eric A. Hanushek and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, <u>Proceedings</u> of the Conference on the Measurement of Noncash Benefits, Volume 1, December 1985, p. 114.

of people qualifying for programs that have poverty status as an eligibility criterion, as critics often complain. The complaint, however, is not directly relevant to the issue; any poverty measure comparing income against fixed thresholds is necessarily an arbitrary statistic which can be driven to any given value by the appropriate choice of thresholds. For the purposes of program targeting, the more relevant question to ask is whether a particular income measure directs benefits toward those people for whom aid is intended. As noted above, the answer depends on which program is being considered.

What is clear is that the definition of income can affect which families are considered "needy" and thus determine the distribution of benefits among families. Table 1 and Figures 1 and 2 show the effects on poverty rates of using alternative income measures. Because they are less likely to get noncash benefits, married couples with children would experience a relatively small drop in their poverty rate--between 1.2 and 2.2 percentage points (a 13 to 25 percent decline) depending on how in-kind income is valued. The effects would be greater for family types that participate in non-cash assistance programs more often: the poverty rate of single-parent families with children would fall by 19 percent or 34 percent, while that of elderly families would be reduced by 41 percent or 79 percent.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup>Table 1 and Figures 1 and 2 reveal significant differences in poverty rates, depending on the method used to value in-kind benefits. The market value is generally greater than either the poverty budget share value or the cash equivalent value (not shown in the table or graphs), and the difference is greatest for health care benefits. This is particularly evident for the elderly, for whom counting in-kind income at market value lowers the poverty rate to 3.6 percent, while using the poverty budget share value--which limits the dollar value of in-kind benefits--causes the

Allocating program benefitson the basis of cash plus in-kind income would, therefore, provide less for the elderly and for single-parent families, while a greater share of assistance would go to married couples with children, if no other changes were made.

If income were also measured after taxes, this effect would be even greater. Using the poverty budget share valuation of in-kind income, the combined effect on poverty rates of counting noncash benefits and excluding taxes would be essentially zero for married couple families. On the other hand, because other family types pay less taxes, their poverty rates would fall more: poverty rates would decline by 17 percent among single-parent families, and by 41 percent among elderly households.

At the same time, counting in-kind benefits as income would not necessarily lead to large or inadvertent changes in the distribution of program benefits. In the first place, Congressional action would generally be required to alter eligibility criteria to include in-kind income; such action would signal revised intent in terms of who should receive assistance. Further, because most programs have multiple eligibility criteria, changing the definition of income might have little effect on who qualifies for benefits; other criteria may be more important in restricting the eligible population.

#### What additional information is needed to value in-kind income?

If in-kind benefits are to be counted when income is measured, two pieces of information about those benefits are needed for each family. First, we must know how much of each good or service the family receives.

poverty rate to fall only to 10.3 percent. There is little agreement on what the appropriate valuation method is.

For area estimates such as national averages, survey data could be used; the usual problems of misreporting would occur, made worse in those situations where recipients do not know how much of a particular in-kind benefit they were given, such as in the case of public housing or energy assistance in the form of third-party payments. For eligibility determination, information could be obtained either from program records or from applicant reports. The former would be administratively complex, however, given the many types of assistance provided by different agencies, while the latter would be subject to underreporting, either intentional or from lack of knowledge.

The second and perhaps more difficult need is a means of valuing in-kind benefits. The seminal work of Timothy Smeeding and subsequent refinements by the Bureau of the Census demonstrate that valuation methods can be devised.<sup>7</sup> There is, however, much disagreement on what method is appropriate, best indicated by the fact that the Census Bureau publishes data based on three alternatives. Arguments can be offered for each of the three--and for other possibilities as well--and consensus is unlikely to be obtained on any one.

The previous data (and the more detailed analyses by the Bureau of the Census) provide insights into the relative importance of different issues. The large changes in the poverty rates result directly from including benefits from Medicare and Medicaid and subsidized housing. The medical programs are especially important for the elderly and differences in their

<sup>&</sup>lt;sup>7</sup>Bureau of the Census, <u>Alternative Methods for Valuing Selected</u> <u>In-Kind Transfer Benefits and Measuring Their Effect on Poverty</u>, Technical Paper 50, March 1982. See also Technical Papers 51, 52, 55, and 56 in the same series.

presumed value lead to the extraordinary swings in the evaluation of their well-being.

As a result, any move to introduce broader measures of income is likely to affect the elderly relatively more heavily than younger people. This is not to say that such options should not be considered; because of the noncash benefits they receive, the elderly are, after all, better off than one would infer from looking only at cash incomes. It does emphasize, however, that attempts to improve targeting through a more inclusive income measure could have potentially significant distributional effects. Furthermore, the alternative ways of valuing noncash benefits mean that the effects may well be arbitrary. Given the importance of medical insurance as noncash income for the elderly, the choice of valuation method could markedly affect the distribution of program benefits between the elderly and the nonelderly.

## III. Distributional Impact of Specific Targeting Options for the Elderly

The second major issue is the impact of programmatic reductions on the elderly. Much of the public debate to date has involved taking the structure of programs as given and focusing on the distributional impacts of any aggregate cutbacks. Almost anything that is done, however, has immediate implications for the well-being of the elderly. Therefore, a parallel consideration has been how program parameters could be altered to protect the low-income elderly from adverse effects.

This work has been quite specific, because, unlike the general discussions of changing income distributions, it has delved into the actual operational details of programs. Specifically, it has worried about how

programs could be modified in realistic ways to achieve savings while protecting the elderly poor and limiting any increase in the level of poverty among the elderly.

Three types of basic policies could be pursued. The first, which has received the most attention, is actions on the spending side that would lead to immediate savings. These options have had the greatest appeal because they involve changes that could be quickly implemented and that would generate obvious rapid reductions in the overall deficit. The simplest example of this is eliminating the cost of living adjustment (COLA) built into Social Security. The second basic policy involves "deeper" structural adjustments that would alter expenditure patterns in the long run but have only small effects in the short run. An example of this is changing the "bend points" in the Social Security benefits formula. The final kind of change involves working on the tax side instead of the benefits side. Increased taxation of Social Security benefits would fall into this category.

The interesting aspect of each of these approaches is that while specific proposals do not represent explicit targeting choices, their evaluation has been in terms of their implicit targeting. Specifically, proposals have been assessed in terms of their distributional impacts, holding constant the amount of change in expenditures or taxes.

To put the possibilities into perspective, Table 2 shows the expenditure levels for the major programs affecting the elderly, while Table 3 provides information about the distribution of cash transfer benefits by income

TABLE 2.	OUTLAYS AND TAX EXPENDITURES FOR SELECTED BENEFIT	PROGRAMS,	1985-
	1990 (By fiscal year, in billions of dollars)		
		Total	

							Total	
	Baseline			Proje	cted		Projected 1986-	
Program	1985	1986	1987	1988	1989	1990	1990	
Non-Means-Tested Ca	sh Benefits		UTLAYS					
Social Security	192	202	215	229	244	260	1,150	
Railroad Retirement	6	6	7	7	7	7	34	
Civil Service Retir	e. 23	25	26	28	30	32	141	
Military Retirement	16	18	19	20	21	23	102	
Other Federal Employee Retirement	1	1	1	1	1	1	4	
Veterans' Compensat	ion <u>10</u>	_10	11	11	11	11	54	
Subtotal	248	262	278	296	314	334	1,485	
Supplemental Securi Income <u>a</u> /	ty 10	10	10	12	11	11	54	
Medicare Hospital Insuranc	e 48	52	57	63	70	78	321	
Supplemental Medi Insurance	cal _23	_26	29	_33	33	38	_169	
Subtotal	71	78	86	96	108	121	489	
SS/RR Benefits from	TAX EXPENDITURES Partial Exclusion of SS/RR Benefits from							
Adjusted Gross Inco	ome 18	19	20	21	22	22	104	

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985.

a. Fiscal year 1988 includes 13 months of payments; fiscal year 1990 includes only 11 months of payments.

		Percentage of Total Program	Receivin	of Families g Benefits		ge Benefits
Family Income	Percentage			As Percentage		S Percentage
Relative to Poverty Line	of Recipients in Group	by Group	In Thousands	of Families in Group	In Dollars	of Average Income
	Soci	al Security and I	Railroad Ret	irement		
Total Families	100	100	23,510	25.6	6,010	34.3
Below Poverty Line	17	9	3,890	26.0	3,370	76.0
100-125 Percent	9	8	2,190	43.4	4,840	74.2
Over 125 Percent	74	83	17,440	24.2	6,750	30.9
	Civ	vil Service and N	lilitary Reti	rement		
Total Families	100	100	2,820	3.1	11,590	37.2
Below Poverty Line	2	1	60		2,770	63.7
100-125 Percent	3	1	90	1.7	3,900	54.4
Over 125 Percent	<b>9</b> 5	98	2,670	3.7	12,060	37.0
		Supplemental S	ecurity Inco	me		
Total Families	100	100	2,990	3.2	2,460	24.3
Below Poverty Line	e 54	47	1,620	10.8	2,130	46.4
100-125 Percent	16	18	470	9.4	2,820	38.6
Over 125 Percent	30	35	900	1.2	2,860	13.2
	Social Secu	rity, Railroad Re	tirement, S	și, Civil Servic	 e	
		or Military R	etirement b	/		
Total Families	100	100	26,100	28.4	6,950	38.2
Below Poverty Line		9	4,620	30.9	3,620	81.2
100-125 Percent	9	7	2,400	47.5	5,120	77.4
Over 125 Percent	73	84	<b>19,08</b> 0	26.5	7,990	34.8

# TABLE 3. FAMILIES RECEIVING BENEFITS FROM SELECTED PROGRAMS, CALENDAR YEAR 1983 a/

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985, p. 22.

a. Unrelated sub-families and unrelated individuals are each defined as separate families in these tabulations. All numbers have been rounded.

b. Families receiving benefits from one or more of these programs. Families receiving benefits from more than one program are counted only once.

category, where income includes cash only.<sup>8</sup> The major programs represent about one-third of all federal outlays. Because of their magnitude, they are programs that need to be considered in any discussions of deficit reduction.

The options discussed here are described briefly in Table 4. They are intended to be illustrative, and represent neither the only ones nor ones currently under active consideration. The nature of these programmatic changes can be seen from Table 5 which summarizes the distribution of their effects by income category.<sup>9</sup>

The first general conclusion arising from this analysis is that programmatic changes would have widely different impacts on the level of poverty among the elderly. Options that do not recognize differences in economic circumstances, such as increases in individual beneficiaries' premiums for Medicare or across-the-board cuts in COLAs, would fall disproportionately on the poor and near poor. At the other extreme, other changes, such as moving from percentage to fixed amount COLAs, would have little effect on the low-income elderly and could even improve the wellbeing of some of them.

<sup>8</sup>These estimates are based upon tabulations from the March 1984 Current Population Survey.

<sup>&</sup>lt;sup>9</sup>These alternate plans are described in great detail in CBO, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled", Staff Working Paper, March 1985. All of the calculations result from CBO simulations based upon distributional information from the 1984 Current Population Survey and CBO projections of macroeconomic parameters as of February 1985. The effects shown might therefore not be accurate if the options were implemented now.

# TABLE 4. SUMMARY DESCRIPTIONS OF POLICY OPTIONS

#### Option

Description

## FREEZE OPTIONS

Freeze Social Security and Railroad Retirement program benefits.

Combine Social Security and Railroad Retirement freeze with increased SSI Guarantee

Freeze all non-means-tested program benefits

Combine freeze on all nonmeans-tested programs with increase in SSI guarantee.

