564

STUDIES IN PUBLIC WELFARE

PAPER NO. 4

INCOME TRANSFER PROGRAMS:
HOW THEY TAX THE POOR

A VOLUME OF STUDIES

PREPARED FOR THE USE OF THE

SUBCOMMITTEE ON FISCAL POLICY

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

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(II)

LETTERS OF TRANSMITTAL

December 20, 1972.

To the Members of the Joint Economic Committee:

Transmitted herewith is a volume of studies entitled "Income Transfer Programs: How They Tax the Poor." These papers represent another in a series of studies being prepared for the use of the Subcommittee on Fiscal Policy in connection with its comprehensive review of the Nation's welfare-related programs under the general title of *Studies in Public Welfare.*

The views expressed in these papers do not necessarily represent the views of members of the Subcommittee on Fiscal Policy, the Joint Economic Committee, or the committee staffs.

WILLIAM PROXMIRE,
Chairman, Joint Economic Committee.

December 19, 1972.

Hon. WILLIAM PROXMIRE,
Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.

DEAR MR. CHAIRMAN: Transmitted herewith is a volume of studies entitled "Income Transfer Programs: How They Tax the Poor." These papers are part of a series of studies prepared for the Subcommittee on Fiscal Policy in its review of all phases of the Nation's system of welfare-related programs.

The papers point out how existing and proposed income maintenance programs actually can discourage the poor from helping themselves through work effort and savings. Recipients of many programs find that their benefits decline as their income rises. This process is similar to a tax on income. The recipient loses part of his added earnings to the Government. Often the Government claims a higher share of the earnings of recipients of such programs as food stamps, aid to families with dependent children, and unemployment insurance than it demands of the highest income persons. In many cases, an added dollar of earnings results in such a small addition to total income—as little as 10 to 15 cents—that recipients might as well stay home as work.

It is hoped that these papers stimulate discussion in the Congress, the administration, and among the general public. Focusing attention on the potential effects of these programs on incentives is important if we are to reform the overall system of welfare-related programs. We must design a system under which working provides a fair and adequate reward to all people.

The compendium was compiled and edited by Robert I. Lerman of the subcommittee staff under the general direction of Alair A. Townsend, technical director of the subcommittee. James R. Storey and Irene Cox also assisted in the preparation of this volume. The views expressed in these papers are exclusively those of the authors and do not necessarily represent the views of the members of the subcommittee or of the subcommittee staff.

MARTHA W. GRIFFITHS,
Chairman, Subcommittee on Fiscal Policy.

FOREWORD

Public income transfer programs do more than provide assistance to needy families just as taxes do more than take money from individuals and corporations. While taxes and transfers are opposites in the sense of who pays and who receives money, both taxes and transfers influence incentives ranging from the incentive to work to the incentive to save. The incentive features of tax laws have been widely discussed for many years and are often explicitly intended to stimulate particular actions. On the other hand, incentives built into such public transfer programs as aid to families with dependent children, food stamps, and unemployment insurance, have received much less attention and are often unintended consequences of decisions about who deserves benefits. This volume of studies carefully examines the incentive features of public transfer programs in order that transfer program incentives become as well understood as tax incentives. How reductions in welfare benefits affect a recipient's incentive to work is as important to know as how increases in income taxes affect the taxpayer's incentive to work. In this context, it is worth highlighting that equity and incentive problems are behind much of the growing dissatisfaction with taxes and with transfer programs.

Americans are becoming increasingly resistant to high taxes. Nearly two-thirds of all Americans feel that taxes have reached the breaking point. A rapidly growing number are expressing sympathy for a taxpayer's revolt, in which people refuse to pay their taxes.[1] Tax reform has been an important issue in the 1972 presidential campaign, again reflecting the special public concern about taxes. Income and social security taxes are, of course, only part of the story. There are taxes on all kinds of activities, such as buying cigarettes, cars, and even food, owning a home, making phone calls, and receiving gifts.

While everyone agrees that some taxes are necessary and taxes must reduce people's spendable income, the widespread discontent also is due implicitly to the present tax system's effects on incentives. First and most important, high tax rates on earned income can reduce the incentive to work. When a worker loses one-third of his increased earnings to Federal, State, and local governments, work becomes much less attractive. At the same time, high taxes require people to work longer in order to maintain their standard of living. Whether or not people work less or more in response to high taxes, they resent taxes that substantially lower the cash rewards to their labor.

A second aspect of the tax system which has aroused much resentment is its incentives to generate income from ways other than working. Investment tax credits, favorable treatment of capital gains,

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[1] Louis Harris, "Tax Revolt Talk Stirs Sympathy," *The Chicago Tribune,* Apr. 15, 1971.

business expense deductions, and a series of other special provisions help produce a system in which a dollar of earned income is often taxed at a higher rate than a dollar of property or business income. This feature not only angers the factory worker who has virtually no opportunities to shift his income, but also frustrates the doctor who finds it more profitable financially to manage investments than to treat patients.

Third, the tax system encourages some uses of income over others. Excise taxes on automobiles, cigarette taxes, alcohol taxes, and general sales taxes all influence a family's expenditure pattern. In addition, there is a large incentive for many taxpayers to become homeowners rather than renters. Except for sales taxes that apply to food and clothing, these incentive effects of taxes arouse less resentment, possibly because the taxes generally encourage expenditure shifts that are perceived to be desirable.

What is especially disturbing to many taxpayers are the taxes that pay the costs of welfare.[2] These same taxpayers may not realize that the incentive and equity problems they face under the tax system are minor compared to the nightmarish set of rules imposed on many recipients of public aid. In fact, the harried taxpayer would find a great many similarities between the impact of taxes and the impact of Government income transfer programs.

Public income transfers are Government payments or benefits provided to persons other than as compensation for goods and services rendered. Such public transfer programs as public assistance, food stamps, public housing, unemployment insurance, and social security redistribute the incomes generated in the market place, often to the nonworking part of the population. As with taxes, these public transfers influence incentives to work, to change income sources, and to shift expenditure patterns. It is natural that taxes and transfers produce similar effects since transfers are essentially negative taxes and taxes are negative transfers. Receiving a transfer payment from the Government can be viewed as paying a negative tax. A rise in a positive tax payment or a fall in a negative tax payment looks the same to the individual and to the Government. In both cases the income to the individual falls and the resources of the Government rise. To illustrate the similarity more vividly, consider a social security recipient who increases his earnings by $1. The Government will receive about 20 cents from the increase in personal income and social security tax payments and possibly 50 cents from a decrease in social security payments. To the recipient the two kinds of cash losses look the same. His lower social security payment is as much a tax as is his explicit income and payroll tax payment.

Public transfers can be much more discouraging than taxes. Nowhere is this more evident than in the case of work incentives. In contrast to the rhetoric of Government officials exhorting recipients to work for their income, the Government itself imposes the largest barrier to work. Program design is such that earnings may be worth very little to many recipients. Some welfare mothers gain only 33 cents in total net income for each added dollar earned over wide ranges of income, while the unemployment insurance claimant may forfeit a dollar of benefits for each dollar earned. A $2.40-per-hour

[2] See Harris.

job is worth only 80 cents per hour to a welfare recipient if his benefits are reduced by $1.60. Instead of feeling resentment against those recipients who do not work, the taxpayer who has examined these program rules might be surprised at the large number of recipients who do work despite significant disincentives to work.

Taxpayers facing tax rates in the neighborhood of 50 to 75 percent often find ways of shifting their income in such a way as to avoid taxes. Transfer programs encourage recipients to try the same thing. Unfortunately, the only way for recipients to shift their income and avoid benefit reductions is to misreport income. Instead of working at a job covered by social security and reporting his earnings to the Government, the recipient might take work which pays in cash. A job paid in cash turns out to be worth much more than its actual wage rate. It may be a job in an illicit occupation. Thus, it becomes more attractive financially to take an illicit job paying $1.50 per hour than to take and report the income from a legitimate job paying $2.40 per hour.

Encouragement of some uses of income over others is another feature common to both the tax system and the transfer system. What differs is the kind of activity that is encouraged and discouraged. Taxes often encourage socially desirable behavior, such as becoming a homeowner and cutting back on smoking and drinking, while transfers often penalize the virtuous, such as those who save and who economize on rent.[3] The low-income person who saves in a bank account may find himself ineligible for welfare benefits while another person with the same income is in no such trouble because he bought a new television set with his spare cash. The welfare mother who moves in with her mother to save on rent and to send her children to camp may find that her rent savings simply reduce her welfare grant and do not provide the money for camp.

The three papers in this volume document in detail many of the incentive effects resulting from how the benefits of public transfer programs are computed and how they are related to income. This relationship of benefit amount to income is called here the benefit reduction rate. The benefit reductions of interest are those that depend on changes in the amount of total income, changes in sources of income, and changes in how the income is used. One question that receives great attention is—How do public transfer programs influence an individual's incentive to work?

Lerman and Hausman examine in detail the role of individual programs and the role of programs in combination in reducing the dollar value of work. Hausman shows the changes over time and the differences among States in how the earnings of public assistance recipients actually affect their welfare grants and other benefits, such as food stamps, public housing, and medicaid. He notes that some changes have increased significantly the financial incentives for recipients to work. Nevertheless, very few recipients of aid to families with dependent children can raise their spendable income more than 40 to 50 cents

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[3] The most blantantly undesirable incentive effects of the welfare system are the financial incentives for fathers to desert their families and for families to move to high-paying States. These effects are well-publicized and are not discussed in these papers.

by earning an added dollar. Hausman also notes how the same incentive problems are present in the family assistance plan proposed by President Nixon and in the British system of transfers. Lerman discusses how added income reduces benefits not only in the public assistance and veterans' pension programs but also in such social insurance programs as social security and unemployment insurance. Lerman also examines how a family's spending and savings choices can reduce or increase benefits from various programs.

The problem of incentive effects is inherent in any system of public transfer programs. Since many persons receive benefits under more than one program, it is important to consider the incentive effects of a combination of programs, and to devise means of coordinating the disparate incentive features of individual programs so that a rational system can be achieved. Mirer demonstrates the alternative ways separate transfer programs can be linked. Unfortunately, methods which least interfere with incentives to work by recipients are also either the most expensive, or provide the least adequate income floors. This problem is by now well recognized. At any minimum income level, there is a direct conflict between the goal of improving the incentive to work and that of minimizing costs. Mirer does propose a useful method for integrating programs as diverse as food stamps and unemployment insurance.

Hausman concludes that the costs of reforming the current programs are likely to be high. Further increases in work incentives of current recipients and the extension of cash public assistance to two-parent families, for example, would be very expensive. In New Jersey, a welfare mother currently may remain eligible for public assistance despite earnings as high as $940 per month. Since a very large share of two-parent families have incomes below this amount and the number of two-parent families far exceeds the number of one-parent families, extending coverage to two-parent families even under the strict current rules would mean a significant rise in program costs and in the number of people affected by high work disincentives.

Lerman discusses one recent attempt at reforming the public transfer programs affecting the elderly. The 1972 Social Security Amendments enacted into law in October 1972, improved the individual work incentives features of both old-age insurance and public assistance programs for the elderly. However, looking at the joint impact of the changes in the two programs, one finds (1) that the more liberal treatment of earnings under social security alone has no effect on the incentives of the poorest elderly who also receive public assistance; and (2) that the new public assistance programs for the elderly make social security benefits worth only $20 per month for many low-income elderly persons. The analysis by Lerman of these changes illustrates the importance of examining the changes in any one program in the context of the other existing programs covering the same population.

By documenting the incentive effects of existing programs and pointing out the problems of reform, this volume contributes to the ongoing debate on how to change the present programs for low-income families. The reader of these papers will come away with the realization that there currently exists a system of programs for the poor which cannot be reformed unless a new design takes account of the entire incentives structure of existing public transfer programs.

CONTENTS

(IX)

INCENTIVE EFFECTS IN PUBLIC INCOME TRANSFER PROGRAMS

By ROBERT I. LERMAN*

SUMMARY

Public income transfer programs do more than provide benefits to 25 to 30 million people. The programs also subject recipients to various rules, including those which specify how much of the benefits recipients may keep as their income rises. To the social security beneficiary, the welfare recipient, or the unemployment insurance claimant, reductions in transfer benefits act as taxes on the recipient's activities. The Government may receive more (spend less) and the recipient receive less with a rise in earnings, property income, or savings. In this sense, rules regarding how benefits are reduced may influence the recipient's incentive to work, to invest, and to save. This paper presents a detailed examination of the rules governing the relationship between benefits and income in 13 transfer programs as well as an analysis of the potential effects of these rules on individual incentives.

Benefit reduction rules follow directly from policy decisions concerning who deserves the benefits. To decide on benefit levels for income groups is to determine how benefits should change with changes in family incomes. The President and the Congress tend to focus on deciding which groups deserve benefits without fully recognizing the effect of benefit reductions on incentives to change behavior. A second problem underlying the design of transfer programs is that the administrative responsibility for the programs analyzed here is divided among six Federal agencies and many State and local agencies and the legislative responsibility is divided among five House and four Senate legislative committees and 50 State legislatures. As a result, reforms introduced in one program are often offset by changes in other programs. The divided responsibility adds significantly to the difficulty of achieving overall reform.