Exempt Social Security and Railroad Retirement benefits below a specified threshold (COLA Cap)

Replace Social Security and Railroad Retirement COLA with flat COLA

Exempt Social Security and Railroad Retirement beneficiaries below a specified threshold (Poverty COLA) One-year elimination of COLA for Social Security and Railroad Retirement only.

One-year elimination of COLA for Social Security and Railroad Retirement only plus raise SSI guarantee levels for individuals by \$20/mo. and for couples by \$30/mo.

One-year elimination of COLA for Social Security, Railroad Retirement, Civil Service Retirement, military retirement, veterans' compensation, and retirement benefits for the Foreign Service, the Public Health Service, and the Coast Guard.

One-year elimination of COLA for Social Security, Railroad Retirement, Civil Service Retirement, military retirement, veterans' compensation, and retirement benefits for the Foreign Service, the Public Health Service, and the Coast Guard plus raise SSI guarantee levels for individuals and for couples by \$20 and \$30 per month, respectively.

Provide COLA only for that portion of Social Security and Railroad Retirement benefits that is below poverty threshold. No COLA would be provided for any other nonmeans-tested programs.

Provide all Social Security and Railroad Retirement beneficiaries with COLA equal to that COLA that would have been given to recipients with benefits at the poverty threshold. No COLA would be provided for any other non-means-tested program.

One-year elimination of COLA for all nonmeans-tested programs except that Social Security and Railroad Retirement beneficiaries with benefits below the poverty threshold would receive the full COLA. TABLE 4, continued.

Option	Description
MEDICARE OPTIONS	
Increase SMI premium to 35% of costs	Raise Supplemental Medical Insurance premiums for all beneficiaries so that total premiums cover 35% of SMI costs.
Increase SMI premium to 30% of costs and increase deductible	Raise Supplemental Medical Insurance premiums for all beneficiaries so that total premiums cover 30% of SMI costs and increase SMI deductible from \$75 to \$200. Index deductible to CPI in the future.
Introduce income-related SMI premium	Impose 1% surtax on taxable income of SMI enrollees; limit surtax to no more than subsidy value of SMI benefits.
TAXATION OF BENEFIT INCOME OPT	IONS

Eliminate thresholds for inclusion of benefits in AGI

Include up to 85% of benefits above threshold in AGI

Lower the thresholds and increase percent of benefits included in AGI

Include 50% of value of HI and 75% of SMI in AGI

Eliminate income thresholds for including Social Security and Railroad Retirement benefits in taxable income. Continue to tax half of benefits.

Use current thresholds (\$25,000 for single returns and \$32,000 for married couples) but tax 85% of Social Security and Railroad Retirement benefits for those above the threshold.

Lower thresholds to \$20,000 for single returns and to \$25,000 for married couples and tax 85% of Social Security and Railroad Retirement benefits for those above the threshold.

Require Medicare beneficiaries to include as taxable income 50% of the insurance value of Hospital Insurance benefits and 75% of the insurance value of Supplemental Medical Insurance benefits.

SOURCE: Derived from Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," Staff Working Paper, March 1985.

	Fiscal Years 1986-1990	Di	Distribution of Effects on Recipients in 1983 (in percents)				
Option <u>b</u> /	Budgetary Savings <u>a</u> / (in billions of dollars)	Poor <u>c</u> /	100%- 125% of Poverty Line	125%- 200% of Poverty Line	200%- 300% of Poverty Line	Över 300% of Poverty Line	
On	e-Year Benefit	Freeze Opt	tions				
Freeze Social Security and Railroad Retirement program benefits Combine Social Security and	33.8	8	7	23	24	39	
Railroad Retirement freeze with increase in SSI Guarantee	29.9	<u>d</u> /	5	24	27	44	
Freeze all non-means-tested program benefits Combine freeze on all non-means-	43.3	6	6	19	22	47	
tested programs with increase in SSI guarantee Exempt Social Security and Railroad	39.4	<u>d</u> /	4	20	24	52	
Retirement benefits below a specified threshold (COLA Cap) <u>f</u> / Replace Social Security and Delivered Particement COLA	16.5	1	2	12	20	66	
Railroad Retirement COLA with flat COLA <u>1</u> /- Exempt Social Security and Railroad Retirement beneficiaries below a specified threshold	10.2	-15 <u>e</u> /	-2 <u>e</u> /	8	21	86	
(Poverty COLA) <u>f</u> /	33.1	1	4	19	23	53	
	Medicare (	Options					
ncrease SMI premium to 35 percent of costs g/ ncrease SMI premium to 30 percent	17.1	11	8	23	23	36	
of costs and increase deductible g/	17.7	11	8	23	23	36	
Introduce an income-related SMI premium	8.7	<u>d</u> /	<u>d</u> /	1	7	<b>9</b> 2	
Tax	ation of Benefit	Income Op	otions				
Eliminate thresholds for inclusion of benefits in adjusted gross income Include up to 85 percent of benefits	36.1	<u>d</u> /	<u>d</u> /	7	28	65	
above threshold in AGI	19.3	0	0	0	<u>d</u> /	100	
Lower the thresholds and increase percent of benefits included in AG	1 28.4	0	0	d/	1	<b>9</b> 9	
Include 50 percent of value of HI and 75 percent of SMI in AGI	20.1	<u>d</u> /	d/	4	18	77	

## TABLE 5. AMOUNTS AND SOURCES OF BUDGETARY SAVINGS

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985, p. 108.

 Budgetary savings estimated for fiscal years 1986-1990; distributional effects are for calendar year 1983.

b. See source for complete definitions of options.

c. Poor families are those with incomes below Census poverty thresholds.

d. Less than 0.5 percent.

e. Total benefits received by the poor and near-poor in 1983 would increase by about \$0.3 billion, and benefits received by the nonpoor would decrease by \$1.6 billion, resulting in a net loss of \$1.3 billion to be allocated across groups.

f. Benefit levels for all other non-means-tested programs would be frozen.

g. The distributions of effects of these options are identical because it is assumed that per capita deductible expenditures do not vary by income group.

The second observation is that expenditure policies with respect to the elderly are relatively clumsy instruments for targeting. This is easiest to see in terms of curtailing the COLA for Social Security. Social Security payments are correlated with the overall income level of the elderly, but only imperfectly. While it has sometimes been asserted that the elderly poor could be protected from the effects of a one-year freeze on Social Security benefits with expenditures of as little as \$400 million--about 8 percent of expected budgetary savings--this is only the case if the elderly poor could be identified by the Social Security Administration. They can't. The Social Security system can only make adjustments in the current level of benefits that are calculated on the basis of past contributions. They do not have direct access to information on other income of the elderly.

A third observation is more subtle. Curtailing COLAs could be combined with policies designed to increase the benefits going to the low-income elderly, such as payment increases for Supplemental Social Insurance (SSI) beneficiaries, for example. This would indeed lessen the impact of COLA curtailments, but would do so only in the aggregate. The individuals brought above the poverty line through increases in SSI benefits would generally not be the same as the individuals pushed below the poverty line by a COLA curtailment. It is generally the case that implicit targeting is an aggregate, not an individual, concept.

The expenditure cuts considered above, curtailing COLAs or increasing SMI premiums for Medicare, take the existing structure of programs as given. The distribution of the cuts thus follows the pattern of distribution built into the programs. In addition, unless they are

continued over time, the cuts have a large immediate impact but little long-term impact on the expenditure patterns of these programs. To the extent that the major problem facing the federal government is a short run fiscal shortfall that will go away in the longer run, this is an appropriate focus. In other words, if the need to deal with budgetary deficits is simply a temporary imbalance, there is no (exogenous) incentive to change the character of the programs. On the other hand, if the problem of fiscal imbalance is one that will exist for some time, basic alterations in program design may be needed.

In terms of this longer run perspective, alternative targeting notions are more important. Within the Social Security system, for example, one inherent source of distributional outcomes lies in the basic benefit formula. Currently, Social Security provides larger relative benefits to those with lower lifetime earnings. It does this through the "bend points" in the benefit formula which determine how rapidly benefits rise with lifetime earnings.<sup>10</sup> By adjusting these, the amount of redistribution of the Social Security system can be altered.<sup>11</sup>

Making such adjustments involves a number of large policy issues. First, there is a delicate balance between the notions that Social Security is a return on individual payments into the system and that Social Security

<sup>&</sup>lt;sup>10</sup>The primary insurance amount (PIA) is based on average indexed monthly earnings (AIME). Currently the PIA is equal to 90 percent of the first \$297 of AIME, plus 32 percent of the next \$1,493 of AIME, plus 15 percent of any AIME in excess of \$1,790. \$297 and \$1,790 are commonly referred to as the "bend points" in the formula.

<sup>&</sup>lt;sup>11</sup>The amount of redistribution is a function of both the bend points and the replacement rates--the percentage of earnings in each bracket paid as retirement benefits. In addition, the amount of redistribution depends on payroll tax rates and maximum taxable earnings over workers' lifetimes.

is a transfer system with redistributive characteristics. Changes in the benefit formula could seriously affect that balance. Second, alterations in the bend points can have substantial long run effects, but would have very little immediate impact on the deficits. This results from the fact that changes in the benefit formula only affect those who have not yet retired.

Finally, the discussion of expenditure policies should be contrasted with the options on the tax side. The current personal income tax system has a somewhat complicated formula that includes a portion of Social Security benefits in taxable income for high income tax payers.<sup>12</sup> Currently, relatively few recipients pay taxes on Social Security; it is estimated that only about one-sixth of tax units with Social Security income will be liable for taxes totalling about \$3 billion from this source in 1987. However, if the income thresholds for taxing benefits were lowered or the portion of Social Security that is included as taxable income were increased, benefits <u>net of taxes</u> could be altered to be more consistent with the overall ability to pay of the elderly.

The fundamental difference between operating on the tax side and on the benefit side is the capacity to target changes more directly to the economic circumstances of the elderly. As it stands now, individuals can receive low Social Security benefits either because they had low lifetime incomes or because they had low Social Security earnings. In the latter case, low Social Security earnings do not accurately reflect the lifetime

<sup>&</sup>lt;sup>12</sup>In most cases, if adjusted gross income plus nontaxable interest income plus one half of Social Security retirement benefits exceeds \$25,000 for individual filers (\$32,000 for joint filers), then one-half of benefits are included in taxable income.

incomes of individuals because they do not recognize either uncovered employment or incomes from sources other than earnings. Thus, using only Social Security earnings data and calculated benefits cannot take into account other sources of income, and benefit adjustments that direct increases to those now receiving low payments would be "inefficient" from a targeting standpoint.

Table 5 clearly demonstrates that changing the taxability of Social Security could raise as much money as straight COLA freezes while having a very different impact on the poor.<sup>13</sup> Since relatively few of the elderly poor pay taxes under the current system, they would generally escape benefit reductions--net of taxes--accomplished in this way.

Several arguments can be raised against changing the taxability of Social Security. First, some contend that payments by individuals into Social Security accounts come from after-tax income, and therefore they have already been taxed once. This is only partially true, however, since only a small portion of current benefits could have been funded by contributions made by individuals. Second, the taxation of benefits (under the progressive income tax system) again raises the issue of whether the underlying philosophy of the system is to provide retirement income payments in line with contributions to the system or to accomplish redistributive goals.

<sup>&</sup>lt;sup>13</sup>In fact, changing the taxation of Social Security could raise significantly more money if inflation rates remain at their current low levels. The estimates given in Table 5 were based on the assumption that the annual inflation rate would be 3.7 percent. With lower inflation, COLAs would be smaller, and eliminating them would save less money.

A final note is important. The recently enacted revisions to the tax code interact with these comments about targeting. Reduced marginal tax rates mean that less tax will be paid on the taxable portion of Social Security benefits in the future. On the other hand, changes in what income must be reported for tax purposes will mean that more returns will be subject to tax on Social Security payments. The net effect is uncertain, but the revenue changes could significantly affect the targeting of benefits based on overall well-being of the elderly.

#### IV. Summing Up

This paper has attempted to delineate a variety of issues related to the targeting of benefits for the elderly. These have been somewhat artificially divided into broad discussions of general income targeting issues and of specific programmatic revisions. The key point is, however, that current income measurement and benefit targeting for the elderly is especially imprecise. This arises from two fundamental factors. First, the elderly receive particularly important noncash benefits, the most significant of which is medical insurance under Medicare. It is unreasonable to neglect these payments in considering the well-being of the elderly and the distribution of programmatic funds. The valuation of these benefits is extremely difficult, however, and how it is done has important distributional implications.

Second, within the existing set of programs, explicit targeting is frequently ruled out because appropriate information is lacking. Virtually all programmatic changes can, however, be viewed as adopting implicit targeting choices. When considered in this framework, specific options

designed primarily to reduce the deficit can have enormous--and widely differing--distributional effects. Even if the explicit intent is to direct benefits more precisely on the basis of income, targeting may be quite imprecise. This is because specific program offices, such as the Social Security Administration, lack the information needed to determine total incomes of beneficiaries. By comparison, because it is based on the fundamental concept of ability to pay, the tax system provides an alternative that can better attain distributional objectives, even though it, too, neglects noncash income.

## BIBLIOGRAPHY

Bureau of the Census, <u>Alternative Methods for Valuing Selected In-Kind</u> <u>Transfer Benefits and Measuring Their Effect on Poverty</u>, Technical Paper 50, March 1982.

<u>Estimates of Poverty Including the Value of Noncash Benefits:</u> <u>1984</u>, Technical Paper 55, August 1985.

<u>Benefits: 1985</u>, Technical Paper 56, September 1986.

- Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," Staff Working Paper, March 1985.
- Hanushek, Eric A., and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, <u>Proceedings of the Conference on the Measurement of Noncash Benefits</u>, Volume 1, December 1985, pp. 104-125.
- U.S. Congress, Joint Committee on Taxation, <u>Federal Tax Treatment of</u> <u>Families Below the Poverty Line</u>, April 9, 1984.



# Rochester Center for Economic Research University of Rochester Department of Economics Rochester, NY 14627

#### 1986-87 DISCUSSION PAPERS

- WP#33 OIL PRICE SHOCKS AND THE DISPERSION HYPOTHESIS, 1900 1980 by Prakash Loungani, January 1986
- WP#34 RISK SHARING, INDIVISIBLE LABOR AND AGGREGATE FLUCTUATIONS by Richard Rogerson, (Revised) February 1986
- WP#35 PRICE CONTRACTS, OUTPUT, AND MONETARY DISTURBANCES by Alan C. Stockman, October 1985
- WP#36 FISCAL POLICIES AND INTERNATIONAL FINANCIAL MARKETS by Alan C. Stockman, March 1986
- WP#37 LARGE-SCALE TAX REFORM: THE EXAMPLE OF EMPLOYER-PAID HEALTH INSURANCE PREMIUMS by Charles E. Phelps, March 1986
- WP#38 INVESTMENT, CAPACITY UTILIZATION AND THE REAL BUSINESS CYCLE by Jeremy Greenwood and Zvi Hercowitz, April 1986
- WP#39 THE ECONOMICS OF SCHOOLING: PRODUCTION AND EFFICIENCY IN PUBLIC SCHOOLS by Eric A. Hanushek, April 1986
- WP#40 EMPLOYMENT RELATIONS IN DUAL LABOR MARKETS (IT'S NICE WORK IF YOU CAN GET IT!) by Walter Y. Oi, April 1986
- WP#41 SECTORAL DISTURBANCES, GOVERNMENT POLICIES, AND INDUSTRIAL OUTPUT IN SEVEN EUROPEAN COUNTRIES by Alan C. Stockman, April 1986
- WP#42 SMOOOTH VALUATIONS FUNCTIONS AND DETERMINANCY WITH INFINITELY LIVED CONSUMERS by Timothy J. Kehoe, David K. Levine and Paul R. Romer, April 1986
- WP#43 AN OPERATIONAL THEORY OF MONOPOLY UNION-COMPETITIVE FIRM INTERACTION by Glenn M. MacDonald and Chris Robinson, June 1986
- WP#44 JOB MOBILITY AND THE INFORMATION CONTENT OF EQUILIBRIUM WAGES: PART 1, by Glenn M. MacDonald, June 1986
- WP#45 SKI-LIFT PRICING, WITH APPLICATIONS TO LABOR AND OTHER MARKETS by Robert J. Barro and Paul M. Romer, May 1986, revised April 1987

- WP#46 FORMULA BUDGETING: THE ECONOMICS AND ANALYTICS OF FISCAL POLICY UNDER RULES, by Eric A. Hanushek, June 1986
- WP#48 EXCHANGE RATE POLICY, WAGE FORMATION, AND CREDIBILITY by Henrik Horn and Torsten Persson, June 1986
- WP#49 MONEY AND BUSINESS CYCLES: COMMENTS ON BERNANKE AND RELATED LITERATURE, by Robert G. King, July 1986
- WP#50 NOMINAL SURPRISES, REAL FACTORS AND PROPAGATION MECHANISMS by Robert G. King and Charles I. Plosser, Final Draft: July 1986
- WP#51 JOB MOBILITY IN MARKET EQUILIBRIUM by Glenn M. MacDonald, August 1986
- WP#52 SECRECY, SPECULATION AND POLICY by Robert G. King, (revised) August 1986
- WP#53 THE TULIPMANIA LEGEND by Peter M. Garber, July 1986
- WP#54 THE WELFARE THEOREMS AND ECONOMIES WITH LAND AND A FINITE NUMBER OF TRADERS, by Marcus Berliant and Karl Dunz, July 1986
- WP#55 NONLABOR SUPPLY RESPONSES TO THE INCOME MAINTENANCE EXPERIMENTS by Eric A. Hanushek, August 1986
- WP#56 INDIVISIBLE LABOR, EXPERIENCE AND INTERTEMPORAL ALLOCATIONS by Vittorio U. Grilli and Richard Rogerson, September 1986
- WP#57 TIME CONSISTENCY OF FISCAL AND MONETARY POLICY by Mats Persson, Torsten Persson and Lars E. O. Svensson, September 1986
- WP#58 ON THE NATURE OF UNEMPLOYMENT IN ECONOMIES WITH EFFICIENT RISK SHARING, by Richard Rogerson and Randall Wright, September 1986
- WP#59 INFORMATION PRODUCTION, EVALUATION RISK, AND OPTIMAL CONTRACTS by Monica Hargraves and Paul M. Romer, September 1986
- WP#60 RECURSIVE UTILITY AND THE RAMSEY PROBLEM by John H. Boyd III, October 1986
- WP#61 WHO LEAVES WHOM IN DURABLE TRADING MATCHES by Kenneth J. McLaughlin, October 1986
- WP#62 SYMMETRIES, EQUILIBRIA AND THE VALUE FUNCTION by John H. Boyd III, December 1986
- WP#63 A NOTE ON INCOME TAXATION AND THE CORE by Marcus Berliant, December 1986

- WP#64 INCREASING RETURNS, SPECIALIZATION, AND EXTERNAL ECONOMIES: GROWTH AS DESCRIBED BY ALLYN YOUNG, By Paul M. Romer, December 1986
- WP#65 THE QUIT-LAYOFF DISTINCTION: EMPIRICAL REGULARITIES by Kenneth J. McLaughlin, December 1986
- WP#66 FURTHER EVIDENCE ON THE RELATION BETWEEN FISCAL POLICY AND THE TERM STRUCTURE, by Charles I. Plosser, December 1986
- WP#67 INVENTORIES AND THE VOLATILITY OF PRODUCTION by James A. Kahn, December 1986
- WP#68 RECURSIVE UTILITY AND OPTIMAL CAPITAL ACCUMULATION, I: EXISTENCE, by Robert A. Becker, John H. Boyd III, and Bom Yong Sung, January 1987
- WP#69 MONEY AND MARKET INCOMPLETENESS IN OVERLAPPING-GENERATIONS MODELS, by Marianne Baxter, January 1987
- WP#70 GROWTH BASED ON INCREASING RETURNS DUE TO SPECIALIZATION by Paul M. Romer, January 1987
- WP#71 WHY A STUBBORN CONSERVATIVE WOULD RUN A DEFICIT: POLICY WITH TIME-INCONSISTENT PREFERENCES by Torsten Persson and Lars E.O. Svensson, January 1987
- WP#72 ON THE CONTINUUM APPROACH OF SPATIAL AND SOME LOCAL PUBLIC GOODS OR PRODUCT DIFFERENTIATION MODELS by Marcus Berliant and Thijs ten Raa, January 1987
- WP#73 THE QUIT-LAYOFF DISTINCTION: GROWTH EFFECTS by Kenneth J. McLaughlin, February 1987
- WP#74 SOCIAL SECURITY, LIQUIDITY, AND EARLY RETIREMENT by James A. Kahn, March 1987

WP#75 THE PRODUCT CYCLE HYPOTHESIS AND THE HECKSCHER-OHLIN-SAMUELSON THEORY OF INTERNATIONAL TRADE by Sugata Marjit, April 1987

- WP#76 NOTIONS OF EQUAL OPPORTUNITIES by William Thomson, April 1987
- WP#77 BARGAINING PROBLEMS WITH UNCERTAIN DISAGREEMENT POINTS by Youngsub Chun and William Thomson, April 1987

WP#78 THE ECONOMICS OF RISING STARS by Glenn M. MacDonald, April 1987

WP#79 STOCHASTIC TRENDS AND ECONOMIC FLUCTUATIONS by Robert King, Charles Plosser, James Stock, and Mark Watson, April 1987

- WP#80 INTEREST RATE SMOOTHING AND PRICE LEVEL TREND-STATIONARITY by Marvin Goodfriend, April 1987
- WP#81 THE EQUILIBRIUM APPROACH TO EXCHANGE RATES by Alan C. Stockman, revised, April 1987
- WP#82 INTEREST-RATE SMOOTHING by Robert J. Barro, May 1987
- WP#83 CYCLICAL PRICING OF DURABLE LUXURIES by Mark Bils, May 1987
- WP#84 EQUILIBRIUM IN COOPERATIVE GAMES OF POLICY FORMULATION by Thomas F. Cooley and Bruce D. Smith, May 1987
- WP#85 RENT SHARING AND TURNOVER IN A MODEL WITH EFFICIENCY UNITS OF HUMAN CAPITAL by Kenneth J. McLaughlin, revised, May 1987
- WP#86 THE CYCLICALITY OF LABOR TURNOVER: A JOINT WEALTH MAXIMIZING HYPOTHESIS by Kenneth J. McLaughlin, revised, May 1987
- WP#87 CAN EVERYONE BENEFIT FROM GROWTH? THREE DIFFICULTIES by Herve' Moulin and William Thomson, May 1987
- WP#88 TRADE IN RISKY ASSETS by Lars E.O. Svensson, May 1987
- WP#89 RATIONAL EXPECTATIONS MODELS WITH CENSORED VARIABLES by Marianne Baxter, June 1987
- WP#90 EMPIRICAL EXAMINATIONS OF THE INFORMATION SETS OF ECONOMIC AGENTS by Nils Gottfries and Torsten Persson, June 1987
- WP#91 DO WAGES VARY IN CITIES? AN EMPIRICAL STUDY OF URBAN LABOR MARKETS by Eric A. Hanushek, June 1987
- WP#92 ASPECTS OF TOURNAMENT MODELS: A SURVEY by Kenneth J. McLaughlin, July 1987
- WP#93 ON MODELLING THE NATURAL RATE OF UNEMPLOYMENT WITH INDIVISIBLE LABOR by Jeremy Greenwood and Gregory W. Huffman
- WP#94 TWENTY YEARS AFTER: ECONOMETRICS, 1966-1986 by Adrian Pagan, August 1987