This paper examines incentive effects in public income transfer programs as of October 1972. However, a final section considers the impact of the recently enacted Social Security Amendments of 1972 on incentives of the elderly.

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A. *Problems Associated With Benefit Reductions*

The detailed examination of program rules highlights the major problems associated with benefit reductions. The current benefit reduction rules (1) often distort choices of recipients and potential recipients away from socially desirable behavior; (2) impose large horizontal inequities (i.e., people in similar circumstances are treated unequally); (3) make it difficult for legislators, administrators, and recipients to understand the actual benefit reduction rates and the actual distribution of benefits; and (4) make the administrative job so complex as to result inevitably in wide discretion and *ad hoc* application of the rules by caseworkers, and frequent errors in benefit computations.

1. *Distorting Recipient Choices* [1]

The impact of benefit reductions on work incentives has gained increasing attention at the policy level. The extremely high benefit reduction rates in the aid to families with dependent children program (AFDC) have received the greatest attention. Prior to 1967, benefits of most AFDC recipients generally were reduced $1 for each $1 earned, for a benefit reduction rate of 100 percent after work expenses were deducted from earnings.[2] The 1967 amendments lowered this rate significantly in some States, but it is well recognized that financial disincentives to work remain severe in AFDC in many States.

Substantial work disincentives are built into other transfer programs. Benefit reduction rates facing persons participating in only one program often exceed 50 percent; that is, each dollar of added income reduces benefits by 50 cents. Social security and personal income taxes increase the total reduction or tax rate from 50 percent to 55–65 percent. To persons facing these rates a $3 per hour job becomes worth only $1.20 per hour. For those participating in more than one program, work disincentive effects are even greater.

The structure of social insurance programs, namely, unemployment insurance (UI) and old-age and survivors insurance (OASI), often discourages work effort even more than do public assistance programs. The UI or OASI beneficiary may actually *lose* net income by increasing his earnings. Programs providing goods (such as food, medical care, or housing) rather than cash also reduce the net income gain from work. A man whose family lives in public housing and receives food stamp

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[1] The paper generally ignores distortions not directly related to program benefit reduction schedules. Two of the most flagrant inequities and distortions not covered are: (1) the financial incentive for one adult to leave the family produced by the favorable treatment accorded to one parent families; and (2) the financial incentive to move to high benefit States produced by the wide variations in benefit levels among States.

[2] Congress recognized this problem in 1967 and attempted to reduce work disincentives by lowering the maximum benefit reduction rate from 100 percent to 66⅔ percent. Unfortunately, the lack of knowledge about State rules concerning AFDC benefit reduction rates limited the effect of the Congressional effort. Some States changed parameters under their control, thereby partially offsetting the change in Federal law. Some States which previously excluded an initial amount of earnings from countable income above Federal requirements changed their policy to limit exclusions only to those required by Federal law. Nevertheless, the 1967 amendments did reduce benefit reduction rates in most States. See Leonard Hausman, "Cumulative Tax Rates in Alternative Income Maintenance Systems," this volume, p. 92.

benefits finds that over some wide income ranges his net gain in income and benefits from an added $100 per month of gross earnings is only about $37. The total $63 deducted includes about $15 for taxes and work expenses, and about $47 to $48 for benefit reductions—in this case, higher public housing rent and higher food stamp purchase price.

Combinations of programs add significantly to the problem of poor work incentives by raising both the effective benefit reduction rate and the guarantee level of total benefits. These effects widen the income range over which high benefit reductions apply. A mother of three in New Jersey who receives AFDC, food stamps, public housing, and medicaid benefits and who does not work would gain only $200 per month in net income by taking a job paying $1,000 per month. A job paying $500 per month would add only $50 per month in disposable income to a totally unemployed father in New Jersey with three dependents receiving food stamps and unemployment insurance benefits.

The high rate at which earnings reduce benefits may encourage recipients either to avoid work or to misreport earnings. The latter option provides an incentive to shift out of market work into jobs which pay in unrecorded currency such as illicit occupations.[3] An alternative is for the primary earner to move away from the family or or simply to report such a move.

The accounting period is another feature of public transfer programs that affects individual incentives.[4] In many transfer programs, accounting periods are short relative to the annual accounting periods used for income tax purposes. These short accounting periods, often 1 month, have the advantage of relating current benefits most closely to current needs. The problem is the undesirable effects of short accounting periods on work and savings incentives. Short accounting periods encourage workers to concentrate their earnings and discourage a stable pattern of work. This effect results from ignoring all earnings in months prior to the current month. For example, a male headed family of four in New Jersey with $800 of gross earnings over 2 months would receive $60 in general assistance and food stamp benefits if earnings were $400 in each month. But if all $800 were earned in 1 month, benefits to the family would total $294 for the 2-month period. This penalty for stable work adds to the other existing incentives for employers to offer and for disadvantaged workers to accept jobs with

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[3] See Michael Piore, "Income Maintenance and Labor Market Entry: The FAP Proposal and the AFDC Experience," paper prepared for the Indiana Manpower Research Association Conference on New Labor Market Entrants, Mar. 20, 1970, for a discussion of this issue.

[4] The accounting period is the period of time over which the specified relationship between income and benefits apply. An accounting period of one month means that the income received in a given month is the basis for computing benefits in that month. The legally specified accounting period is not always strictly enforced. The actual accounting period which recipients perceive probably depends on the frequency of income reporting by recipients and of income checking by the Government. This period is often longer than the legally specified period. For example, income verification of food stamp recipients may occur only once every 3 months in spite of the statutory monthly accounting period. This paper focusses on statutory accounting periods and generally does not examine deviations resulting from lax administration and misreporting by recipients.

high turnover, little on-the-job training, and little chance for advancement.[5]

Short accounting periods discourage savings for two reasons. First, benefits available on a current basis to those with low current income reduce the need for low income families to save in order to offset income deficiencies. Second, savings may actually disqualify a low income family for benefits during difficult periods because those with moderate asset levels are ineligible [6] and because the current income derived from past savings reduces current benefits.

Benefit reductions varying by source and use of income also may encourage socially undesirable behavior. In many States, AFDC provisions discourage families from economizing on rent. In many programs, asset tests penalize cash savings. Work expense credits may also produce undesirable shifts in expenditures. This paper documents these and other effects on incentives.

2. Horizontal Inequities

Horizontal inequities follow directly from bad incentive effects. Rules encouraging socially undesirable behavior have the effect of giving unfavorable treatment to those who resist the incentives. Thus, one result of present benefit reduction rules is to mandate unequal treatment of those at similar incomes and often to provide the least to those who appear to be the most deserving.

The paper notes many inequities resulting from current benefit reduction rules. Some examples follow. In the AFDC program, two female-headed families of the same size, same location, and same earned and unearned private incomes, may receive different cash benefits. The reason is that larger deductions from earned income are permitted in determining benefits for those already receiving payments than in determining eligibility. Under the social security and unemployment insurance programs, one family may receive less than another merely because of differences in the source of current income. Given the same total income, the family with the higher percentage of income earned from working (as apposed to income from pensions, investments, and so forth) will receive the lower benefit. An AFDC family may receive a lower cash payment than another otherwise similar AFDC family merely by spending relatively more on housing and less on clothing. And the poor recipient family that faithfully builds up its savings account may find itself far *worse* off than the otherwise similar family that failed to save. The reason is that a family may become ineligible if its cash assets exceed some given amount.

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[5] Michael Piore examines these and other factors that help produce a secondary labor market in which turnover is high and training is low. Some of the other factors are instability of product demand, absence of unionization, and absence of social insurance coverage. See his, "On-The-Job Training of Disadvantaged Workers," in *Public-Private Manpower Policies*, edited by Arnold Weber, Frank Cassell, and Woodrow Ginsburg, Industrial Relations Research Association, Madison, Wis., 1969.

[6] One may view provisions limiting the asset levels of recipients as an adjunct to short accounting periods necessary to maintain a close relation between benefits and current need. Since accumulated savings may offset income deficiencies most easily during brief periods, current need becomes more dependent on assets as the accounting period becomes shorter. Consider the polar case of a daily accounting period. Income in a particular day is certainly a poor indication of current need in the absence of information about savings and past and likely future income.

3. Misunderstanding Benefit Reduction Rates and the Distribution of Benefits

The definition of income for benefit computation purposes varies widely among programs and is often highly complex. As a result, legislators, administrators, and recipients have great difficulty in understanding exactly how benefits vary with income. In any one program, the problem is that the relationship is generally complex because of the differences in treatment of particular sources and uses of income. Understanding benefit reduction rates becomes even more difficult in the case of recipients of more than one type of benefit. Program differences in the definition of income, in the accounting period, and in State benefit computation procedures are also prime obstacles to clarity.

Since benefit reduction rates are not well understood, determining the potential distribution of benefits for all who are eligible becomes difficult. It is probably not well recognized that a family of four could qualify for homeownership programs for the poor, with annual incomes beyond $10,000. High income cutoff points are not necessarily bad. In fact, they are the inevitable result of keeping work incentives strong. But in programs which have too little funding to cover the entire eligible population, high-income cutoffs also may prevent the lowest income families from receiving much of the benefits.[7] Many current programs are grossly underfunded relative to what would be required to cover all eligible persons.

4. Administrative Complexity and Caseworker Discretion

The existence of many income-tested programs, each with its own income definition, creates an enormous administrative burden. Verification of income must be performed separately for each program, and none of the programs individually can spend enough to verify income properly. Even when income is reported correctly, the process of applying benefit reduction rules is often highly complex. In addition, many rules require subjective judgments on the part of the caseworker.

The result of all these factors is a significant amount of caseworker discretion. Sometimes this discretion may prove helpful in reducing the most blatant anomalies associated with benefit reduction rates. For example, "notches" (defined below) in the medicaid and food distribution program ("surplus commodities") may have a less severe impact on recipients as a result of caseworker discretion. Although the rules call for a full dropoff in benefits with a $1 increase in income above the income cutoff, the caseworker may reinterpret the income accounting rules and thereby help families stay on these programs despite the slight income gain which would make them ineligible.[8]

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[7] As Stephan Michelson points out, "It is a general social phenomenon that any program which defines a class of eligibles by low income by and large serves the highest income people eligible." See Michelson, "For the Plaintiffs—Equal School Resource Allocation," *Journal of Human Resources*, vol. VII, No. 3, summer 1972, p. 291.

[8] *Problems in Administration of Public Welfare Programs.—Pt. 3*, hearings before the Subcommittee on Fiscal Policy of the Joint Economic Committee, June 6, 7, and 8, 1972, U.S. Government Printing Office, Washington, D.C., 1972, pp. 959–960.

The discretion at the caseworker level may also result in inequitable treatment. What to one caseworker is a need for emergency assistance and thus additional money, to another caseworker in the same office or county may be merely a desire for a somewhat higher living standard and thus no justification for additional payments.

B. *The Impact of the Social Security Amendments of 1972*

The recently enacted Social Security Amendments of 1972 will alter some incentive effects facing social security (OASI) beneficiaries and recipients of adult public assistance programs. In general, the changes improve work incentives for many aged persons. Effective January 1973, persons eligible for OASI benefits may earn $2,100 per year without losing any benefits instead of the current $1,680. Annual earnings above $2,100 will reduce benefits at a 50 percent rate. Under current rules, OASI benefits decline 50 cents for each dollar of earnings between $1,680 and $2,880 and decline $1 for each dollar of earnings above $2,880. Recipients of adult public assistance will also have improved work incentives in January 1974 when the Federal Government puts into effect the national adult public assistance program called Supplemental Security Income (SSI). Although the SSI program means a complete administrative restructuring of adult public assistance, this study considers only the changes in various financial parameters.

While there will be a general improvement in work incentives under social security and adult public assistance programs, some undesirable features will remain. First, OASI benefit reduction rates in some months may far exceed 50 percent. After a social security beneficiary earns $2,100, he will face substantial financial disincentives to earning more than $175 in any later month during the year. It turns out that in those months after earnings have reached $2,100 the OASI beneficiary will gain almost no added spendable income by raising his monthly earnings from $175 to $500. A second problem is that the improved work incentives under OASI will not help many of the poorest aged persons who supplement their social security payments with public assistance. Third, the improved work incentives under the new Federal public assistance program (SSI) may be subverted by benefit reduction rules covering state supplements to SSI. The first $65 of earnings do not reduce SSI payments but may cause as much as dollar for dollar declines in the state supplements.

Another aspect of the recent changes is that social security benefits will be worth little to growing numbers of aged persons. Currently, the fact that monthly Old Age Assistance payments decline with each dollar of monthly social security payments above $4–11 means that aged public assistance recipients gain little from OASI payments. For example, the recent 20 percent increase in OASI benefits was largely offset by reductions in public assistance and food stamp benefits for many of the poorest OASI beneficiaries. With the introduction of the SSI program, the monthly value of social security to public assistance recipients will rise to $20 per month. On the other hand, the substantial increase in aged persons receiving public assistance will add to the number of social security beneficiaries who find (1) that qualifying for OASI payments is of little value and (2) that they do not share fully in the increases in OASI benefits.

I. INTRODUCTION

Programs designed for low income families have grown enormously in the last 10 years. Recognition by Congress of the poverty problem and of the Federal responsibility to help low income families has produced a rapid expansion in existing programs and in the enactment of new programs. These efforts have increased the amounts of money transferred to the poor and have helped reduce the extent of poverty. Unfortunately, the large increase in the amount transferred has been achieved at the cost of creating severe inequities and inducing economic inefficiency.

Through poor program design, the President and the Congress unwittingly may have stimulated the very behavior they with to discourage. We have not confronted explicitly the harsh realities of programs designed for low income families. By definition, programs for low income families only must reduce benefit levels as family income rises. The decline may be gradual or sudden, but without some decline the program is no longer a low income program.[9] This feature forces a difficult choice, namely, how to choose the appropriate rate at which to change benefits as income changes. Holding the initial benefit level constant, a relatively small decline in benefits for each added dollar of income raises the income level at which families lose the last dollar of benefits (the income cutoff) and enormously raises the cost to the taxpayers through coverage of middle income families. On the other hand, a relatively large decline in benefits for each added dollar of income carries the undesirable consequence of creating a disincentive to work and/or a large incentive to hide whatever income is received.

A third method is to declare an income level beneath which families receive full benefits, with those above that level receiving no benefits. This method creates an income "notch." At the eligibility level there is a full dropoff in benefits with the next additional dollar of income received. The notch implies (1) that two families with almost identical private incomes receive widely differing public benefits, and (2) that many families could increase their total incomes substantially by reducing slightly the income they derive privately.

Current benefit programs use all three methods. The problem is that the choices generally are considered casually and are often made as an afterthought. A second difficulty is that approaches that are desirable in an isolated context are highly inappropriate in the context of a multiprogram world. As a result it is not at all unusual for a low income family to find that its total income falls when its earnings rise.

This paper examines in detail the choices made by Congress and administrative agencies as to how benefit levels should vary with income. The purpose is to state the precise treatment of each source and each use of income, to provide examples of how benefit reductions affect persons eligible for more than one program, and to point out

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[9] An alternative is to provide benefits on some basis other than income but which serves as a proxy for low income. The governing criteria can be region, as with aid to Appalachia; neighborhood, as with the model cities program; ethnic group, as with aid to Indians; or age, as with extra tax deductions and credits for the elderly. This alternative avoids the "tax rate" problem created by reducing benefits with income but at the cost of cutting the share of expenditures actually reaching the poor. Another cost may be to encourage people to shift into those groups receiving the benefits.

some problems with the current rules. The first task alone consumes substantial space largely because of wide differences among programs in the treatment of income. The focus is on benefit reduction rules as stated in laws and administrative regulations, not on the way benefit reductions are perceived by the recipient.

A. Benefit Reductions as Taxes

Benefit reductions are similar to taxes, and much can be learned from the theory of tax policy in considering the relation between benefits and income. Recipients or potential recipients of program benefits give up real income to the Government based on increases in various sources and uses of income. Thus, there are taxes (benefit reductions) on earnings, on property income, on savings, and on other sources and uses of income.

Equity and efficiency are the two major criteria economists use to examine taxes.[10] These criteria are equally appropriate in the analysis of benefit reductions and are used throughout this paper. The concept of equity is that people in equal positions should be treated equally and that people in unequal positions should be treated unequally. The "equal treatment of equals" notion is labeled horizontal equity. In taxation literature the horizontal equity principle generally implies equal taxation of those at equal incomes. If one defines income as consumption plus increase in net worth during a given period, then the horizontal equity principle would require equal taxation of all income sources. The vertical equity concept, "unequal treatment of unequals," is more difficult to apply. Although the question of how tax levels should differ among persons of unequal incomes is purely an ethical one, there is general support for progressivity and general rejection of regressivity. In other words the tax burden as a proportion of income should be at least as large and possibly larger for the high income classes than for the low income classes.

The efficiency criterion, as used here, derives from economic theory. Therefore, a brief explanation of the economist's concept of efficiency is necessary. In general, an efficient state is one in which no reallocation of resources can make one person better off without making at least one person worse off. Economists assume that individual taxpayers or recipients choose how much work to perform, how much to save, how much of each good and service to buy, and how much to allocate to each investment opportunity, in order to achieve their highest level of satisfaction. The individual makes these choices based on his preferences for goods, services, and leisure; his wealth; the prices of goods and services he may purchase; and the prices of goods and services he may sell (including his own labor services). Under some circumstances, the Government may cause inefficiency by changing the price ratios facing individuals from their market-determined levels. For example, a positive tax on earnings lowers the price of leisure (lowers the return to work) and may influence individuals to choose a level of work hours that is less socially efficient than if the same amount of money had been raised in another way. A tax on any other good or service may also induce inefficiency. One object of tax policy is to minimize this inefficiency, to limit the impact of taxes on the choices individuals make.

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[10] This discussion draws much from Richard A. Musgrave, *The Theory of Public Finance*, McGraw Hill Book Co., Inc., New York, 1959.

Some inefficiency is inevitable in any tax system. Indeed, inefficiency is not necessarily undesirable. First, the tax system must raise revenues. Since there are almost no taxes that do not alter price ratios and individual choices, there is in some sense an inevitable conflict between raising revenues and minimizing inefficiency.[11] Second, the tax system must sometimes compromise the efficiency objective in order to achieve the equity objective. Third, the Government may want to alter the choices of individuals away from socially undesirable goods and services. Thus, the inefficiency induced by a tax on alcohol or cigarettes is not necessarily undesirable. Apart from these factors, taxes should be designed to minimize inefficiency.

The equity and efficiency criteria developed in the tax field are equally appropriate to the analysis of transfer benefits. After all, transfers are essentially negative taxes and benefit reduction rates are essentially tax rates. This paper's focus on benefit reduction rates on sources and uses of income is an application of the equity and efficiency principles to the examination of public transfer programs.

B. Benefit Reduction Rates and Definitions of Income

How much do benefits decline with a rise in income? The answer for each transfer program depends not only on its benefit reduction rate but also on the definition of income to which that rate is applied. Although analysts usually focus on the benefit reduction rate specified in laws and regulations, the definition of income used in each program deserves equal attention. Analysis based on the benefit reduction rate alone often proves to be misleading. Obviously, a 20-percent income tax rate will differ in its impact if it is applied to total gross income or only to income net of many deductions and exemptions.

To understand how benefits actually decline with income, one must distinguish between income countable for program purposes and a comprehensive definition of income. Countable income sometimes excludes taxes, work expenses, an initial amount of income, a percentage of income, an allowance for dependents, and income from specific sources. Any exclusion means that the percentage decline in benefits resulting from a rise in gross income is less than the statutory benefit reduction rate. For example, the statutory maximum benefit reduction rate for public housing tenants is 25 percent; that is, increased earnings of $1 should not raise the rent by more than 25 cents. However, this rate does not indicate by how much a $1 increase in gross earnings reduces benefits through an increase in rents because the income definition used in public housing is not comprehensive. The law excludes 10 percent of gross income of elderly recipients, immediately reducing their maximum benefit reduction rate to 22½ percent (0.25 × 0.90).

The approach of this paper is to examine the benefit reduction rates that apply to each source and use of income. The major income sources are earnings, property income, public transfers, and private transfers. Each of these sources may come in the form of cash or goods and services (commonly called in-kind income). A dollar rise in income may cause benefits to decline by differing amounts depending on the source of the additional income. In some cases, how a family uses its income also may influence benefit levels. Spending a dollar more on housing and a dollar less on other items, for example, may raise benefits.

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[11] A few taxes such as a tax on pollution may increase efficiency.

The differing treatment may occur because of the exclusion of income used for particular purposes—such as for housing, health needs, work expenses, and day care—from countable income.

Expressing the relationship between benefits and income for a given income requires that one distinguish between average and marginal benefit reduction rates. At any level of income the average rate is equal to the total decline in benefits divided by total income. The marginal rate is equal to the change in benefit levels associated with a unit change in income. For example, a taxpayer may be in the 40-percent tax bracket at the top of his income. While he faces a 40-percent *marginal* rate there, the *average* tax paid on his entire income may be only 25 percent. This paper discusses both average and marginal benefit reduction rates.

C. Programs Covered

The paper examines in detail the benefit reduction rules in major public transfer programs. The programs covered are: aid to families with dependent children (AFDC), old age assistance (OAA), aid to the blind (AB), aid to the permanently and totally disabled (APTD), unemployment insurance (UI), old-age, survivors, and disability insurance (OASDI), veterans pensions (VP), veterans disability compensation (VC), the national school lunch program (SL), the food distribution program (FD), the food stamp program (FS), Federal housing programs, and medicaid. The basic procedure will be to describe, for the 13 programs, the relation between benefits and each source and each use of income. After treating each program separately, section X analyzes benefit reductions from combinations of programs. The final pages discuss the impact of the recently passed Social Security Amendments of 1972 on the elderly.

The programs selected account for 66 percent of total Federal expenditures on public income transfer programs. However, the paper does not cover a large number of other income conditioned programs. Ignored are area programs targeted on low-income geographic regions, such as aid to Appalachia and the Model Cities program; social services for current, former, and potential public assistance recipients; service programs funded through the Office of Economic Opportunity, such as legal services and community health centers; training programs for low income youths and adults, such as the work incentive program and the Neighborhood Youth Corps; and special regulations, such as a Hill-Burton Act regulation requiring hospitals to allocate specific resources for medical care for the poor. Another major set of programs not covered in detail is the general assistance programs operating in many State and local areas. Although these programs are relevant to the problem of benefit reductions, the information on them is too limited to permit generalizations that would apply nationally.

The benefit reductions that are examined below are derived from laws and regulations. In some cases, these statutory benefit reductions do not reflect actual practices. State and local agencies may adopt different rules from those mandated in laws and regulations.[12] In

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[12] For example, the limitations on work expense deductions in some States are not fully in accord with Federal regulations. A major study of these differences by the subcommittee staff is currently underway.

addition, broad caseworker discretion may result in inaccurate application of Federal, State, and local government policies. This paper does not attempt to deal with these differences between actual practices and the policies prescribed under law and regulation.

D. The Impact of Benefit Reductions on Family Behavior

Benefit reductions in public transfer programs change the incentives facing families in a variety of ways. Program rules often discourage work effort and savings, and encourage family splitting, migration, and income misreporting. This paper examines in detail the program rules and how they affect incentives. However, there is no attempt to assess what the actual responses by families are to these changing incentives.

Several other studies have analyzed the impact of program rules on family behavior, especially the effect of benefit reductions on work effort.[13] These studies demonstrate that program rules do influence behavior although the precise quantitative magnitudes involved are not well known. A great deal of new work is necessary in order to understand the impact of program rules.

II. AID TO FAMILIES WITH DEPENDENT CHILDREN

Aid to families with dependent children (AFDC) is the largest public assistance program in the United States.[14] AFDC provides cash assistance with funds from Federal, State, and local governments to needy children deprived of parental support.[15] Federal and State laws and regulations determine benefit levels, eligibility, and treatment of income. The result is that wide variations exist by State with respect to policy in spite of the many rules that apply to all States. The analysis below examines neither the procedures used by each State nor those used by a representative sample of States. However, it is hoped that variations discussed will give the reader a feeling for the range of methods used to scale benefits to income.[16]

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[13] There are a large number of studies which have examined the behavioral responses to benefit reduction rates in public transfer programs. Among them are: Gary Appel, *Effects of a Financial Incentive on AFDC Employment: Michigan's Experience Between July 1969 and July 1970*, Institute for Interdisciplinary Studies, Minneapolis, Minnesota, March 1972; Leonard Hausman, "The Impact of Welfare on the Work Effort of AFDC Mothers", in *The President's Commission on Income Maintenance Programs: Technical Studies*, U.S. Government Printing Office, 1969, pp. 83–100; G. Chapin, "Unemployment Insurance, Job Search, and the Demand for Leisure," *Western Economic Journal*, March 1971, pp. 102–107; and Wayne Vroman, *Older Worker Earnings and the 1965 Social Security Amendments*, Social Security Administration, Office of Research and Statistics, Research Report No. 38, U.S. Government Printing Office, 1970.

[14] Over 10 million persons received AFDC payments in an average month in 1972.

[15] For purposes of this paper the term State generally includes Puerto Rico, Guam, the Virgin Islands, and the District of Columbia in addition to the 50 States.

[16] See Hausman, "Cumulative Tax Rates . . ." for many examples of State policy variations. For a cross section analysis of how actual benefits differ with differences in the earned and unearned income of AFDC recipients, see N. A. Barr and R. E. Hall, "The Taxation of Earnings Under Public Assistance," MIT Department of Economics Working Paper No. 85, April 1972. Barr and Hall find that effective benefit reduction rates on earnings in 1967 ranged from 18 percent in Pittsburgh to 72 percent in Washington, D.C.