WP#95 ON WELFARE THEORY AND URBAN ECONOMICS by Marcus Berliant, Yorgos Y. Papageorgiou and Ping Wang, August 1987

WP#96 ENDOGENOUS FINANCIAL STRUCTURE IN AN ECONOMY WITH PRIVATE INFORMATION by James Kahn, August 1987

- WP#97 THE TRADE-OFF BETWEEN CHILD QUANTITY AND QUALITY: SOME EMPIRICAL EVIDENCE by Eric Hanushek, September 1987
- WP#98 SUPPLY AND EQUILIBRIUM IN AN ECONOMY WITH LAND AND PRODUCTION by Marcus Berliant and Hou-Wen Jeng, September 1987
- WP#99 AXIOMS CONCERNING UNCERTAIN DISAGREEMENT POINTS FOR 2-PERSON BARGAINING PROBLEMS by Youngsub Chun, September 1987
- WP#100 MONEY AND INFLATION IN THE AMERICAN COLONIES: FURTHER EVIDENCE ON THE FAILURE OF THE QUANTITY THEORY by Bruce Smith, October 1987
- WP#101 BANK PANICS, SUSPENSIONS, AND GEOGRAPHY: SOME NOTES ON THE "CONTAGION OF FEAR" IN BANKING by Bruce Smith, October 1987
- WP#102 LEGAL RESTRICTIONS, "SUNSPOTS", AND CYCLES by Bruce Smith, October 1987
- WP#103 THE QUIT-LAYOFF DISTINCTION IN A JOINT WEALTH MAXIMIZING APPROACH TO LABOR TURNOVER by Kenneth McLaughlin, October 1987
- WP#104 ON THE INCONSISTENCY OF THE MLE IN CERTAIN HETEROSKEDASTIC REGRESSION MODELS by Adrian Pagan and H. Sabau, October 1987
- WP#105 RECURRENT ADVERTISING by Ignatius J. Horstmann and Glenn M. MacDonald, October 1987
- WP#106 PREDICTIVE EFFICIENCY FOR SIMPLE NONLINEAR MODELS by Thomas F. Cooley, William R. Parke and Siddhartha Chib, October 1987
- WP#107 CREDIBILITY OF MACROECONOMIC POLICY: AN INTRODUCTION AND A BROAD SURVEY by Torsten Persson, November 1987
- WP#108 SOCIAL CONTRACTS AS ASSETS: A POSSIBLE SOLUTION TO THE TIME-CONSISTENCY PROBLEM by Laurence Kotlikoff, Torsten Persson and Lars E. O. Svensson, November 1987
- WP#109 EXCHANGE RATE VARIABILITY AND ASSET TRADE by Torsten Persson and Lars E. O. Svensson, Novmeber 1987
- WP#110 MICROFOUNDATIONS OF INDIVISIBLE LABOR by Vittorio Grilli and Richard Rogerson, November 1987
- WP#111 FISCAL POLICIES AND THE DOLLAR/POUND EXCHANGE RATE: 1870-1984 by Vittorio Grilli, November 1987

- WP#112 INFLATION AND STOCK RETURNS WITH COMPLETE MARKETS by Thomas Cooley and Jon Sonstelie, November 1987
- WP#113 THE ECONOMETRIC ANALYSIS OF MODELS WITH RISK TERMS by Adrian Pagan and Aman Ullah, December 1987
- WP#114 PROGRAM TARGETING OPTIONS AND THE ELDERLY by Eric Hanushek and Roberton Williams, December 1987

To order a copy of the above papers complete the attached form and return to Mrs. Ellen Bennett, or call (716) 275-8396. The first three papers requested will be provided free of charge. Each additional paper will require a \$3.00 service fee which <u>must be enclosed with your order</u>.

Requestor's Name	 ·
Requestor's Address	 

WP# \_\_\_\_\_ WP# \_\_\_\_ WP# \_\_\_\_

I understand there is a \$3.00 fee for each additional paper. Enclosed is my check or money order in the amount of \$ \_\_\_\_\_. Please send me the following papers.

WP#	 WP#	WP#
WP#	 WP#	WP#
WP#	 WP#	WP#
WP#	 WP#	WP#

## PROGRAM TARGETING OPTIONS AND THE ELDERLY

by

Eric A. Hanushek and Roberton Williams\*

Working Paper No. 114

December 1987

#### ABSTRACT

The current emphasis on federal deficit reduction has led to a renewed interest in more precisely targeting governmental programs to reach the intended recipients. The targeting of benefits is not always easy, however, even when the objectives of programs are well defined. The case of programs for the elderly is both important for current policy and a good example of applied targeting.

Income criteria are frequently advocated for targeting in transfer programs, but practical difficulties can be very significant. For example, measurement problems are particularly important in programs for the elderly because of the importance of in-kind benefit programs. Further, the lack of appropriate administrative data on individuals in various programs implies that implicit targeting through overall program choices is the only feasible approach. When the distributional effects of currently discussed options are considered, the differences among alternatives are seen to be very large. It also is apparent that expenditure-side targeting is a much cruder instrument than tax-side targeting, at least given the nature of current programs and data.

\* University of Rochester and Congressional Budget Office, respectively. The analysis and conclusions in this paper are those of the authors and do not necessarily represent those of the Congressional Budget Office. Many people provided helpful comments and contributions including Nancy Gordon, Bruce Jacobs, Richard Kasten, and Ralph Smith.



#### Program Targeting Options and the Elderly

by Eric A. Hanushek and Roberton Williams

#### I. Introduction

As federal budgetary pressures increase, the idea of more precise targeting of outlays becomes increasingly attractive. The notion is that by refining the distribution of outlays to direct benefits toward the more needy, the harm of any program reduction can be minimized. Of course, this presumes that it is possible to define and measure "most needy" in some reasonable manner related to the program under consideration. This paper considers alternatives in the targeting of programs for the elderly.

Discussions of targeting have taken place at a variety of levels. One major theme has been the improvement of income measures used to determine program eligibility and benefit levels. Central to these discussions is accounting for noncash benefits that individuals might receive along with cash income. Whether and how these benefits are counted, often linked to the measurement of poverty, can significantly affect the determination of who the needy are, and consequently the distribution of benefits across population subgroups. It is particularly significant in comparing the elderly to the nonelderly because of the substantial average noncash benefits of the elderly through the Medicare system.

A second theme of these discussions relates to the distribution of benefits among the elderly themselves. Current budgetary pressures have forced consideration of a wide range of options--both programmatic changes and tax revisions--to reduce the federal deficit, many of which would affect primarily the elderly. Most frequently discussed are program

changes that would reduce benefits. While attempts have been made to design proposals with distributional effects in mind, it must be recognized that working within the constraints of current program structures can make accurate targeting difficult. Finally, as an alternative to changing programs, tax revisions can also be used to reduce the deficit, but again, the implicit targeting of any revenue changes must be kept in mind.

#### II. Targeting Program Benefits to Individuals

Programs that provide benefits to individuals use eligibility criteria to determine who gets aid. In principle, these criteria direct benefits to those whom the programs are intended to help, while denying assistance to others. This targeting serves a number of purposes. First, it is a means of allocating scarce federal funds "efficiently," not in the economist's sense of the word but rather in the sense of getting funds to where they will be most effective in meeting the program's aims. The asset test in the Food Stamp program, for example, focuses aid on the most needy by denying benefits to households that are otherwise eligible but whose liquid assets could be used to buy food. Second, targeting can be used to exclude people who might change their behavior in undesired ways if they were eligible for benefits. This is the case in the Supplemental Security Income (SSI) program where participation is restricted to people who are aged, blind, or disabled; because these groups are not expected to work, these categorical criteria limit reductions in work effort that the program might otherwise cause. Third, in the case of appropriated programs, targeting criteria determine the distribution of benefits, at least in the short run; in the longer run, targeting may influence the level of program

support, since funding may depend on the program's image in terms of getting aid to those for whom it is intended.

# Alternative Targeting Devices

A wide range of characteristics can be used as targeting devices. Some programs base eligibility on physical status, offering aid, for example, only to those nonelderly who are blind or disabled. Others specify age: Medicare, for example, is available to essentially all Americans age 65 or older. Family composition can determine who is helped, as in the Aid to Families with Dependent Children (AFDC) program which, in half the states, assists only those families with children in which either there is only one parent or one parent is incapacitated. Veterans' benefits are distributed on the basis of prior military service. And many programs direct aid to those whose economic well-being is below some threshold, defined in terms of income or some other dimension of need. Moreover, programs often use combinations of these characteristics to assess eligibility; for example, SSI is available to people over age 65 and to younger disabled people, but only if both their incomes and their liquid assets are below fixed limits.<sup>1</sup>

Targeting criteria are often determined by the nature of the specific programs. Participation in programs intended to assist the elderly is naturally limited to people at least 62 or 65 years old, while programs aimed at children generally restrict benefits to families with members

<sup>&</sup>lt;sup>1</sup>Another way in which benefits can be targeted is through the federal personal income tax. If some or all benefits are made taxable--as is now the case for Social Security payments to those with high enough incomes, for example--existing progressive tax rates will skew net benefits toward those with lower incomes. This effect can be increased by making larger percentages of benefits taxable for those above the thresholds. This approach is addressed further later in the paper.

under 18 years of age. Other programs may have less obvious bounds, and their eligibility criteria may seem to reflect this. For example, some veterans' benefits are available only to people who served in the armed forces during specified periods.

# Poverty and Income as Targeting Criteria

Programs for which eligibility is based on poverty or low-income criteria have two general purposes. First, they are designed to alleviate current problems such as hunger, lack of shelter, or medical needs, that are expected to be short-term in nature. In this sense, assistance treats the symptoms of poverty but not its root causes. Dealing with the latter forms the second aim: helping the poor to support themselves in the future. Some programs--such as job training--are aimed at poor adults with the goal of providing them with skills that will make them self-sufficient. Others--such as Head Start--focus on poor children, trying to help them past the barriers that being poor establish and on to adult lives out of poverty. Straddling the line between these two general aims--helping with current needs and curing long-term problems--are programs for the elderly, who are not expected to become independent but will have specific daily care needs that are likely to last for the rest of their lives.

Programs that address these problems--both short-term and long-term--use income criteria for eligibility, not so much because income is necessarily the correct measure of need, but rather because low income serves as a proxy for other conditions. Ideally, targeting ought to be done through a general specification of social priorities and choices. It is not always possible, however, to find operational indicators that assess directly

whether or not to aid a particular person or family. We might want to offer job training to people whose work skills are too limited for them to earn non-poverty wages, but we identify eligible candidates through observing their incomes and not by examining their skills.<sup>2</sup> We might want to help disadvantaged children to be able escape poverty when they grow up: yet we target cash, food, housing, and educational aid based on their parents' incomes, not on more direct measures of specific deprivation or on whether they are unlikely to make it on their own as individuals.<sup>3</sup> Of course, some programs with income eligibility criteria are intended for people with low incomes, regardless of cause. Food stamps are available, at least in part, because as a society we feel that no one should go hungry.