The AFDC program primarily covers families with needy children deprived of parental support because of the death, incapacity, or absence from the home of one or both parents. Although the vast majority of AFDC recipients are in families headed by women, male-headed families may also qualify for AFDC. In all States male-headed families may be eligible for assistance if the mother is dead or absent from the home or if either parent is incapacitated. Some 24 States also extend aid to husband-wife families with an unemployed father under the AFDC-unemployed father (UF) program.

In general, the size and composition of the recipient unit determines the maximum grant available to the unit in any given State. The recipient unit is usually, though not necessarily, equivalent to the family unit. The responsible adult covered may be someone other than the parents of the needy children. Some family members may be covered by other programs. Children living at home are not part of the recipient unit if they do not attend school and are over age 18, or in some States over age 16. To simplify the exposition, we generally assume the recipient unit consists of one adult and three children.

The accounting period for AFDC is 1 month. That is, States make monthly payments to families based on State monthly need standards and the sources and uses of family income in each month. The discussion below examines how the actual payment to a family declines with increases in income. The primary focus is on benefit reductions in the AFDC program but the minor differences between the AFDC and AFDC-UF program are noted.

A. Sources of Income

To the welfare agency, AFDC payments are intended to make up the difference between some State-determined dollar standard of need and the dollar amount of monthly income available to the family. If States paid the full difference between the need standard and income and included every dollar of income as available to the family, AFDC benefits would decline one dollar for each dollar of income. As many have pointed out, this policy would imply a 100-percent benefit reduction rate and a greater overall rate for persons paying income and payroll taxes. In practice, benefit reduction rates are lower than 100 percent because of federally mandated exclusions and deductions from income, and because some States pay less than the full difference between the need standard and countable income.

A complex treatment applies to earned income sources. There is no reduction in AFDC benefits resulting from imputed earnings such as food produced and consumed by the family, clothing produced and worn by the family, and furniture built and used by the family. Fringe benefits paid by employers also fit into this category and do not cause reductions in benefits. Benefit reductions associated with earnings from wages and salaries and from self-employment vary widely.

Federal law limits the amount by which AFDC grants may be reduced by requiring all States to exclude from countable income (the income used to compute AFDC grants) the first $30 per month of earnings and one-third of monthly gross earnings in excess of $30. Thus, the maximum benefit reduction rates on gross earnings are zero for the first $30 per month and 66⅔ percent for monthly earnings above

$30. In fact, benefits in all States decline more slowly with gross earnings because of the Federal requirement that States deduct taxes and work expenses from the countable income remaining after the $30 and one-third deductions. While the two exclusions affect the AFDC grant level of current recipients, the $30 and one-third deduction may not be used to detei mine whether a non-recipient is eligible for AFDC. This policy produces an enormous hoiizontal inequity; two families who differ only by past recipient status would receive different AFDC payments. The working woman never on AFDC might receive no benefits while another woman currently earning the same amount could retain AFDC benefits because of her past status as a recipient.

State maximum payments that differ from need standards have the effect of reducing benefit reductions. These maximums are used in 13 States. Consider two States, each with monthly need standards of $190, each paying 100 percent of the difference between need standard and countable income, but one with an independent maximum payment of $150 and the other with no such maximum. Benefit reductions will differ in the two States as family gross earnings rise from zero to $90 per month.[17] In the State without a maximum, the payment falls from $190 to $150 as *countable* income rises from zero to $40. (The $40 of countable income is equal to $90 less $30 and less one-third of $90 minus $30.) In the State with a maximum payment of $150, actual payments remain at $150 as countable income rises from zero to $40. Thus, maximums increase the amount that may be earned without losing any benefits.

In California, the $314 need standard and $280 maximum for a family of four implies that countable income must reach $34 or total gross earnings of $81, before benefit reductions occur. If there were no maximum, benefit reductions would begin after the first $30 of earnings or the first $1 of countable income. By raising above $30 the amount subject to a zero tax rate, maximums reduce the average tax rate for levels of earnings above $30. The reduction in average tax rates is largest where the difference between need standard and maximum is largest. Mississippi and Indiana are extreme cases. There is no benefit reduction for the first $220 and $300 of monthly net earnings, respectively. Thus, the reward to earnings remains high for AFDC recipients in these States.

Other features of the payment formula affect tax rates. In most States the AFDC grant is the full difference between the need standard or reduced standard and countable income. Countable income is total earnings minus one-third of the quantity earned less $30, and the full amount of the difference between countable income and the standard is paid.[18] However, in seven States AFDC payments are less than 100 percent of the difference between the need standard and countable income. For example, the payment in Arizona is 65 percent of this difference. If countable income increases from zero to $60, the AFDC grant would decline by 65 percent of $60 or $39 instead of the entire $60. But the full increase in earnings after work expenses implied by a $60 increase in countable income would be $90. (Recall that countable income excludes one-third of earnings above $30.) Thus, the full

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[17] This example ignores work expenses.
[18] This paragraph ignores work expenses, other income, and State maximums.

marginal tax rate on the $90 of added earnings is $39/$90 or 43⅓ percent which is equal to two-thirds times 0.65. This policy is known as a ratable reduction and has the effect of reducing average and marginal tax rates on earnings above $50. These and other complications make the job of the caseworker more difficult and add to the probability of caseworker error.

Major reductions in AFDC tax rates on gross earnings may result from the treatment of social security and personal income taxes, other payroll deductions, and other work expenses. Since work expenses and taxes are deducted from the earnings figure derived after applying the $30 and one-third rule to gross earnings, work expenses are treated essentially as credits for which recipients are fully reimbursed. A $1 shift in expenditure from a consumption item such as a new dress to a work expense such as a new uniform or a better lunch increases the AFDC grant by $1, since the work expense is fully reimbursed. The full reimbursement applies to allowable work expenses as long as income includes some gross earnings.[19]

Interpreting the effects of work expenses on tax rates requires a careful specification of which tax rate is under consideration. The percentage by which AFDC benefits fall with a small increase in the recipient's gross earnings is a rate relevant to AFDC administrators. To the individual, the appropriate marginal tax is the sum of all deductions directly associated with a marginal increase in gross earnings; that is, how much of his added earnings is *not* available as spendable cash. The deductions would include AFDC benefit reductions, payroll deductions, and other work expenses. In most States, workers are fully reimbursed for payroll deductions and for other allowable work expenses.[20] [21] Reimbursements for social security and personal income taxes simply prevent the total marginal tax rate on gross earnings facing the AFDC recipient from rising above 66⅔ percent. This implies that the AFDC marginal tax rate on gross earnings falls below 66⅔ percent. Of a one dollar increase in the recipient's gross earnings, 5.2 cents goes to social security, 10 cents may go to personal income taxes, 51.5 cents would go the AFDC program in form of reduced payments, and 33 cents is added income for the recipient. Thus, the total marginal tax rate facing the individual remains at 66⅔ percent while the marginal rate at which AFDC taxes gross earnings falls to 51.5 percent.[22] Preventing net return to working recipients from falling below 33⅓ percent (33 cents on a dollar) keeps work incentives higher at the cost of higher caseloads and higher program expenditures.

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[19] The family assistance plan proposed that work expenses be treated as deductions rather than as credits. With deductions, the reimbursement for an added dollar spent on work expenses would equal one dollar times the benefit reduction rate, implying in many cases a reimbursement of two-thirds of the increased expenses.

[20] What work expenses are allowable varies widely among States. See section B.

[21] Full reimbursements for allowable expenses do not occur in States with ratable reductions or where workers are affected by State maximums. Work expenses reduce countable income dollar for dollar. If countable income reductions of one dollar do not increase AFDC payments by the full dollar amount, then the reimbursement for increased work expenses is less than complete.

[22] Note that the AFDC marginal rate on *net* earnings is 61 percent, or 51.5/(100–15.2). This is less than 66⅔ percent. The AFDC marginal rate on *net* earnings falls as work expenses rise because work expenses are treated as tax credits, not as tax deductions.

If other payroll deductions and other work expenses were pure expenses (as are the taxes noted above), the effects on marginal tax rates would be the same. However, the tax rate impact on individuals differs to the extent that the nontax work expenses are made up of savings and consumption components. Consider the following example: with a $1 rise in gross earnings, the AFDC recipient reports an increase of 50 cents in allowable work expenses; the 50 cents includes 5 cents for social security, 10 cents for personal income taxes, 5 cents for fringe benefits, and 30 cents for other work expenses. At relatively high earnings levels, the AFDC grant would fall by 17 cents. Thus, the implied AFDC marginal tax rate on gross earnings is 17 percent regardless of the savings and consumption nature of reported work expenses. However, to the individual, the net gain in real income from the $1 rise in gross earnings depends on the nature of nontax work expenses. Considering all reported work expenses as pure expenses means that the individual's net marginal gain is the familiar 33 cents. At the other extreme, if all reported work expenses other than taxes are in fact savings and consumption, the $1 rise in earnings is worth 68 cents, or an additional 35 cents from fringe benefits and other work expenses.[23][24]

In summary, the tax rates on earnings that AFDC recipients face depend on the $30 plus one-third Federal regulation, on State maximums, on ratable reductions, on State provisions for disregarding work expenses, and on the savings and consumption components of allowable work expenses.

The treatment of earnings discussed above must be amended in the case of children's earnings and incentive payments from Government training programs. Earnings of children who are students are ignored while earnings of out-of-school children are accorded the same treatment as adult earnings. Recipients who receive training through the work incentive program (WIN), the primary training program for AFDC recipients, are paid $30 per month in addition to the AFDC grant. This payment is an incentive to participate in the WIN program but is not considered as income in computing AFDC grants. Oddly enough, incentive payments to AFDC recipients who participate in other government training programs are treated as earned income.

The AFDC–UF program has an additional Federal rule affecting benefit reduction rates. Families receiving AFDC–UF payments lose all benefits in any month in which the father works 100 hours or more. This benefit reduction is independent of family earnings. It is a notch in the sense that an extra dollar of earnings through an extra hour of work can result in a large decline in benefits. The 100-hour rule does not limit the hours worked by the mother or other family members.[25] As long as the father works less than 100 hours, the treatment of

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[23] Administrative practices are important here. Local agencies within States and caseworkers within local agencies differ as to the ease with which recipients can classify as work expenses those goods and services which have substantial consumption elements. Items such as work clothes, hair styling, and car payments are work expenses with elements of consumption.

[24] This statement is not strictly true because (1) the value of fringe benefits may be more or less than 5 cents, and (2) the AFDC rules distort the individual's consumption choices toward goods that can be reported as work expenses.

[25] In this sense, full-time work by a mother is more valuable to the family than is full-time work by the father at similar wage rates.

family earnings is equivalent to the treatment of earnings under AFDC. Thus, of two fathers with equal earnings but unequal hours of work, the father with the lower number of hours and the higher wage might be eligible while the lower wage father is ineligible.

The monthly accounting period under AFDC may also affect work incentives. Since earnings in earlier months have no impact on current benefits, families with equal 2-month earnings may have unequal 2-month AFDC benefits. Of two families of four in Colorado with 2-month earnings equal to $800 and total work expenses of $160, the family with equal monthly earnings of $400 would receive $137 while the family earning all $800 in 1 month would receive $235. This treatment penalizes stable employment and encourages workers to concentrate their earnings over short periods.

Income from sources other than earnings generally results in larger AFDC benefit reductions than does earned income. Countable income includes all income from property, private cash transfers, and public cash transfers. Since there is no $30 and one-third exclusion,[26] the AFDC benefit reduction is equal to 100 percent of all unearned income except for the impact of State maximums and ratable reductions. That is, $1 increases in unearned income sources tend to reduce AFDC payments by $1. In States with maximums, unearned income below an initial level (equal to the need standard minus the maximum) does not reduce benefits at all while AFDC benefits decline $1 for each dollar of unearned income above the initial level. In States with ratable reductions, the AFDC benefit reduction rate is equal to the percentage of unmet need (the need standard less countable income) that is paid by AFDC.

One exception to the treatment described here is the effect of unemployment insurance (UI) payments on AFDC-UF recipients. Eligibility for UI prevents a family from becoming eligible for AFDC-UF, but not for AFDC, whether or not the family receives UI and whether or not UI payments are less than potential AFDC-UF payments.

Public in-kind transfer income receives a single treatment. It is ignored. Medicaid, public housing, and food stamp benefits all have no effect on AFDC benefits.

Table 1 illustrates the effects of Federal and State rules on AFDC benefit reductions associated with earnings and property income. The major provisions are: (1) the $30 and one-third Federal requirement for excluding earnings from countable income; (2) State maximum payments that are below State need standards; (3) State ratable reductions; and (4) credits for work expenses.