Whether or not a poverty measure--as opposed to some simple income limit--is needed or appropriate as an eligibility criterion depends on the nature of the program in question.<sup>4</sup> Programs for which only specific kinds

<sup>3</sup>Providing for the immediate needs of children through food or shelter is, of course, an additional motivation independent of any long run goals.

<sup>4</sup>The official poverty measure has two basic strengths in assessing financial need. First, it provides a way to compare the well-being of families of different types and sizes or in different circumstances. Because there are separate income thresholds for families with varying numbers of adult and child members, we can aggregate poverty status across families. Second, because it is defined at the national level, the poverty measure is consistent across states. While this is also a shortcoming, it does allow program eligibility to be defined uniformly throughout the country.

The weaknesses of the official poverty measure have been frequently discussed. The omission of in-kind income is particularly important. Underreporting of income, particularly in the cases of interest, dividends, and rental income, is known to be serious. Wealth, except to the extent

<sup>&</sup>lt;sup>2</sup>Income criteria for job training programs may have a quite different purpose, identifying not those with inadequate skills, but rather those least able to finance their own training.

of families can qualify may not need an aggregate measure of well-being across family types; for example, among the non-disabled, SSI offers benefits only to single people or couples age 65 and over, so there is no need for the more complex set of poverty thresholds that provide comparisons across family groupings with other characteristics.

# Expanding the Definition of Income

It is generally recognized that ignoring in-kind benefits in measuring income understates the well-being of families. Less well understood are the effects of expanding the definition of income to include in-kind benefits. Much attention has been directed to the fact that changing the definition of income to count in-kind benefits and leaving any set of thresholds--such as those used for the official poverty measure--unaltered would lead automatically to significant reductions in the number of families with incomes below the thresholds. Data published by the Bureau of the Census, for example, show that the overall poverty rate would have been between 2.0 percentage points and 4.7 percentage points lower in 1985, depending on how in-kind income is valued.<sup>5</sup> This would reduce the number

<sup>5</sup>The in-kind benefits included were food stamps, housing assistance, medical benefits, and school lunches. See Bureau of the Census, <u>Estimates</u> <u>of Poverty Including the Value of Noncash Benefits: 1985</u>, Technical Paper 56, September 1986, p. 17. Similar differences were found for other years:

Difference B	etween	Offici	al and	l Expan	ded Po	verty	Rates
	(i1	n perce	ntage	points	•)		
Year	1979	1980	1981	1982	1983	1984	1985
Range of Estimates	s						
Low	2.5	2.4	2.2	2.2	2.0	2.0	2.0
High	4.7	4.9	4.7	4.7	4.7	4.6	4.7

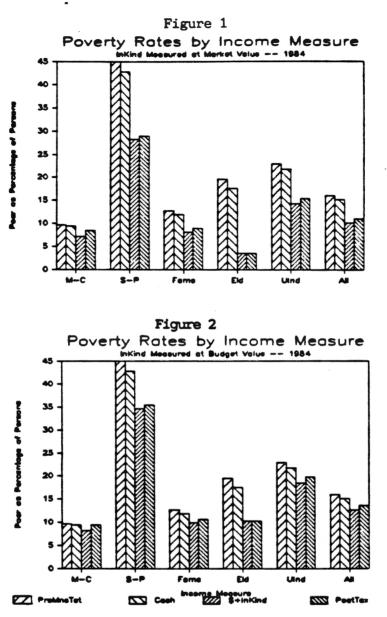
that it generates cash income, is excluded. Taxes are ignored. And, geographic differences in cost of living are not considered. See Hanushek and Williams [1986].

Married Single Couples Parents Income w/Child. w/Child. All Elderly Unrel. All Measure under 18 under 18 Families Units Indivs. Persons IN-KIND BENEFITS MEASURED AT MARKET VALUE		Y RATES US 1984 (in p		TIVE DEFIN	NITIONS OF I	NCOME BY	FAMILY
TN VIND DENEETTS NEASIDED AT MADVET VALUE		Couples w/Child.	Parents w/Child.		•		
IN-KIND BENEFIIS MEASURED AI MARKEI VALUE	1	IN-KIND BE	NEFITS MEAS	SURED AT MA	ARKET VALUE		
Pre-Means Tested 9.7 45.0 12.7 19.5 23.0 16.0							
All Cash 9.4 42.8 11.9 17.5 21.8 15.1							
Cash + In-Kind 7.2 28.3 8.1 3.6 14.2 10.1		7.2	28.3	8.1	3.6		
After Taxes         8.5         29.0         8.9         3.6         15.4         11.0	After Taxes	8.5	29.0	8.9	3.6	15.4	11.0
IN-KIND BENEFITS MEASURED AT POVERTY BUDGET SHARE VALUE	IN-KIND	BENEFITS	MEASURED AT	POVERTY I	RUDCET SHARE	VALUE	
In ALLE BLOCK TO ALLEGALE AT TOVERTY DODGET OFFICE VALUE		DENER TTO	MUROONLD AI	IUIDAIII		111505	

9.7	45.0	12.7	19.5	23.0	16.0
9.4	42.8	11.9	17.5	21.8	15.1
7.2	28.3	8.1	3.6	14.2	10.1
8.5	29.0	8.9	3.6	15.4	11.0
	9.4 7.2	9.4 42.8 7.2 28.3	9.442.811.97.228.38.1	9.442.811.917.57.228.38.13.6	9.442.811.917.521.87.228.38.13.614.2

Pre-Means Tested	9.7	45.0	12.7	19.5	23.0	16.0
All Cash	9.4	42.8	11.9	17.5	21.8	15.1
Cash + In-Kind	8.2	34.7	9.9	10.3	18.5	12.7
After Taxes	9.4	35.5	10.6	10.3	19.8	13.6

- SOURCE : Eric A. Hanushek and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, Proceedings of the Conference on the Measurement of Noncash Benefits, Volume 1, December 1985, p. 113.
  - NOTE: For a discussion of alternative ways to value in-kind benefits, see Bureau of the Census, Estimates of Poverty Including the Value of Noncash Benefits: 1984, Technical Paper 55, August 1985.



Population Subgroups

M-C : married couples with related children under 18 years of age
S-P : single parents with related children under 18 years of age
Fams : all primary families and unrelated subfamilies
Eld : all families and unrelated subfamilies with all members age 65 or over, plus all people age 65 and over not living with relatives.
UInd : all unrelated individuals

All : all people

SOURCE: Eric A. Hanushek and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, <u>Proceedings</u> of the Conference on the Measurement of Noncash Benefits, Volume 1, December 1985, p. 114.

of people qualifying for programs that have poverty status as an eligibility criterion, as critics often complain. The complaint, however, is not directly relevant to the issue; any poverty measure comparing income against fixed thresholds is necessarily an arbitrary statistic which can be driven to any given value by the appropriate choice of thresholds. For the purposes of program targeting, the more relevant question to ask is whether a particular income measure directs benefits toward those people for whom aid is intended. As noted above, the answer depends on which program is being considered.

What is clear is that the definition of income can affect which families are considered "needy" and thus determine the distribution of benefits among families. Table 1 and Figures 1 and 2 show the effects on poverty rates of using alternative income measures. Because they are less likely to get noncash benefits, married couples with children would experience a relatively small drop in their poverty rate--between 1.2 and 2.2 percentage points (a 13 to 25 percent decline) depending on how in-kind income is valued. The effects would be greater for family types that participate in non-cash assistance programs more often: the poverty rate of single-parent families with children would fall by 19 percent or 34 percent, while that of elderly families would be reduced by 41 percent or 79 percent.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup>Table 1 and Figures 1 and 2 reveal significant differences in poverty rates, depending on the method used to value in-kind benefits. The market value is generally greater than either the poverty budget share value or the cash equivalent value (not shown in the table or graphs), and the difference is greatest for health care benefits. This is particularly evident for the elderly, for whom counting in-kind income at market value lowers the poverty rate to 3.6 percent, while using the poverty budget share value--which limits the dollar value of in-kind benefits--causes the

Allocating program benefitson the basis of cash plus in-kind income would, therefore, provide less for the elderly and for single-parent families, while a greater share of assistance would go to married couples with children, if no other changes were made.

If income were also measured after taxes, this effect would be even greater. Using the poverty budget share valuation of in-kind income, the combined effect on poverty rates of counting noncash benefits and excluding taxes would be essentially zero for married couple families. On the other hand, because other family types pay less taxes, their poverty rates would fall more: poverty rates would decline by 17 percent among single-parent families, and by 41 percent among elderly households.

At the same time, counting in-kind benefits as income would not necessarily lead to large or inadvertent changes in the distribution of program benefits. In the first place, Congressional action would generally be required to alter eligibility criteria to include in-kind income; such action would signal revised intent in terms of who should receive assistance. Further, because most programs have multiple eligibility criteria, changing the definition of income might have little effect on who qualifies for benefits; other criteria may be more important in restricting the eligible population.

# What additional information is needed to value in-kind income?

If in-kind benefits are to be counted when income is measured, two pieces of information about those benefits are needed for each family. First, we must know how much of each good or service the family receives.

poverty rate to fall only to 10.3 percent. There is little agreement on what the appropriate valuation method is.

For area estimates such as national averages, survey data could be used; the usual problems of misreporting would occur, made worse in those situations where recipients do not know how much of a particular in-kind benefit they were given, such as in the case of public housing or energy assistance in the form of third-party payments. For eligibility determination, information could be obtained either from program records or from applicant reports. The former would be administratively complex, however, given the many types of assistance provided by different agencies, while the latter would be subject to underreporting, either intentional or from lack of knowledge.

The second and perhaps more difficult need is a means of valuing in-kind benefits. The seminal work of Timothy Smeeding and subsequent refinements by the Bureau of the Census demonstrate that valuation methods can be devised.<sup>7</sup> There is, however, much disagreement on what method is appropriate, best indicated by the fact that the Census Bureau publishes data based on three alternatives. Arguments can be offered for each of the three--and for other possibilities as well--and consensus is unlikely to be obtained on any one.

The previous data (and the more detailed analyses by the Bureau of the Census) provide insights into the relative importance of different issues. The large changes in the poverty rates result directly from including benefits from Medicare and Medicaid and subsidized housing. The medical programs are especially important for the elderly and differences in their

0

<sup>&</sup>lt;sup>7</sup>Bureau of the Census, <u>Alternative Methods for Valuing Selected</u> <u>In-Kind Transfer Benefits and Measuring Their Effect on Poverty</u>, Technical Paper 50, March 1982. See also Technical Papers 51, 52, 55, and 56 in the same series.

presumed value lead to the extraordinary swings in the evaluation of their well-being.

As a result, any move to introduce broader measures of income is likely to affect the elderly relatively more heavily than younger people. This is not to say that such options should not be considered; because of the noncash benefits they receive, the elderly are, after all, better off than one would infer from looking only at cash incomes. It does emphasize, however, that attempts to improve targeting through a more inclusive income measure could have potentially significant distributional effects. Furthermore, the alternative ways of valuing noncash benefits mean that the effects may well be arbitrary. Given the importance of medical insurance as noncash income for the elderly, the choice of valuation method could markedly affect the distribution of program benefits between the elderly and the nonelderly.

# III. Distributional Impact of Specific Targeting Options for the Elderly

The second major issue is the impact of programmatic reductions on the elderly. Much of the public debate to date has involved taking the structure of programs as given and focusing on the distributional impacts of any aggregate cutbacks. Almost anything that is done, however, has immediate implications for the well-being of the elderly. Therefore, a parallel consideration has been how program parameters could be altered to protect the low-income elderly from adverse effects.

This work has been quite specific, because, unlike the general discussions of changing income distributions, it has delved into the actual operational details of programs. Specifically, it has worried about how

programs could be modified in realistic ways to achieve savings while protecting the elderly poor and limiting any increase in the level of poverty among the elderly.

Three types of basic policies could be pursued. The first, which has received the most attention, is actions on the spending side that would lead to immediate savings. These options have had the greatest appeal because they involve changes that could be quickly implemented and that would generate obvious rapid reductions in the overall deficit. The simplest example of this is eliminating the cost of living adjustment (COLA) built into Social Security. The second basic policy involves "deeper" structural adjustments that would alter expenditure patterns in the long run but have only small effects in the short run. An example of this is changing the "bend points" in the Social Security benefits formula. The final kind of change involves working on the tax side instead of the benefits side. Increased taxation of Social Security benefits would fall into this category.

The interesting aspect of each of these approaches is that while specific proposals do not represent explicit targeting choices, their evaluation has been in terms of their implicit targeting. Specifically, proposals have been assessed in terms of their distributional impacts, holding constant the amount of change in expenditures or taxes.

To put the possibilities into perspective, Table 2 shows the expenditure levels for the major programs affecting the elderly, while Table 3 provides information about the distribution of cash transfer benefits by income

					,		Total Projected
	Baseline			Proje	cted		1986-
Program	1985	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	1990
		0	UTLAYS				
Non-Means-Tested Cas	<u>sh Benefits</u>						
Social Security	192	202	215	229	244	260	1,150
Railroad Retirement	6	6	7	7	7	7	34
Civil Service Retire	e. 23	25	26	28	30	32	141
Military Retirement	16	18	19	20	21	23	102
Other Federal Employee Retirement	1	1	1	1	1	1	4
Veterans' Compensat:	ion <u>10</u>	_10	11	11	11	11	54
Subtotal	248	262	278	296	314	334	1,485
Supplemental Securi Income <u>a</u> /	ty 10	10	10	12	11	11	54
Medicare Hospital Insurance	e 48	52	57	63	70	78	321
Supplemental Medie Insurance	cal _23	_26	_29	_33	_33	_38	_169
Subtotal	71	78	86	96	108	121	489
Partial Exclusion of SS/RR Benefits from	f	TAX E	XPENDIT	URES			
Adjusted Gross Incom	me 18	19	20	21	22	22	104

TABLE 2.OUTLAYS AND TAX EXPENDITURES FOR SELECTED BENEFIT PROGRAMS, 1985-<br/>1990 (By fiscal year, in billions of dollars)

Ø

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985.

a. Fiscal year 1988 includes 13 months of payments; fiscal year 1990 includes only 11 months of payments.

		Percentage of Total Program	Receivin	of Families g Benefits		ge Benefits
	Percentage		-	s Percentage	-	s Percentage
Relative to Poverty Line	of Recipients in Group	by Group	In Thousands	of Families in Group	In Dollars	of Average Income
-				•		
	Soci	al Security and I	Railroad Ret	irement		
Total Families	100	100	23,510	25.6	6,010	34.3
Below Poverty Line	17	9	3,890	26.0	3,370	76.0
100-125 Percent	9	8	2,190	43.4	4,840	74.2
Over 125 Percent	74	83	17,440		6,750	30.9
••••••					• • • • •	
	Civ	vil Service and N	lilitary Retir	ement		
Total Families	100	100	2,820	3.1	11,590	37.2
Below Poverty Line	2	1	60		2,770	63.7
100-125 Percent	3	1	90	1.7	3,900	54.4
Over 125 Percent	<b>9</b> 5	98	2,670	3.7	12,060	37.0
		Supplemental S	ecurity Inco	me		
Total Families	100	100	2,990	3.2	2,460	24.3
Below Poverty Line	54	47	1,620	10.8	2,130	46.4
100-125 Percent	16	18	470	9.4	2,820	38.6
Over 125 Percent	30	35	<b>90</b> 0	1.2	2,860	13.2
	Social Secu	rity, Railroad Re	etirement, SS	il, Civil Servic	æ	
		or Military R	etirement b			
Total Families	100	100	26,100	28.4	6,950	38.2
Below Poverty Line		9	4,620	30.9	3,620	81.2
100-125 Percent	9	7	2,400	47.5	5,120	77.4
Over 125 Percent	73	84	19,080	26.5	7,990	34.8

# TABLE 3. FAMILIES RECEIVING BENEFITS FROM SELECTED PROGRAMS, CALENDAR YEAR 1983 a/

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985, p. 22.

a. Unrelated sub-families and unrelated individuals are each defined as separate families in these tabulations. All numbers have been rounded.

b. Families receiving benefits from one or more of these programs. Families receiving benefits from more than one program are counted only once.

category, where income includes cash only.<sup>8</sup> The major programs represent about one-third of all federal outlays. Because of their magnitude, they are programs that need to be considered in any discussions of deficit reduction.

The options discussed here are described briefly in Table 4. They are intended to be illustrative, and represent neither the only ones nor ones currently under active consideration. The nature of these programmatic changes can be seen from Table 5 which summarizes the distribution of their effects by income category.<sup>9</sup>

The first general conclusion arising from this analysis is that programmatic changes would have widely different impacts on the level of poverty among the elderly. Options that do not recognize differences in economic circumstances, such as increases in individual beneficiaries' premiums for Medicare or across-the-board cuts in COLAs, would fall disproportionately on the poor and near poor. At the other extreme, other changes, such as moving from percentage to fixed amount COLAs, would have little effect on the low-income elderly and could even improve the wellbeing of some of them.

<sup>&</sup>lt;sup>8</sup>These estimates are based upon tabulations from the March 1984 Current Population Survey.

<sup>&</sup>lt;sup>9</sup>These alternate plans are described in great detail in CBO, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled", Staff Working Paper, March 1985. All of the calculations result from CBO simulations based upon distributional information from the 1984 Current Population Survey and CBO projections of macroeconomic parameters as of February 1985. The effects shown might therefore not be accurate if the options were implemented now.

# TABLE 4. SUMMARY DESCRIPTIONS OF POLICY OPTIONS

TABLE I. SOMMANT DESCRIPTION	
Option	Description
FREEZE OPTIONS	
Freeze Social Security and Railroad Retirement program benefits.	One-year elimination of COLA for Social Security and Railroad Retirement only.
Combine Social Security and Railroad Retirement freeze with increased SSI Guarantee	One-year elimination of COLA for Social Security and Railroad Retirement only plus raise SSI guarantee levels for individuals by \$20/mo. and for couples by \$30/mo.
Freeze all non-means-tested program benefits	One-year elimination of COLA for Social Security, Railroad Retirement, Civil Service Retirement, military retirement, veterans' compensation, and retirement benefits for the Foreign Service, the Public Health Service, and the Coast Guard.
Combine freeze on all non- means-tested programs with increase in SSI guarantee.	One-year elimination of COLA for Social Security, Railroad Retirement, Civil Service Retirement, military retirement, veterans' compensation, and retirement benefits for the Foreign Service, the Public Health Service, and the Coast Guard plus raise SSI guarantee levels for individuals and for couples by \$20 and \$30 per month, respectively.
Exempt Social Security and Railroad Retirement benefits below a specified threshold (COLA Cap)	Provide COLA only for that portion of Social Security and Railroad Retirement benefits that is below poverty threshold. No COLA would be provided for any other non- means-tested programs.
Replace Social Security and Railroad Retirement COLA with flat COLA	Provide all Social Security and Railroad Retirement beneficiaries with COLA equal to that COLA that would have been given to recipients with benefits at the poverty threshold. No COLA would be provided for any other non-means-tested program.
Exempt Social Security and Railroad Retirement bene- ficiaries below a specified threshold (Poverty COLA)	One-year elimination of COLA for all non- means-tested programs except that Social Security and Railroad Retirement bene- ficiaries with benefits below the poverty threshold would receive the full COLA.

TABLE 4, continued.

Option	Description
MEDICARE OPTIONS	
Increase SMI premium to 35% of costs	Raise Supplemental Medical Insurance premiums for all beneficiaries so that total premiums cover 35% of SMI costs.
Increase SMI premium to 30% of costs and increase deductible	Raise Supplemental Medical Insurance premiums for all beneficiaries so that total premiums cover 30% of SMI costs and increase SMI deductible from \$75 to \$200. Index deductible to CPI in the future.
Introduce income-related SMI premium	Impose 1% surtax on taxable income of SMI enrollees; limit surtax to no more than subsidy value of SMI benefits.

# TAXATION OF BENEFIT INCOME OPTIONS

Eliminate thresholds for inclusion of benefits in AGI	Eliminate income thresholds for including Social Security and Railroad Retirement benefits in taxable income. Continue to tax half of benefits.
Include up to 85% of benefits above threshold in AGI	Use current thresholds (\$25,000 for single returns and \$32,000 for married couples) but tax 85% of Social Security and Railroad Retirement benefits for those above the threshold.
Lower the thresholds and increase percent of benefits included in AGI	Lower thresholds to \$20,000 for single returns and to \$25,000 for married couples and tax 85% of Social Security and Railroad Retirement benefits for those above the threshold.
Include 50% of value of HI and 75% of SMI in AGI	Require Medicare beneficiaries to include as taxable income 50% of the insurance value of Hospital Insurance benefits and 75% of the insurance value of Supplemental Medical Insurance benefits.

SOURCE: Derived from Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," Staff Working Paper, March 1985.

	Fiscal Years 1986-1990	Di	Distribution of Effects on Recipients in 1983 (in percents)					
Option <u>b</u> /	Budgetary Savings <u>a</u> / (in billions of dollars)	Poor <u>c</u> /	100%- 125% of Poverty Line	125%- 200% of Poverty Line		Over 300% of Poverty Line		
On	e-Year Benefit I	Freeze Opt	tions					
Freeze Social Security and Railroad			_					
Retirement program benefits Combine Social Security and Railroad Retirement freeze with	33.8	8	7	23	24	39		
increase in SSI Guarantee Freeze all non-means-tested	29.9	<u>d</u> /	5	24	27	44		
program benefits Combine freeze on all non-means- tested programs with increase in	43.3	6	6	19	22	47		
SSI guarantee Exempt Social Security and Railroad Retirement benefits below a	39.4	<u>d</u> /	4	20	24	52		
specified threshold (COLA Cap) <u>f</u> / Replace Social Security and	16.5	1	2	12	20	<b>6</b> 6		
Railroad Retirement COLA with flat COLA <u>f</u> / Exempt Social Security and Railroad Retirement beneficiaries below a specified threshold	10.2	-15 <u>e</u> /	-2 <u>e</u> /	8	21	86		
(Poverty COLA) <u>f</u> /	33.1	1	4	19	23	53		
	Medicare C	Options						
ncrease SMI premium to 35 percent of costs g/ ncrease SMI premium to 30 percent	17.1	11	8	23	23	36		
of costs and increase deductible g/ ntroduce an income-related	17.7	11	8	23	23	36		
SMI premium	8.7	<u>d</u> /	<u>d</u> /	1	7	92		
Tax	ation of Benefit	Income Op	otions					
liminate thresholds for inclusion of								
benefits in adjusted gross income nclude up to 85 percent of benefits	36.1	<u>d</u> /	<u>d</u> /	7	28	65		
above threshold in AGI ower the thresholds and increase	19.3	0	0	0	<u>d</u> /	100		
percent of benefits included in AGI nclude 50 percent of value of HI	28.4	0	0	<u>d</u> /	1	<del>9</del> 9		
and 75 percent of SMI in AGI	20.1	<u>d</u> /	<u>d</u> /	4	18	77		

# TABLE 5. AMOUNTS AND SOURCES OF BUDGETARY SAVINGS

SOURCE: Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," March 1985, p. 108.

a. Budgetary savings estimated for fiscal years 1986-1990; distributional effects are for calendar year 1983.

b. See source for complete definitions of options.

c. Poor families are those with incomes below Census poverty thresholds.

d. Less than 0.5 percent.

e. Total benefits received by the poor and near-poor in 1983 would increase by about \$0.3 billion, and benefits received by the nonpoor would decrease by \$1.6 billion, resulting in a net loss of \$1.3 billion to be allocated across groups.

f. Benefit levels for all other non-means-tested programs would be frozen.

g. The distributions of effects of these options are identical because it is assumed that per capita deductible expenditures do not vary by income group.