The tax rates displayed in row 4 represent the perspective of the welfare agency, not the recipient. They indicate how agency payments change with gross earnings. From the recipient's point of view, the relevant changes are the total reductions in gross earnings from AFDC benefit reductions and from other expenses, or the sum of rows 1 and 3. Row 5 shows the net gain to the recipient as gross earnings rise. The effects of other public programs on AFDC benefits and on net income are ignored in this table.

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[26] Some States do disregard small amounts, such as $5 a month, from unearned income.

TABLE 1.—*Effects of maximum payments and ratable reductions on AFDC benefit reductions from earnings and property income*

	Monthly gross earnings							Monthly property income					
	$0	$50	$100	$150	$200	$250	$300	$50	$100	$150	$200	$250	$300
(1) Work expenses [1]	$0	$13	$25	$38	$50	$63	$75	----------					
(2) Net earnings	0	37	75	112	150	187	225	----------					
(3) Decline in AFDC payment in State with:													
(a) No maximum, no ratable	0	1	22	42	63	84	105	$50	$100	$150	$200	$250	$300
(b) Maximum=need standard—$50, no ratable [2]	0	0	0	0	13	34	55	0	50	100	150	200	250
(c) No maximum, ratable=60% [3]	0	1	13	25	39	50	63	30	60	90	120	150	180
(4) Average (marginal) benefit reduction rates (in percent) in States with: [4]													
(a) No maximum, no ratable	0	2%	22%	28%	32%	32%	35%	100%	100%	100%	100%	100%	100%
	0	(42%)	(42%)	(42%)	(42%)	(42%)	(42%)						
(b) Maximum=need standard—$50 no ratable	0	0	0	0	7%	14%	18%	0	50%	67%	75%	80%	83%
	(0)	(0)	(0)	(0)	(42%)	(42%)	(42%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)
(c) No maximum, ratable=60% [3]	0	2%	13%	16%	20%	20%	21%	60%	60%	60%	60%	60%	60%
	0	(25%)	(25%)	(25%)	(25%)	(25%)	(25%)						
(5) Rise in disposable income:													
(a) No maximum, no ratable	0	36	53	70	87	103	120	0	0	0	0	0	0
(b) Maximum=need standard—$50, no ratable	0	37	75	112	137	153	170	50	50	50	50	50	50
(c) No maximum, ratable=60%	0	36	62	87	111	137	162	20	40	60	80	100	120

[1] Social Security taxes equal 5.2 percent of gross earnings and other work expenses equal 20 percent of gross earnings.

[2] In 13 States, maximum payments are below need standards.

[3] In 7 States, payments equal less than 100 percent of the difference between the need standard and countable income.

[4] The average rate is equal to the total benefit reduction divided by gross earnings. The marginal rate is equal to decline in the AFDC payment associated with a $1 increase in gross earnings divided by $1. The marginal benefit reduction rates are in parentheses.

Source: *Handbook of Public Income Transfer Programs.*

B. Uses of Income

The major uses of income are expenditures on housing, food, medical care, child care, and other non-tax work expenses; other consumption expenditures; and various kinds of savings. By a marginal tax (positive or negative) on a use of income, I mean the impact on AFDC cash payments of a marginal change in one expenditure (or type of savings), holding all other expenditures constant.

The discussion above has already alluded to the effect of reported work expenses on AFDC payments. A marginal increase in expenditures on child care or other non-tax allowable work expenses, such as transportation, work clothing, or lunches, results in an equal marginal increase in AFDC payments except in States with ratable reductions or in cases where the benefit reduction is zero.[27] This treatment is a tax credit or a negative tax on work expenses which is often at a 100 percent rate. To the extent that State rules allow only those expenditures which have zero consumption content, the tax credit is not an incentive to spend more on goods allowable as work expenses. In such cases only the normally required expenses which a worker must bear are paid by his welfare grant, a process which simply limits the size of the financial disincentives to work.

Alternatively, some reported work expense deductions may have a high consumption component. Consumption elements in work expenses imply the tax is on uses of income. With client discretion in reporting or purchasing work expenses, one would expect some reported shifting of expenditures toward these work expense goods. Note that reimbursement for an added $20 of work expenses is not equivalent to a $20 increase in the recipient's real income. Had the recipients received the $20 through an increase in grant levels, they might have spent the money on other goods.

As recipient earnings rise, the consumption element in work expenses is also likely to rise. This is particularly true given the favorable treatment accorded to work expenses and the fact that credits for work expenses cannot exceed 67 percent of gross earnings. As a recipient earns more, she may spend part of the added earnings on higher quality lunches, special clothing, private rather than public transportation, and higher quality child care. The extent to which recipients may classify expenditures as work expenses varies by State. Allowable expenses in Indiana are for child care, mandatory payroll deductions, union dues, transportation, lunches, special clothing, special education or training, telephone, tools, licenses, dues to business organizations, special safety devices, a flat $11 for extra food away from home, extra clothing, and upkeep. Wisconsin credits only child care, tax and social security payments, and transportation. Only two States use flat allowances, a policy which eliminates the incentive to shift expenditures.

One added aspect of the work expense issue is the constraint on recipients reporting work expenses. While wide latitude may exist in allowing work expenses based on written provisions, reported amounts may not be allowed to exceed too high a percentage of total earnings.

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[27] See footnote 7.

Employee payroll contributions for fringe benefits are work expenses that may be viewed as a use of income. Contributions for pensions are a form of saving; contributions for health programs are payments for health benefits. In almost every State workers are fully reimbursed for these contributions. Thus, there is 100-percent negative tax applicable to these expenditures.

A negative tax also applies to housing in 32 States. AFDC payments in these States may depend on the recipient unit's rent. A rise in rent payments may be fully offset by a rise in the AFDC grant. In 18 States, one component of the AFDC grant is a fixed dollar amount while the other part is equal to rent actually paid up to a maximum allowable amount. An AFDC family of four in Michigan with no countable income would receive $163 per month independent of rent plus an amount equal to rent payments up to $145. (In some areas within Michigan the rent maximum is less than $145; in Detroit it is only $100, for example.) Thus, only AFDC families paying at least $145 in rent in certain counties would receive the full $308 State standard. Any AFDC family paying less rent than the area maximum would find any increased rent expenditures up to the area rent maximum accompanied by dollar for dollar increases in AFDC payments. This is a negative tax or positive credit of 100 percent on rent.[28]

This rent policy is inefficient and inequitable. By interfering with the recipient's expenditure decisions, the system discourages many families from economizing on rent. It is inequitable in that families with low rent needs and high clothing needs might well receive less than families comparable in size and income with high rent and low clothing needs. Where the negative tax of 100 percent appies, families simply cannot shift their expenditure pattern from housing toward other goods. The actual impact of these rent policies may be very small due to the low maximum allowances for rent that generally apply. However, it is not implausible that the policy artificially encourages young mothers to set up their own households instead of living with their parents or other close relatives at low rent or free. [29]

Positive and negative taxes also apply to various kinds of savings. If a family shifts its use of income from current consumption to savings earmarked for a child's future needs, the AFDC grant to that family would rise in a few States. The amount of the rise would depend on the marginal tax rate that would have applied to the income or earnings earmarked.

Many other types of savings are subject to positive taxes due to asset limitations. Although again there is wide variation among States, many apply detailed rules that restrict the accumulation of assets. For example, Indiana permits reserves in tangible personal property of only $150 in cash in addition to life insurance. This restriction is a severe disincentive to normal cash savings. Since this

[28] The negative tax rate would be less than 100 percent in the 10 States which use reduced standards or which pay only a percent of the deficit between need standards and countable income. In the four States with this rent policy that also use payment maximums, the negative 100 percent tax rate would apply only to those persons with countable income high enough to lower their grant below the State maximum.

[29] The recipient might avoid losing benefits while living with relatives at no cost by claiming payment of rent without actually making the payment.

type of saving is the most flexible and most easily accomplished by AFDC families, the high tax on cash savings may produce significant reallocations toward current consumption and away from savings.

States tend to allow higher asset holdings if the assets are physical and not monetary. This pattern is particularly important in the case of homeownership. This treatment probably produces an inequity among AFDC families. For those families in the more advantageous positions, savings through purchasing a home is a more viable alternative. Their savings would not be taxed. The only method of saving available to the most disadvantaged families, however, is cash savings. Yet it is this type of saving that is subject to the harshest treatment.

Summarizing the AFDC benefit reductions associated with uses of income, we find that is is most financially advantageous to allocate income toward expenditures on allowable work expenses and on housing (in some States up to a mazimum), toward savings earmarked for future needs of children in a few States, and toward savings accumulated as ownership of physical assets in most States. Other uses of income are generally financially less advantageous.

Table 2 illustrates the effect on AFDC grants of a $1 reallocation from purchasing a book toward other expenditures. Such reallocations may increase the grant by $1, increase the grant by less than $1, have no effect on the grant, or decrease the grant.

TABLE 2.—*Effects on AFDC grant of changes in uses of income*

$1 reallocation from purchasing a book—	Amount of change in grant by State and by type of recipient			
	$1 increase applies to—	Partial increase applies to—	No change applies to—	Decrease applies to—
To lunches at work____	Recipients with earnings in most States without ratables; exceptions are recipients whose earnings are too low for any benefit reductions (due to 30 plus $\frac{1}{3}$ provision or State maximum) and in the few States where the item is not an allowable work expense.	Recipients with earnings in States with ratable reductions; same exceptions as col. 1.	Recipients with earnings too low for benefit reductions or in a few States where item is not an allowable work expense.	None.
To clothing_____	Same as above_____	Same as above_____	Same as above_____	Same as above.
To rent_____	Recipients whose rent is currently below State rent maximum in those States whose shelter policy is to include in grant, rent as paid to maximum; exceptions are those in States with ratable reductions reduced standards and those in States with payment maximums whose grants are already at the maximum.	Recipients whose rent is below State rent maximum in States with shelter policy same as col. 1 and with ratable reductions or reduced standards.	Recipients in States with fixed rent payment or whose rent exceeds State maximum or those in States with payment maximums whose grants are already at the maximum.	None.

TABLE 2.—*Effects on AFDC grant of changes in uses of income*—Continued

$1 reallocation from purchasing a book—	Amount of change in grant by State and by type of recipient			
	$1 increase applies to—	Partial increase applies to—	No change applies to—	Decrease applies to—
To partial savings in the form of a mortgage payment.	Same as for rent	Same as for rent	Same as for rent	Recipients removed from AFDC rolls if value of house exceeds State limitation.
To cash savings	None	None	Recipients whose cash and total assets are well below State asset limitations.	Recipients removed from AFDC rolls as their cash assets begin to exceed State asset limitations.
To savings earmarked for children.	Recipients with income high enough to induce benefit reductions in States with a special provision that excludes income used for this purpose.	None	Almost all States	None.

Source: *Handbook of Public Income Transfer Programs;* and Department of Health, Education, and Welfare, Social and Rehabilitation Service; *Characteristics of State Public Assistance Plans Under the Social Security Act* (Report No. 50; 1970).

III. Adult Categories of Federal-State Public Assistance

Old Age Assistance (OAA), Aid to the Permanently and Totally Disabled (APTD), and Aid to the Blind (AB) are the Federal-State public assistance programs for special groups of adults. These programs are similar to AFDC in philosophy, in structure, and in rules concerning benefits and benefit reductions. However, there are enough differences in the adult programs to merit examination separate from AFDC. This section covers the adult programs as of October 1972. The recent enactment of H.R. 1 mandates Federal takeover of these programs effective January 1974. A discussion of the rule changes and the implications of these changes appears in section XI.

The philosophy behind both AFDC and the adult programs is that the Government has a responsibility for certain groups of poor people to fill the gap between specifically defined needs and available resources. The State definitions of financial need vary widely for all four programs. The treatment of available resources is generally a matter of Federal legislation and regulation but State differences also appear here. Administration of all four programs occurs at the State levels and, in 21 States, at the local level, although the financing is from 50 percent to 83 percent Federal. As for the relation of benefits to the sources and uses of income, there are important differences and similarities among the four programs which are discussed below.

A. Sources of Income

The income definition with respect to sources other than earnings is similar for all four programs. All cash property income, private cash transfers, and public cash transfers count as income. In-kind income is excluded from countable income. The only major difference in treatment of an income source is between earnings and all other sources. And one may view this as a difference in the tax rate applied to earnings rather than as a difference in definition. For the adult categories as for AFDC, recipients may deduct allowable work expenses from gross income for purposes of computing benefits.

Before returning to benefit reduction rates on earnings, we examine the actual rates that apply to cash property and cash transfer income such as social security. After exclusions of $4 of social security income and up to $7.50 per month of other property or transfer income in some States, the marginal tax rate on this income is 100 percent. This is why increases in social security benefits do not automatically mean higher incomes for all OASDI beneficiaries who also receive welfare. However, the existence of maximums in State adult programs produce zero marginal rates over low ranges of income, as occur in some State AFDC programs. Where income is counted against the State standard and the maximum payment is less than the standard, a dollar of countable income would not reduce the actual payment at all. The zero benefit reduction rate would apply until the difference between the State standard and countable income is less than the State maximums produce this effect in seven States with 22 percent of the OAA recipients.[30]

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[30] The ratable reduction is a feature that reduces AFDC benefit reduction rates in a few States but does not exist in the adult programs in any State.