The second observation is that expenditure policies with respect to the elderly are relatively clumsy instruments for targeting. This is easiest to see in terms of curtailing the COLA for Social Security. Social Security payments are correlated with the overall income level of the elderly, but only imperfectly. While it has sometimes been asserted that the elderly poor could be protected from the effects of a one-year freeze on Social Security benefits with expenditures of as little as \$400 million--about 8 percent of expected budgetary savings--this is only the case if the elderly poor could be identified by the Social Security Administration. They can't. The Social Security system can only make adjustments in the current level of benefits that are calculated on the basis of past contributions. They do not have direct access to information on other income of the elderly.

A third observation is more subtle. Curtailing COLAs could be combined with policies designed to increase the benefits going to the low-income elderly, such as payment increases for Supplemental Social Insurance (SSI) beneficiaries, for example. This would indeed lessen the impact of COLA curtailments, but would do so only in the aggregate. The individuals brought above the poverty line through increases in SSI benefits would generally not be the same as the individuals pushed below the poverty line by a COLA curtailment. It is generally the case that implicit targeting is an aggregate, not an individual, concept.

The expenditure cuts considered above, curtailing COLAs or increasing SMI premiums for Medicare, take the existing structure of programs as given. The distribution of the cuts thus follows the pattern of distribution built into the programs. In addition, unless they are

continued over time, the cuts have a large immediate impact but little long-term impact on the expenditure patterns of these programs. To the extent that the major problem facing the federal government is a short run fiscal shortfall that will go away in the longer run, this is an appropriate focus. In other words, if the need to deal with budgetary deficits is simply a temporary imbalance, there is no (exogenous) incentive to change the character of the programs. On the other hand, if the problem of fiscal imbalance is one that will exist for some time, basic alterations in program design may be needed.

In terms of this longer run perspective, alternative targeting notions are more important. Within the Social Security system, for example, one inherent source of distributional outcomes lies in the basic benefit formula. Currently, Social Security provides larger relative benefits to those with lower lifetime earnings. It does this through the "bend points" in the benefit formula which determine how rapidly benefits rise with lifetime earnings.<sup>10</sup> By adjusting these, the amount of redistribution of the Social Security system can be altered.<sup>11</sup>

Making such adjustments involves a number of large policy issues. First, there is a delicate balance between the notions that Social Security is a return on individual payments into the system and that Social Security

<sup>&</sup>lt;sup>10</sup>The primary insurance amount (PIA) is based on average indexed monthly earnings (AIME). Currently the PIA is equal to 90 percent of the first \$297 of AIME, plus 32 percent of the next \$1,493 of AIME, plus 15 percent of any AIME in excess of \$1,790. \$297 and \$1,790 are commonly referred to as the "bend points" in the formula.

<sup>&</sup>lt;sup>11</sup>The amount of redistribution is a function of both the bend points and the replacement rates—the percentage of earnings in each bracket paid as retirement benefits. In addition, the amount of redistribution depends on payroll tax rates and maximum taxable earnings over workers' lifetimes.

is a transfer system with redistributive characteristics. Changes in the benefit formula could seriously affect that balance. Second, alterations in the bend points can have substantial long run effects, but would have very little immediate impact on the deficits. This results from the fact that changes in the benefit formula only affect those who have not yet retired.

Finally, the discussion of expenditure policies should be contrasted with the options on the tax side. The current personal income tax system has a somewhat complicated formula that includes a portion of Social Security benefits in taxable income for high income tax payers.<sup>12</sup> Currently, relatively few recipients pay taxes on Social Security; it is estimated that only about one-sixth of tax units with Social Security income will be liable for taxes totalling about \$3 billion from this source in 1987. However, if the income thresholds for taxing benefits were lowered or the portion of Social Security that is included as taxable income were increased, benefits <u>net of taxes</u> could be altered to be more consistent with the overall ability to pay of the elderly.

The fundamental difference between operating on the tax side and on the benefit side is the capacity to target changes more directly to the economic circumstances of the elderly. As it stands now, individuals can receive low Social Security benefits either because they had low lifetime incomes or because they had low Social Security earnings. In the latter case, low Social Security earnings do not accurately reflect the lifetime

<sup>&</sup>lt;sup>12</sup>In most cases, if adjusted gross income plus nontaxable interest income plus one half of Social Security retirement benefits exceeds \$25,000 for individual filers (\$32,000 for joint filers), then one-half of benefits are included in taxable income.

incomes of individuals because they do not recognize either uncovered employment or incomes from sources other than earnings. Thus, using only Social Security earnings data and calculated benefits cannot take into account other sources of income, and benefit adjustments that direct increases to those now receiving low payments would be "inefficient" from a targeting standpoint.

Table 5 clearly demonstrates that changing the taxability of Social Security could raise as much money as straight COLA freezes while having a very different impact on the poor.<sup>13</sup> Since relatively few of the elderly poor pay taxes under the current system, they would generally escape benefit reductions--net of taxes--accomplished in this way.

Several arguments can be raised against changing the taxability of Social Security. First, some contend that payments by individuals into Social Security accounts come from after-tax income, and therefore they have already been taxed once. This is only partially true, however, since only a small portion of current benefits could have been funded by contributions made by individuals. Second, the taxation of benefits (under the progressive income tax system) again raises the issue of whether the underlying philosophy of the system is to provide retirement income payments in line with contributions to the system or to accomplish redistributive goals.

<sup>&</sup>lt;sup>13</sup>In fact, changing the taxation of Social Security could raise significantly more money if inflation rates remain at their current low levels. The estimates given in Table 5 were based on the assumption that the annual inflation rate would be 3.7 percent. With lower inflation, COLAs would be smaller, and eliminating them would save less money.

A final note is important. The recently enacted revisions to the tax code interact with these comments about targeting. Reduced marginal tax rates mean that less tax will be paid on the taxable portion of Social Security benefits in the future. On the other hand, changes in what income must be reported for tax purposes will mean that more returns will be subject to tax on Social Security payments. The net effect is uncertain, but the revenue changes could significantly affect the targeting of benefits based on overall well-being of the elderly.

#### IV. Summing Up

This paper has attempted to delineate a variety of issues related to the targeting of benefits for the elderly. These have been somewhat artificially divided into broad discussions of general income targeting issues and of specific programmatic revisions. The key point is, however, that current income measurement and benefit targeting for the elderly is especially imprecise. This arises from two fundamental factors. First, the elderly receive particularly important noncash benefits, the most significant of which is medical insurance under Medicare. It is unreasonable to neglect these payments in considering the well-being of the elderly and the distribution of programmatic funds. The valuation of these benefits is extremely difficult, however, and how it is done has important distributional implications.

Second, within the existing set of programs, explicit targeting is frequently ruled out because appropriate information is lacking. Virtually all programmatic changes can, however, be viewed as adopting implicit targeting choices. When considered in this framework, specific options designed primarily to reduce the deficit can have enormous--and widely differing--distributional effects. Even if the explicit intent is to direct benefits more precisely on the basis of income, targeting may be quite imprecise. This is because specific program offices, such as the Social Security Administration, lack the information needed to determine total incomes of beneficiaries. By comparison, because it is based on the fundamental concept of ability to pay, the tax system provides an alternative that can better attain distributional objectives, even though it, too, neglects noncash income.

# BIBLIOGRAPHY

- Bureau of the Census, <u>Alternative Methods for Valuing Selected In-Kind</u> <u>Transfer Benefits and Measuring Their Effect on Poverty</u>, Technical Paper 50, March 1982.
  - <u>, Estimates of Poverty Including the Value of Noncash Benefits:</u> <u>1984</u>, Technical Paper 55, August 1985.
  - <u>Benefits: 1985</u>, Technical Paper 56, September 1986.
- Congressional Budget Office, "An Analysis of Selected Deficit Reduction Options Affecting the Elderly and Disabled," Staff Working Paper, March 1985.
- Hanushek, Eric A., and Roberton Williams, "Alternative Poverty Measures and the Allocation of Federal Benefits," in Bureau of the Census, <u>Proceedings of the Conference on the Measurement of Noncash Benefits</u>, Volume 1, December 1985, pp. 104-125.
- U.S. Congress, Joint Committee on Taxation, <u>Federal Tax Treatment of</u> <u>Families Below the Poverty Line</u>, April 9, 1984.



# Rochester Center for Economic Research University of Rochester Department of Economics Rochester, NY 14627

# 1986-87 DISCUSSION PAPERS

- WP#33 OIL PRICE SHOCKS AND THE DISPERSION HYPOTHESIS, 1900 1980 by Prakash Loungani, January 1986
- WP#34 RISK SHARING, INDIVISIBLE LABOR AND AGGREGATE FLUCTUATIONS by Richard Rogerson, (Revised) February 1986
- WP#35 PRICE CONTRACTS, OUTPUT, AND MONETARY DISTURBANCES by Alan C. Stockman, October 1985
- WP#36 FISCAL POLICIES AND INTERNATIONAL FINANCIAL MARKETS by Alan C. Stockman, March 1986
- WP#37 LARGE-SCALE TAX REFORM: THE EXAMPLE OF EMPLOYER-PAID HEALTH INSURANCE PREMIUMS by Charles E. Phelps, March 1986
- WP#38 INVESTMENT, CAPACITY UTILIZATION AND THE REAL BUSINESS CYCLE by Jeremy Greenwood and Zvi Hercowitz, April 1986
- WP#39 THE ECONOMICS OF SCHOOLING: PRODUCTION AND EFFICIENCY IN PUBLIC SCHOOLS by Eric A. Hanushek, April 1986
- WP#40 EMPLOYMENT RELATIONS IN DUAL LABOR MARKETS (IT'S NICE WORK IF YOU CAN GET IT!) by Walter Y. Oi, April 1986
- WP#41 SECTORAL DISTURBANCES, GOVERNMENT POLICIES, AND INDUSTRIAL OUTPUT IN SEVEN EUROPEAN COUNTRIES by Alan C. Stockman, April 1986
- WP#42 SMOOOTH VALUATIONS FUNCTIONS AND DETERMINANCY WITH INFINITELY LIVED CONSUMERS by Timothy J. Kehoe, David K. Levine and Paul R. Romer, April 1986
- WP#43 AN OPERATIONAL THEORY OF MONOPOLY UNION-COMPETITIVE FIRM INTERACTION by Glenn M. MacDonald and Chris Robinson, June 1986
- WP#44 JOB MOBILITY AND THE INFORMATION CONTENT OF EQUILIBRIUM WAGES: PART 1, by Glenn M. MacDonald, June 1986
- WP#45 SKI-LIFT PRICING, WITH APPLICATIONS TO LABOR AND OTHER MARKETS by Robert J. Barro and Paul M. Romer, May 1986, revised April 1987

- WP#46 FORMULA BUDGETING: THE ECONOMICS AND ANALYTICS OF FISCAL POLICY UNDER RULES, by Eric A. Hanushek, June 1986
- WP#48 EXCHANGE RATE POLICY, WAGE FORMATION, AND CREDIBILITY by Henrik Horn and Torsten Persson, June 1986
- WP#49 MONEY AND BUSINESS CYCLES: COMMENTS ON BERNANKE AND RELATED LITERATURE, by Robert G. King, July 1986
- WP#50 NOMINAL SURPRISES, REAL FACTORS AND PROPAGATION MECHANISMS by Robert G. King and Charles I. Plosser, Final Draft: July 1986
- WP#51 JOB MOBILITY IN MARKET EQUILIBRIUM by Glenn M. MacDonald, August 1986
- WP#52 SECRECY, SPECULATION AND POLICY by Robert G. King, (revised) August 1986
- WP#53 THE TULIPMANIA LEGEND by Peter M. Garber, July 1986
- WP#54 THE WELFARE THEOREMS AND ECONOMIES WITH LAND AND A FINITE NUMBER OF TRADERS, by Marcus Berliant and Karl Dunz, July 1986
- WP#55 NONLABOR SUPPLY RESPONSES TO THE INCOME MAINTENANCE EXPERIMENTS by Eric A. Hanushek, August 1986
- WP#56 INDIVISIBLE LABOR, EXPERIENCE AND INTERTEMPORAL ALLOCATIONS by Vittorio U. Grilli and Richard Rogerson, September 1986
- WP#57 TIME CONSISTENCY OF FISCAL AND MONETARY POLICY by Mats Persson, Torsten Persson and Lars E. O. Svensson, September 1986
- WP#58 ON THE NATURE OF UNEMPLOYMENT IN ECONOMIES WITH EFFICIENT RISK SHARING, by Richard Rogerson and Randall Wright, September 1986
- WP#59 INFORMATION PRODUCTION, EVALUATION RISK, AND OPTIMAL CONTRACTS by Monica Hargraves and Paul M. Romer, September 1986
- WP#60 RECURSIVE UTILITY AND THE RAMSEY PROBLEM by John H. Boyd III, October 1986
- WP#61 WHO LEAVES WHOM IN DURABLE TRADING MATCHES by Kenneth J. McLaughlin, October 1986
- WP#62 SYMMETRIES, EQUILIBRIA AND THE VALUE FUNCTION by John H. Boyd III, December 1986
- WP#63 A NOTE ON INCOME TAXATION AND THE CORE by Marcus Berliant, December 1986

- WP#64 INCREASING RETURNS, SPECIALIZATION, AND EXTERNAL ECONOMIES: GROWTH AS DESCRIBED BY ALLYN YOUNG, By Paul M. Romer, December 1986
- WP#65 THE QUIT-LAYOFF DISTINCTION: EMPIRICAL REGULARITIES by Kenneth J. McLaughlin, December 1986
- WP#66 FURTHER EVIDENCE ON THE RELATION BETWEEN FISCAL POLICY AND THE TERM STRUCTURE, by Charles I. Plosser, December 1986
- WP#67 INVENTORIES AND THE VOLATILITY OF PRODUCTION by James A. Kahn, December 1986
- WP#68 RECURSIVE UTILITY AND OPTIMAL CAPITAL ACCUMULATION, I: EXISTENCE, by Robert A. Becker, John H. Boyd III, and Bom Yong Sung, January 1987
- WP#69 MONEY AND MARKET INCOMPLETENESS IN OVERLAPPING-GENERATIONS MODELS, by Marianne Baxter, January 1987
- WP#70 GROWTH BASED ON INCREASING RETURNS DUE TO SPECIALIZATION by Paul M. Romer, January 1987
- WP#71 WHY A STUBBORN CONSERVATIVE WOULD RUN A DEFICIT: POLICY WITH TIME-INCONSISTENT PREFERENCES by Torsten Persson and Lars E.O. Svensson, January 1987
- WP#72 ON THE CONTINUUM APPROACH OF SPATIAL AND SOME LOCAL PUBLIC GOODS OR PRODUCT DIFFERENTIATION MODELS by Marcus Berliant and Thijs ten Raa, January 1987
- WP#73 THE QUIT-LAYOFF DISTINCTION: GROWTH EFFECTS by Kenneth J. McLaughlin, February 1987
- WP#74 SOCIAL SECURITY, LIQUIDITY, AND EARLY RETIREMENT by James A. Kahn, March 1987
- WP#75 THE PRODUCT CYCLE HYPOTHESIS AND THE HECKSCHER-OHLIN-SAMUELSON THEORY OF INTERNATIONAL TRADE by Sugata Marjit, April 1987
- WP#76 NOTIONS OF EQUAL OPPORTUNITIES by William Thomson, April 1987
- WP#77 BARGAINING PROBLEMS WITH UNCERTAIN DISAGREEMENT POINTS by Youngsub Chun and William Thomson, April 1987
- WP#78 THE ECONOMICS OF RISING STARS by Glenn M. MacDonald, April 1987
- WP#79 STOCHASTIC TRENDS AND ECONOMIC FLUCTUATIONS by Robert King, Charles Plosser, James Stock, and Mark Watson, April 1987

- WP#80 INTEREST RATE SMOOTHING AND PRICE LEVEL TREND-STATIONARITY by Marvin Goodfriend, April 1987
- WP#81 THE EQUILIBRIUM APPROACH TO EXCHANGE RATES by Alan C. Stockman, revised, April 1987
- WP#82 INTEREST-RATE SMOOTHING by Robert J. Barro, May 1987
- WP#83 CYCLICAL PRICING OF DURABLE LUXURIES by Mark Bils, May 1987
- WP#84 EQUILIBRIUM IN COOPERATIVE GAMES OF POLICY FORMULATION by Thomas F. Cooley and Bruce D. Smith, May 1987
- WP#85 RENT SHARING AND TURNOVER IN A MODEL WITH EFFICIENCY UNITS OF HUMAN CAPITAL by Kenneth J. McLaughlin, revised, May 1987
- WP#86 THE CYCLICALITY OF LABOR TURNOVER: A JOINT WEALTH MAXIMIZING HYPOTHESIS by Kenneth J. McLaughlin, revised, May 1987
- WP#87 CAN EVERYONE BENEFIT FROM GROWTH? THREE DIFFICULTIES by Herve' Moulin and William Thomson, May 1987
- WP#88 TRADE IN RISKY ASSETS by Lars E.O. Svensson, May 1987
- WP#89 RATIONAL EXPECTATIONS MODELS WITH CENSORED VARIABLES by Marianne Baxter, June 1987
- WP#90 EMPIRICAL EXAMINATIONS OF THE INFORMATION SETS OF ECONOMIC AGENTS by Nils Gottfries and Torsten Persson, June 1987
- WP#91 DO WAGES VARY IN CITIES? AN EMPIRICAL STUDY OF URBAN LABOR MARKETS by Eric A. Hanushek, June 1987
- WP#92 ASPECTS OF TOURNAMENT MODELS: A SURVEY by Kenneth J. McLaughlin, July 1987
- WP#93 ON MODELLING THE NATURAL RATE OF UNEMPLOYMENT WITH INDIVISIBLE LABOR by Jeremy Greenwood and Gregory W. Huffman
- WP#94 TWENTY YEARS AFTER: ECONOMETRICS, 1966-1986 by Adrian Pagan, August 1987
- WP#95 ON WELFARE THEORY AND URBAN ECONOMICS by Marcus Berliant, Yorgos Y. Papageorgiou and Ping Wang, August 1987
- WP#96 ENDOGENOUS FINANCIAL STRUCTURE IN AN ECONOMY WITH PRIVATE INFORMATION by James Kahn, August 1987

- WP#97 THE TRADE-OFF BETWEEN CHILD QUANTITY AND QUALITY: SOME EMPIRICAL EVIDENCE by Eric Hanushek, September 1987
- WP#98 SUPPLY AND EQUILIBRIUM IN AN ECONOMY WITH LAND AND PRODUCTION by Marcus Berliant and Hou-Wen Jeng, September 1987
- WP#99 AXIOMS CONCERNING UNCERTAIN DISAGREEMENT POINTS FOR 2-PERSON BARGAINING PROBLEMS by Youngsub Chun, September 1987
- WP#100 MONEY AND INFLATION IN THE AMERICAN COLONIES: FURTHER EVIDENCE ON THE FAILURE OF THE QUANTITY THEORY by Bruce Smith, October 1987
- WP#101 BANK PANICS, SUSPENSIONS, AND GEOGRAPHY: SOME NOTES ON THE "CONTAGION OF FEAR" IN BANKING by Bruce Smith, October 1987
- WP#102 LEGAL RESTRICTIONS, "SUNSPOTS", AND CYCLES by Bruce Smith, October 1987
- WP#103 THE QUIT-LAYOFF DISTINCTION IN A JOINT WEALTH MAXIMIZING APPROACH TO LABOR TURNOVER by Kenneth McLaughlin, October 1987
- WP#104 ON THE INCONSISTENCY OF THE MLE IN CERTAIN HETEROSKEDASTIC REGRESSION MODELS by Adrian Pagan and H. Sabau, October 1987
- WP#105 RECURRENT ADVERTISING by Ignatius J. Horstmann and Glenn M. MacDonald, October 1987
- WP#106 PREDICTIVE EFFICIENCY FOR SIMPLE NONLINEAR MODELS
  by Thomas F. Cooley, William R. Parke and Siddhartha Chib,
  October 1987
- WP#107 CREDIBILITY OF MACROECONOMIC POLICY: AN INTRODUCTION AND A BROAD SURVEY by Torsten Persson, November 1987
- WP#108 SOCIAL CONTRACTS AS ASSETS: A POSSIBLE SOLUTION TO THE TIME-CONSISTENCY PROBLEM by Laurence Kotlikoff, Torsten Persson and Lars E. O. Svensson, November 1987
- WP#109 EXCHANGE RATE VARIABILITY AND ASSET TRADE by Torsten Persson and Lars E. O. Svensson, Novmeber 1987
- WP#110 MICROFOUNDATIONS OF INDIVISIBLE LABOR by Vittorio Grilli and Richard Rogerson, November 1987
- WP#111 FISCAL POLICIES AND THE DOLLAR/POUND EXCHANGE RATE: 1870-1984 by Vittorio Grilli, November 1987

- WP#112 INFLATION AND STOCK RETURNS WITH COMPLETE MARKETS by Thomas Cooley and Jon Sonstelie, November 1987
- WP#113 THE ECONOMETRIC ANALYSIS OF MODELS WITH RISK TERMS by Adrian Pagan and Aman Ullah, December 1987
- WP#114 PROGRAM TARGETING OPTIONS AND THE ELDERLY by Eric Hanushek and Roberton Williams, December 1987

To order copies of the above papers complete the attached invoice and return to Christine Massaro, W. Allen Wallis Institute of Political Economy, RCER, 109B Harkness Hall, University of Rochester, Rochester, NY 14627. <u>Three (3) papers per year will be</u> provided free of charge as requested below. Each additional paper will require a \$5.00 service fee which <u>must be enclosed with your order</u>. For your convenience an invoice is provided below in order that you may request payment from your institution as necessary. Please make your check payable to the Rochester Center for Economic Research. <u>Checks must be drawn from a U.S. bank and in U.S. dollars</u>.

W. Allen Wallis Institute for Political Economy

# Rochester Center for Economic Research, Working Paper Series

# OFFICIAL INVOICE Requestor's Name Requestor's Address Please send me the following papers free of charge (Limit: 3 free per year). WP# WP# WP# I understand there is a \$5.00 fee for each additional paper. Enclosed is my check or money order in the amount of \$\_\_\_\_\_. Please send me the following papers. WP# WP# WP# \_\_\_\_\_ WP# WP# WP# WP# WP#\_\_\_\_ WP# WP# WP# WP#