Benefit reduction rates applied to earnings vary with the program. As compared to the AFDC treatment of earnings discussed in section II, earnings are subject to higher benefit reduction rates under OAA and APTD and somewhat lower benefit reduction rates under AB. The deduction of work expenses from earnings is a Federal requirement although as in AFDC the definition or work expenses varies by State.[31] In addition, in OAA and APTD States may deduct at their discretion up to the first $20 of monthly earned income and half of earnings between $20 and $60.[32] Five States tax all earnings at a 100-percent rate after excluding work expenses while 13 States deduct only $7.50 of monthly earnings in addition to work expenses. In the case of APTD an optional provision allows States to disregard all earnings for up to 36 months if the recipient has a plan to achieve self-support. Of the 11 States that use this provision, eight may disregard earnings for the full 36 months while three do so only for 12 months.

The AB program also includes a provision requiring States to disregard income necessary to achieve self-support. Thus, all States use this provision in their AB programs in contrast to only 11 States in the APTD program. The frequent use of this provision is one factor keeping effective marginal rates lower in AB than in other programs. In addition, AB benefits decline less rapidly with ordinary earnings. A zero marginal rate applies to the first $85 of earnings and a 50-percent marginal rate to earnings above $85. Again actual benefit reductions with respect to gross earnings are lower because of the deduction for work expenses after other deductions.

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[31] As in AFDC, work expenses are deducted after any other deductions, implying that these expenses are credits.

[32] States may also deduct $7.50 from any source. All but 22 States allow this deduction.

TABLE 3.—*The effects of gross earnings and property income on benefits from OAA, APTD, and AB programs*

	Monthly gross earnings							Monthly property or cash transfer income			
	$0	$50	$100	$150	$200	$250	$300	$50	$100	$150	$200
OAA AND APTD											
(1) Gross income, before taxes and transfers_____	0	$50	$100	$150	$200	$250	$300	$50	$100	$150	$200
(2) Taxes and work expenses [1]_____	0	8	15	23	30	38	45				
(3) OAA or APTD payment [2]_____	$130	123	85	43	0	0	0	88	38	0	0
(4) Average (marginal) benefit reduction rates (in percent) with respect to gross income [3]_	0	14%	45%	71%	65%	---------	---------	84%	92%	87%	---------
	0	(40%)	(85%)	(85%)	(85%)			(100%)	(100%)		
(5) Total income = (1) − (2) + (3)____	130	165	180	180	180	225	270	138	138	150	200
AB											
(1) Gross income, before taxes and transfers_____	0	50	100	150	200	250	300	50	100	150	200
(2) Taxes and work expenses [1]_____	0	8	15	23	30	38	45				
(3) AB payment [4]_____	130	130	130	121	103	86	68	88	38	0	0
(4) Average (marginal) benefit reduction rates (in percent) with respect to gross income [3]_	0	0	0	6%	14%	18%	21%	81%	92%	87%	---------
	0	0	(35%)	(35%)	(35%)	(35%)	(35%)	(100%)	(100%)		
(5) Total income = (1) − (2) + (3)___	130	172	215	248	273	298	323	138	138	150	200

[1] Social security taxes equal 5.2 percent of gross earnings; other work expenses equal 10 percent of gross earnings.

[2] The OAA or APTD payment is equal to $130 less countable income, countable income is gross income less $7.50 from any source or $20 of earnings, less ½ of earnings between $20 and $60, and less work expenses.

[3] See table 1, footnote 4.

[4] The AB payment is equal to $130 less countable income. Countable income is equal to gross income less $7.50 from any source or $85 of gross earnings, less ½ of gross earnings above $85, and less work expenses.

Source: *Handbook of Public Income Transfer Programs.*

Some recipients in adult categories may receive payments for participating in training programs. All such allowances are excluded from income.

Table 3 illustrates the relation between benefits and income for various situations in the adult programs. Note in table 3, the dollar for dollar reductions in benefits beyond very low levels of income. For the OAA recipients, social security (OASI) is a major source of non-OAA income. The table illustrates that small increases in OASI payments do not help OAA recipients. In fact, the increases may hurt OAA recipients whose incomes are near the cutoff levels. The anomaly that OAA, APTD, and AB recipients may lose substantial real income through small increases in other public cash income programs is an example of a notch. The notch—a large dropoff in benefits due to a small gain in cash income—occurs when recipients lose medicaid and food stamp benefits as they become ineligible for either OAA, APTD, or AB.[33]

Table 3 illustrates the differences in the treatment of earnings under OAA, APTD, and AB. OAA and APTD benefits fall almost as fast with rising earnings as with rising property income. On the other hand, substantially lower benefit reduction rates apply to the earnings of AB recipients. In practice the distinction in the treatment of earnings may lie between OAA and the other two programs. AB and APTD administrators in some States could exclude a great deal of the recipient's earnings by classifying these earnings as "income necessary for fulfilling a State-approved plan for self-support." Since no provision for this exclusion exists in the OAA program, OAA benefits must decline rapidly with earnings.

B. Uses of Income

Payments to recipients in the adult categories depend partly on the recipients' uses of income. The same uses that influence AFDC payments also help determine OAA, APTD, and AB grants. These uses are work expenses, housing expenditures, and some types of savings.

The work expense allowance is less important to adult than to AFDC recipients because fewer adult recipients work. Allocating dollars from ordinary consumption to consumption goods one can associate with work only adds to the grant if there are earnings against which the expenses may be deducted. It is doubtful that there are more than a few cases in which the work expense deduction is used by adult recipients to increase their grant by reallocating dollars to work expense goods since less than 5 percent have any earnings at all.

The impact of the rent allowance policy is probably larger on OAA than on AFDC in producing variations in grant levels. In most States the total grant is made up of a fixed amount ostensibly for expenditures other than housing plus a variable amount equal to actual housing expenditures up to a maximum allowable amount. Since a significant percentage (28 percent) of OAA recipients own their homes and may spend little on housing, differences in housing expenditures probably account for a sizable percentage of variations in OAA grants. Alternatively, probably few AFDC recipients have housing expendi-

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[33] See sections VII and IX.

tures significantly lower than the maximum rent. Thus, AFDC payments within the same area would not show much variation as a result of the housing allowance policy.[34]

The generally low rent maximums suggest to many that the policy does not in practice encourage increased rent expenditures. If this were true, then the effect would be redistributive away from those who appear to be the least needy, the homeowners. However, it is plausible that the variable rent payment influences some elderly to form their own house-holds instead of living with their children or other relatives. In addition to distorting expenditure choices of recipients, the policy may also produce inequities. Consider two elderly couples in equivalent circumstances with respect to income, location, and chances to live with relatives. The couple that tries to economize on rent by living with relatives in order to spend more on other goods would receive a much lower OAA grant than the couple which preferred to use its income to rent its own housing unit. It may also be inequitable to pay significantly lower grants to some homeowners. If an elderly couple owns a very poor home, the real value of the housing services may be lower than the value of unit rented on the market for the maximum allowable rent. In this case the rent policy would mean different grants levels to recipients with the same total (cash-plus in-kind) nonassistance income.

Another use of income that may affect grant levels is savings. As in the case of AFDC, asset levels beyond specified amounts disqualify people for OAA, APTD, or AB. Since accumulated savings are assets, incremental growth in savings could push a recipient's asset holdings above the asset limits, which could result in ineligibility and a large decline in benefits. The actual asset limits vary widely by State and by type of asset. For example, consumer durable goods are subject to virtually no limits while the limits on savings accounts are very low. This means that recipients who want to save are encouraged to buy physical goods and discouraged from holding their savings in cash.

IV. UNEMPLOYMENT INSURANCE

Unemployment insurance (UI) is another Federal-State program whose rules on eligibility, benefit levels, and benefit reduction rates vary widely by State. While it is impossible here to examine all State variations, the descriptions below cover many of the important differences that affect benefit reduction rates. There is only a brief treatment on eligibility determination in spite of the complex State variations.[35]

Generally, an individual's maximum current potential benefit depends on his past earnings, type of employment (covered or uncovered), the number of dependents in 11 States (usually up to a maximum), and reason for loss of employment. The treatment of each

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[34] In one sense this treatment appears similar to a tax on imputed income from the housing services. However, it is not equivalent to either a tax on gross or on net imputed income. Net imputed income is equal to the gross value of housing services paid to and consumed by the homeowner less the homeowner expenses. The first term depends on the quality of the home. Yet the quality of the home has no affect on the public assistance grant. The rent policy actually amounts to a negative tax on housing expenditures.

[35] See *Handbook of Public Income Transfer Programs* for more details on State payment levels and eligibility requirements.

of these varies by State. In most cases potential benefits per week are a specified percentage of the claimant's average wages in covered employment during his highest quarter within a specified period. Potential benefit levels all are subject to maximums which in turn usually are related to a percentage of the State average weekly wage. Excluding allowances for dependents, the mean State maximum benefit level was $65 per week in early 1972. Although the range of maximums goes from $45 to $105, over two-thirds of the States use maximums between $53 and $77. Allowances for dependents increase weekly benefits for recipients in 11 States. The amounts per dependent vary, with the median near $5; the median maximum allowance per family is $20.

About half of new claimants qualify for State maximum payments. One would expect such a percentage since (1) State maximums are often half of average weekly wages in covered employment and (2) actual weekly benefits are often half of the claimant's average weekly wages in a high earnings quarter up to the State maximum. What is unexpected is that the percentage of claimants receiving the State maximum varies widely among States, from 12 percent to 80 percent. Some of this variation is due to differences in the relation between State maximums and State average weekly wages. But other factors are the extent to which partial unemployment is permitted without large losses of benefits and the actual amount and type of available part-time employment opportunities.

States also differ with respect to eligibility provisions on the reasons for loss of employment. Voluntary leaving does not disqualify the claimant if the departure was for good cause. However, there is wide variation in the strictness with which the phrase "good cause" is interpreted. In some States, voluntary departures or discharge for misconduct simply delay eligibility for a few weeks while other States cancel all benefit rights of workers leaving work for these two reasons.

The definition of covered employment is similar for all States. Nationally, somewhat more than two-thirds of all employment was covered in the third-quarter of 1971. Domestic service, agricultural labor, self-employment, and some government work are the major categories of excluded employment. There are many other workers who are excluded, especially those in temporary or low-skill occupations.

The above discussion briefly describes the determinants of an individual's current potential benefit. This amount is the maximum the individual can receive regardless of current activity. The focus of this section is an examination of how various activities, particularly earnings, may reduce actual benefits below the potential amounts.

A. Sources of Income

The general purpose of UI is to insure employees against the risk of unemployment. UI benefits are supposed to cover a portion of the insured employee's earnings, not to provide the most benefits to the neediest. As a result, the source of income primarily associated with benefit reductions is earnings. Benefits decline with earnings not because families become less needy as earnings rise but because higher earnings show the worker is more fully employed.

Unemployment is not necessarily an absolute matter. To avoid large notches in total income between those with no employment or earnings

and those with a very slight amount, almost all States pay some UI benefits for "partial unemployment." It is the differences in definitions of "partial unemployment" that largely determine how benefits decline and benefit levels by four.

Although the worker's potential benefit from UI depends on his earning's history over a specified number of quarters, the accounting period used to determine how much of his potential benefit the worker actually receives is 1 week. The worker is eligible for a specified amount during weeks of total unemployment.[36] Earnings in any week of partial unemployment may reduce UI benefits only in that particular week. This policy accords favorable treatment to those partially unemployed who can concentrate their earnings in a few weeks. While the weekly accounting period is actually in use, the discussion below treats benefit reductions under UI on a monthly basis in order to maintain a common format for programs examined in this paper. The reader interested in how the weekly accounting period would work may divide all earnings and benefit levels by four.

In most States, current gross earnings above a small disregard reduce UI benefits $1 for each dollar earned. Earnings may rise to the worker's potential benefit level or to that level plus the State's disregard before the worker loses all UI benefits. In the Ohio example displayed in table 4, the disregard is $64 per month (one-fifth the potential benefit level of $320) and the point at which gross earnings eliminates all UI benefits is the full potential benefit, or $320 per month. Thus, partial earnings of $64 per month, or $15 per week do not reduce UI benefits at all. From $65 to $319 per month of earnings, UI benefits fall $1 for each dollar of added earnings. At $319 of gross earnings, the worker could receive $65 in UI benefits, for a total income of $384. However, a $1 increase in gross earnings would disqualify the worker for any UI benefits and his total income would fall to $320. This large dropoff in benefits with the $1 increase in earnings is an example of a notch. A similar kind of notch exists in 28 States. The policy of 14 States removes the notch by applying the 100-percent benefit reduction rate to all earnings above the disregard. Using the Ohio benefit and disregard provisions as an example, this would mean that all benefits cease at monthly earnings of $384.

Exceptions to these benefit reduction rules occur in 10 States. Of these, Nebraska, Michigan, and Wisconsin have adopted a particularly odd schedule. UI benefits do not decline at all if gross earnings are below one-half of total benefits. At the point gross earnings reach one-half of potential UI benefits, UI payments fall from the full potential benefits to one-half of those benefits. UI payments remain at one-half of potential benefits until gross earnings reach the potential benefit level, at which point all UI payments are lost. Thus, the rules in these States create two large notches.[37] The Nebraska case in table

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[36] The worker is ineligible for benefits in the initial week of unemployment and after the maximum number of weeks of UI coverage (usually 26 weeks).

[37] See Raymond Munts, "Partial Benefit Schedules in Unemployment Insurance: Their Effect on Work Incentives," *Journal of Human Resources*, Spring, 1970, pp. 160–176, for an analysis demonstrating that workers clearly respond to these notches by limiting their earnings.

4 also illustrates this odd approach to defining partial unemployment. For example, a worker with part-time work paying $111 per month and receiving the full $224 UI benefit would experience a decline of $112 in UI benefits with a $1 increase in gross earnings.

Complicating State formulas further is the treatment of hours worked. Regardless of earnings, claimants who work full time would not receive any UI benefits. This provision leads to the possibility of notches at hour levels near full-time employment. A UI claimant receiving partial unemployment benefits would find his payments dropping to zero if he works full time at a low wage job even if he qualifies on an earnings basis for partial benefits. An odd implication is that claimants with equal potential benefits and equal earnings would receive unequal payments if work hours and wage rates differed. The claimant with longer current hours might receive less. It should be pointed out that this anomaly may not occur often since in most States qualifying for UI on an earnings basis while working full time would require a wage rate of from one-half to three-fourths of the State average.

These UI benefit reductions represent severe disincentives to work, especially at part-time or low-paying jobs. Feldstein argues that the high marginal benefit reduction rates almost certainly lengthen the duration of unemployment. UI recipients are unemployed for longer periods than other unemployed persons and the duration of unemployment is longer in States with higher UI benefits.[38]

The earnings concept used above is gross earnings. Taking account of payroll deductions, we find that net income would actually decline for each dollar of gross earnings over some ranges of earnings. The initial disregard may compensate the claimant for his work expenses but, since the disregards are flat amounts for each claimant, the disregards would only raise the earnings level above which the over 100 percent rate becomes effective. The exceptions are Connecticut, Kentucky, and South Dakota, where the disregard is a percentage of wages. These disregards reduce marginal benefit reduction rates from 100 percent to 67 percent, 80 percent, and 50 percent, respectively. Again payroll taxes would reduce further the net income gain associated with gross earnings.

The treatment of public and private cash transfers is also complex. Generally, receipts from many types of transfers either reduce UI payments dollar for dollar or do not reduce UI payments at all. In a few States, UI benefits are zero during a week in which the claimant receives another transfer payment. Further, each type of transfer is subject to a different treatment. OASI benefits have no effect on UI payments in 34 States, reduce UI payments dollar for dollar in 15 States, and cause UI payments to fall to zero in one State. Workmen's compensation, private pensions, severance pay, and wages in lieu of notice are other transfers whose effects on UI payments vary by State. Private supplemental unemployment benefits, the best known of which are from the Ford-General Motors plan, do not reduce UI

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[38] Martin Feldstein, "Lowering the Rate of Unemployment," A Preliminary Report Prepared for the Joint Economic Committee of the U.S. Congress, Oct. 18, 1972. Also see G. Chapin, "Unemployment Insurance, Job Search, and the Demand for Leisure," *Western Economic Journal*, March, 1971, pp. 102–07, referenced in Feldstein.

payments at all in the 47 States that have decided the issue. Other transfers not specifically mentioned do not reduce UI in any State.

Property income and in-kind income have no effect on UI payments. This treatment is natural given that the philosophy of the program is to insure income losses associated with unemployment. However, it is hard to rationalize differences in treatment of property income and public or private retirement income. For example, consider private pensions, which may reduce UI payments in 34 States. The claimant has built up his rights to the pension through past savings just as in the case of much property ownership. Often the pension payments, like property income, are independent of earnings or outside employment. Receipt indicates withdrawal from a particular job but not necessarily withdrawal from the labor force. There is simply no clear rationale for the differing treatments of various types of income in use in many States.

TABLE 4.—*Effects of earnings from partial unemployment on unemployment insurance benefits and total income*

	Monthly gross earnings								
	$0	$50	$100	$150	$200	$250	$300	$350	$400
(1) Gross earnings_____	$0	$50	$100	$150	$200	$250	$300	$350	$400
(2) Taxes and work expenses [1]____	0	8	15	23	30	38	45	53	60
OHIO									
(3) UI benefits_____	320	320	284	234	184	134	84	34	0
(4) Average, (marginal) benefit reduction rates (in percent) with respect to gross earnings [3]_____	0 (0)	0 (0)	11% (100%)	57% (100%)	68% (100%)	74% (100%)	79% (100%)	82% (100%)	80%
(5) Total income (1) − (2) + (3) ___	320	362	369	361	354	346	339	331	340
NEBRASKA									
(6) UI benefits [4]_____	224	224	224	112	112	0	0	0	0
(7) Average (marginal) benefits reduction rates (in percent) with respect to gross earnings [3]_____	0 (0)	0 (0)	0 (0)	75% (0)	56% (0)	90% (0)	75%	64%	56%
(8) Total income (1) − (2) + (6) ___	224	266	309	239	282	212	255	297	340

[1] Social security taxes equal 5.2 percent of gross earnings and other work expenses equal 10 percent of gross earnings.

[2] Maximum UI payments in Ohio are $84 per week. The $80 per week payment assumed in this example is the weekly benefit amount (wba) or the total amount available to the worker with total unemployment. For those with partial unemployment, UI payments equal the weekly benefit amount less gross earnings above ⅕ wba. Those with gross earnings equal to wba receive no UI payments.

[3] See footnote 4, table 1. The marginal benefit reduction rates are in parentheses.

[4] The maximum UI payment in Nebraska is $56 per week. This is the weekly benefit amount assumed in this example for those with total unemployment. Those with gross earnings less than ½ wba receive the full wba; those with gross earnings between ½ wba and wba receive ½ wba; and those with gross earnings above wba receive zero.

Source: *Handbook of Public Income Transfer Programs.*

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Another potential source of family income is earnings of the claim-ant's spouse. The spouse's earnings do not affect UI payments except in a few States where the allowance for dependents falls with the spouse's earnings. By timing unemployment of one spouse to coincide with employment of the other spouse, a clever and employable hus-band-wife team could receive UI as a supplement to family earnings a good share of the time. The presence of UI changes substantially the relative market wage rate and relative home wage rate between the spouses. The husband's market wage may be higher than the wife's market wage, but the combination of the wife's earnings plus the husband's unemployment insurance benefit could exceed the husband's earnings. The rules provide a financial encouragement (above the pre-UI wage ratios) for spouses to switch roles.[38a]

B. Uses of Income

The UI claimant's use of income have no effect on his UI benefits. Only indirectly could the claimant's use of income influence his UI payments. Such indirect influence may occur through the avail-ability-for-work provision. Travel expenditures themselves would not reduce UI levels. However, if the claimant travels far from his local Employment Service office, he may be considered "not available for work" and lose UI benefits. In general, such a claimant may receive for benefits from the State in which he gained entitlement by register-ing at the UI office in his new State of residence. Schooling can also disqualify the claimant from UI benefits although the school expendi-tures themselves would not affect payment levels.

V. Old-Age, Survivors, and Disability Insurance

Social security (OASDI) is the largest income maintenance program in the United States.[39] After a brief description of the determinants of potential OASDI benefits, we examine how current activities can affect actual benefits received. This section covers OASDI rules as of October 1972. The recent passage of H.R. 1 introduced changes in paramenters that are effective January 1973. A discussion of these changes appears in section XI.

As the program name implies, the beneficiaries of OASDI are the elderly (more accurately, the elderly retired from covered employ-ment), the disabled, the survivors of deceased workers who had sufficient covered employment, and dependents of these groups. Eligibility provisions require that the insured worker have covered employment of a specific number of quarters that vary with year of birth. Those born after 1929 must have 40 covered quarters of em-ployment to qualify for fully insured status, which is the status required for full benefits under the retirement or survivors provisions. Lower benefits are available for those with enough employment to gain classification as currently insured. Eligibility for disability benefits

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[38a] The authors of UI no doubt foresaw the women's liberation movement and trend toward sharing home and work responsibilities.

[39] In fiscal year 1972, there were 17 million beneficiaries of old age insurance, 7.3 million beneficiaries of survivors insurance, and 2.9 million beneficiaries of dis-ability insurance. Expenditures totaled nearly $40 billion on the three programs in fiscal year 1972.

generally requires covered employment in 20 of the previous 40 quarters; fewer quarters are necessary in the case of workers younger than age 31.

Current potential benefits for retired or disabled workers depend not only on the quarters of covered employment required but also on the earnings levels per year, excluding the 5 years with the lowest earnings. For survivors and dependents, potential benefits are a percentage of the monthly benefit that is received by a retired or disabled worker or that would have been received by a deceased worker. Total benefits to a single family are subject to a fixed maximum. The range of individual benefits to retired or disabled workers is from $70 to $218 per month. In 1970 the average monthly payments to retired workers and to disabled workers were $118 and $131, respectively.

The determination of OASDI current potential benefits is much more complicated than the sketchy description above.[40] In large part current potential benefit levels are based on past activity and are outside the focus of this paper. The analysis below concerns how the generation of current income affects potential benefits.

A. Sources of Income

Earnings is by far the most important income source that reduces OASDI benefit levels. The only other income sources that may reduce OASDI benefits are workmen's compensation and survivors' or retirement benefits under the Railroad Retirement Act. OASDI disability benefits to workers under age 62 who also receive workmen's compensation are reduced so that the combined payments do not exceed 80 percent of average monthly earnings prior to the disability. The reduction does not occur where workmen's compensation benefits are reduced to offset social security payments.

Survivors are eligible for benefits from either social security or railroad retirement based on the worker's combined earnings record, although social security benefits to retired workers do not decline at all with railroad retirement benefits.

The basic rules that apply to the earnings of OASDI recipients appear simple. The benefit reduction rates on gross earnings are zero for annual earnings between zero and $1,680, 50 percent between $1,680 and $2,880, and 100 percent above $2,880. Benefit reduction rates become zero at any level of earnings when the recipient reaches age 72. In the case of survivor benefits, this treatment of earnings applies only to the earner's benefits and not to benefits of other family members. A surviving widow may earn any amount without reducing the benefits payable to the surviving children.

Actually, these simple rules apply only to those persons whose earnings each month are one-twelfth of annual earnings. This is because money earned in a month in which total earnings are less than $140 do not reduce social security benefits at all. Thus, the highest benefit reduction rates fall on those whose earnings are most uniform throughout the year.

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[40] The reader interested in the detailed criteria may consult U.S. Department of Health, Education, and Welfare, Social Security Administration, *Social Security Handbook*, U.S. Government Printing Office, Washington, D.C. 1969, or *Handbook of Public Income Transfer Programs.*

The implications of an annual accounting period with monthly disregards are complex. A notch may exist for a retired worker if his annual earnings exceed $1,680. Consider a recipient who earns $2,080 in January and zero for February through November. Assuming a benefit level of $200 or less, the $400 earned above $1,680 would completely eliminate the January payment. Earnings in December up to $140 will have no effect on benefits. However, the 141st dollar earned would reduce payments by $70. If gross earnings through January and February were $2,880, or enough to eliminate all benefits in those 2 months up to $300 per month, and zero from March through November, the notch taking hold at the 141st dollar of December earnings would be even larger. December benefits would fall by the full $140, assuming a monthly benefit level at least equal to $140.

A potentially wide variation in annual benefit reductions may result among persons with the same monthly benefit levels, the same annual earnings, but different monthly earnings patterns. Consider two recipients, each with potential benefits of $300 per month and annual earnings of $18,000. One recipient earns the $18,000 by working 12 months at $1,500 per month. Since the excess of his earnings over the the $1,680 and $2,880 levels is well over his benefit amount and since his earnings exceed $140 in all months, this recipient would lose all $3,600 in annual benefits. Earnings of the other recipient are totally concentrated in the first 3 months. The high annual earnings would cause the recipient to lose all benefits in the first 3 months. However, benefits from April through December would continue at the full $300 because the recipient's earnings in the later months were less than $140. The average benefit reduction rates for these recipients are 20 percent $\left(\frac{3,600}{18,000}\right)$ for the first and 5 percent $\left(\frac{900}{18,000}\right)$ for the second recipient.

It is impossible to state unique marginal and average benefit reduction rates for OASI without specifying the monthly pattern of annual earnings. As noted above, there is a simple rate structure for recipients with a uniform earnings pattern. However, every other earnings pattern yields its own rate structure. In general, the rules discourage earnings above $140 per month and encourage the concentration of earnings into a few months. These rules help those with the largest discretion over their earnings pattern, such as doctors or other professionals.

The apparent rationale for not reducing benefits in months in which earnings are less than $140 is that such low earnings in those months indicate a high degree of retirement in those months. Such a notion of retirement is hard to justify, especially for those who earn large amounts in some months. Someone who works moderate but regular hours is judged as less retired than one who works the same number of hours in a few bursts of intensive activity.

The concept of earnings used for benefit reduction purposes is gross earnings. In general, there is no deduction for taxes or work expenses. Exceptions to the rule are that in-kind earnings, tips of less than $20 per month, and travel payments reimbursed by the employer are not counted as earnings. The travel deduction does not necessarily exclude commuting expenses. It is only available where the travel reimbursements are identified as such at the time of payment. Thus, employees who are able to convince employers to identify some of

their compensation as travel reimbursements can receive more favorable social security treatment than those who must count all compensation as earnings. The fact that no allowances are made for social security and income taxes raises the total marginal tax rates from 0, 50 percent, and 100 percent to at least 5.2 percent, 55.2 percent, and 105.2 percent, respectively. The added 5.2 percent is the social security rate paid on gross earnings to $7,800. In most cases Federal, State, and local personal income taxes plus work expenses would lower further the net return to the recipient for a dollar of earnings.

Some aspects of the social security system provide positive incentives to work. A person nearing age 62 without enough quarters of covered employment to qualify for full social security benefits has an incentive to work in addition to current earnings. His last few quarters of work qualify him for retirement and survivors benefits.

Another feature encourages work by retirees drawing benefits before age 65 and by widows and widowers drawing benefits before age 62. The benefit levels payable to these retirees after age 65 and to these widows and widowers after age 62 depend in part on the receipt of reduced benefits in earlier years. Each month a retiree receives OASI benefits between age 62 and 65 reduces that retiree's benefit level after age 65. Since the early retiree may not actually receive any OASI benefits in some months because of benefit reductions associated with earnings, such high earnings in the 62 to 65 age range may in-increase OASI benefits after age 65. To these retirees, widows, and widowers drawing early benefits, returning to work results not only in increased net earnings but also in increased future OASI benefits less the decline in current OASI benefits. On the other hand, OASI benefit reductions associated with earnings of retirees in the 65 to 72 age range (or of widows or widowers in the 62 to 72 age range) add nothing to future OASI benefits.[41]

Benefit reductions of an indirect kind apply to disabled beneficiaries. High earnings demonstrate that the recipient is not disabled in the sense of being incapable of gainful employment and is therefore ineligible for disability benefits. The criteria are that earnings averaging (1) more than $140 per month would generally result in ineligibility, (2) less than $90 per month would not affect eligibility, and (3) between $90 and $140 per month require consideration of various circumstances surrounding the recipient's work. These rules create another notch effect, this time at $90 and $140 of earnings per month. Earnings above $90 may and earnings above $140 will cause potential recipients to lose all payments.

B. Uses of Income

Benefit reductions are generally independent of the recipient's uses of income.

VI. VETERANS' BENEFITS

The Veterans' Administration makes cash payments to veterans, their dependents, and their survivors, under two major programs. The veterans compensation (VC) program covers veterans whose

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[41] A provision in the recently passed H.R. 1 changes this rule. Effective January 1973, each month in which OASI benefits of 65 to 72-year-olds fall to zero will add $\frac{1}{12}$ of 1 percent to their future monthly benefits.

death or disability was service-connected; the veterans pension (VP) program provides support in cases where a veterans' death or disability has no connection with his military service.[42]

In general, those who receive benefits from VC are not subject to benefit reductions based on any current activity. The flat amounts paid to veterans and/or their families depend only on the degree of disability, the number of dependents or survivors, and the highest rank achieved. Only in the case of payments to dependent parents are VC benefits dependent on current income or assets. Except for payments to parents, the VC program is analogous to providing each serviceman with a free insurance policy. The policy insures the serviceman and his dependents against service-connected disabling injury or death. The Government's financial obligation remains regardless of income available to the veteran, his dependents, or his survivors.

As demonstrated in the VP program, the Government's responsibility is much more limited for veterans whose disability or death is unrelated to their military service. Benefits are paid only to the financially needy in this group. In other words, benefits decline as incomes of recipients rise. These benefit reductions apply to almost all VP beneficiaries. One may distinguish two major groups of VP beneficiaries. Disabled veterans with or without dependents make up one group. Any person age 65 or more is automatically considered permanently disabled. The other group is composed of surviving wives and children of deceased veterans. The discussion below examines in detail benefit reductions applicable to these two groups and to dependent parents eligible for VC benefits.

A. Sources of Income

This section analyzes the relationship between benefit reduction and income for dependent parents eligible for VC payments and for all eligible VP beneficiaries. As in most income-tested programs, benefit reductions depend on the sources of income as well as the amounts from particular sources. Thus, it is important to examine the definitions of income before presenting benefit reduction rate schedules.

Although there are some differences in the treatment of various income sources, it is easiest to begin with the general rules and then to point out the exceptions and the differences in treatment. The basic income concept is gross cash earnings, property income, and most public cash transfer income. In-kind income from earnings, property, or transfers is not counted for purposes of computing benefits. Capital gains are excluded as income except for sales of businesses and for those veterans covered under old rules.[43] In the case of major public cash transfer categories, public assistance payments are excluded while 90 percent of social security and unemployment compensation payments are included. Retirement benefits regardless of source are another important category in which 90 percent of the payments count as income. Earnings of dependent and surviving children are excluded

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[42] In fiscal year 1972, there were 3.4 million beneficiaries of veterans' disability and survivors compensation and 1.3 million beneficiaries of veterans' pensions and veterans' survivors pensions.

[43] See Veterans' Administration: *1971 Annual Report* (January 1972) for a description of the old rules.

under the new rules as are the earnings of a dependent spouse. If her earnings are less than $1,200, the spouse may exclude up to $1,200 of her total income from the amount used to compute pensions.

This definition generally applies to all those covered under the new law for veteran's pensions. Those VP recipients eligible or receiving benefits on or before June 30, 1960 could be subject to the old law. Since the small percentage in this category could elect coverage under the new law and since benefits and income disregards are more liberal under the new law, the treatment here deals only with the new law.

One aspect of eligibility determination may be implicitly a benefit reduction associated with employment. All veterans over 65 are classified as permanently disabled for VP purposes regardless of their recent work experience. Below age 55, medical evidence alone determines eligibility. In the case of veterans between 55 and 65, the disability classification depends on independent medical evidence or on evidence of unemployability. The latter provision opens an area for discretion as to what constitutes inability to secure and follow substantially gainful employment by reason of disability. Thus, a 55-year-old low-skill veteran may lose his claim on VP benefits by finding and working at a job. Another veteran in similar circumstances whose job seeking efforts are less strong may qualify for VP benefits. There is here a very unsystematic but negative relation between earnings and VP benefits.

The accounting period exerts an influence on the relationship between benefits and income that is not easily determined. Benefits are paid monthly while income is reported only on an annual basis. In general, income for the year is determined once during the year on the basis of income received and income anticipated in the relevant calendar year as reported by the beneficiary. However, there is provision, where the amount of anticipated income is uncertain, for deferring the income determination and allowing little or no pension until the end of the calendar year. Benefit reduction rates are stated as changes in payments per month for a given change in annual income. For example, a rise in annual income in the $300 to $600 range may reduce payments per month by 1 cent for each added dollar of annual income. Using monthly benefit and income concepts, one may restate the rule as implying that each dollar increase in monthly income between $25 and $50 reduced monthly benefits by 12 cents. The benefit schedules below use this legally correct transformation.

This procedure may not reflect how benefit reductions work in practice. Although it is probably impossible to determine actual income reporting practices, it is plausible that VP beneficiaries may make honest statements on the initial report but not bother to amend the report if they experience a rise in income later in the year. One might well expect such behavior given the Veterans' Administration's casual or nonexistent procedures for verifying the initial income report and the fact that recipients are not reminded to report differences between actual and expected income. Such recipients are more likely to report changes that help them than changes that hurt them, so that the income reporting procedures probably tend to reduce actual benefit reduction rates. Of course, this tendency is unsystematic and cannot be stated precisely. It may also exist in other transfer programs.

Table 5 illustrates the benefit reduction rates facing a veteran with no dependents, a veteran with three dependents, and a widow with three dependents.[44] The marginal rates rise for all three groups as earnings rise. Note also the higher rates applied to earnings of veterans than to earnings of widows. Pensions to veterans with and without dependents decline abruptly at specified income cutoff levels. At $317 of countable monthly income, the veteran with three dependents receives $43 in benefits per month. An extra dollar of income, to $318 causes benefits to fall to zero. In the case of the widow with three children, income may reduce the widow's benefit to zero but does not affect the children's benefit. Thus, the veterans pension to this family remains at $76 per month in spite of growth in income above $300 per month.

These benefit reduction rates apply only to those veterans not receiving other transfers. Yet nearly three-fourths of VP recipients also are OASDI recipients. The result of the overlap of VP and OASDI benefits is a higher total cash payment to those with zero nontransfer income and a higher benefit reduction rate. The combined VP and OASDI benefit levels at various amounts of earnings and property income appear in section X. That section examines this and many other examples of overlapping benefits.

[44] The benefit reduction rates appearing in table 5 assume accurate income reporting. Although the effects of unreported income on benefit reduction rates is a subject that deserves independent study, it goes beyond the scope of this paper.

TABLE 5.—*Effects of gross earnings on veterans pensions and total income of veterans, veterans with dependents and widows with dependents*

	Monthly gross earnings								
	$0	$50	$100	$150	$200	$250	$300	$350	$400
(1) Gross earnings	$0	$50	$100	$150	$200	$250	$300	$350	$400
Veteran—No dependents:									
(2) Taxes and work expenses [1]	0	8	15	23	30	40	55	70	87
(3) Veterans pension [2]	130	121	101	74	36	0	0	0	0
(4) Average (marginal) benefit reduction rates with respect to gross earnings [3]	0 (0)	18% (36%)	29 (48%)	37% (72%)	47% (84%)	52% ----	43%	37%	33%
(5) Total income = (1) − (2) + (3)	130	163	186	201	206	210	245	280	313
Veteran—3 dependents:									
(6) Taxes and work expenses [1]	0	8	15	23	30	38	46	53	61
(7) Veterans pension	150	148	133	115	97	79	53	0	0
(8) Average (marginal) benefit reduction rates with respect to gross earnings [3]	0 0	4% (24%)	17% (36%)	23% (36%)	27% (36%)	28% (60%)	32% (60%)	43% ----	38%
(9) Total income = (1) − (6) + (7)	150	190	218	242	267	291	307	297	339
Widow—3 surviving children:									
(11) Taxes and work expenses [1]	0	10	20	30	40	51	61	71	81
(12) Veterans pension [2]	138	138	132	122	110	95	77	76	76
(13) Average (marginal benefit reduction) rates with respect to gross earnings [3]	0 0	0 (12%)	6% (12%)	6% (24%)	14% (24%)	17% (36%)	20% (36%)	18% ----	16%
(14) Total income = (1) − (11) + (12)	138	178	212	242	270	294	316	355	395

[1] Social Security taxes equal 5.2 percent of gross earnings. Other work expenses equal 10 percent of gross earnings of veterans and veterans with dependents, but 15 percent of gross earnings of widows with dependents.

[2] See text for benefit levels and rules specifying relation between benefits and income.

[3] See table 1, footnote 4. The marginal benefit reduction rates are in parentheses.

Source: *Handbook of Public Income Transfer Programs.*

B. *Uses of Income*

Veterans' pension and veterans' compensation payments are generally unaffected by the way recipients use their income. The exceptions are medical care, "final" expenses of a veteran, and a few cases of savings. Unusual medical expenses and expenses associated with the death of a veteran (burial, expenses of last illness, and debts of a veteran in excess of VA reimbursements) are deducted from other countable income for purposes of computing veterans' pension benefits to dependents. This deduction is worth the amount by which benefits would have been reduced in the absence of the deduction. In general, the deduction is worth most among those recipients whose income is highest.

Savings may result in a complete cutoff from the programs if such savings push assets above allowable levels. There is a net worth test applied to potential recipients. Eligibility requires that the applicant's net worth be below an allowable amount. This amount is determined by income, ease of conversion of the estate to cash, limitations of community property laws, life expectancy, number of dependents, and the potential rate of depletion of the estate. The application of these criteria seems to be highly subjective. In all likelihood, no followup tests on the net worth of recipients are conducted. This means that the accumulation of assets through savings only very rarely would affect benefit levels.

VII. FEDERAL FOOD PROGRAMS

The largest programs designed to provide food to the needy are the national school lunch program (SL), the food distribution program (FD), and the food stamp program (FS). Under all three programs benefits depend on family income. However, the programs differ with respect to the benefit-income relationship, the form of the benefits, and the locations where benefits are available.

Food benefits, unlike cash benefits, limit the choices of recipients. In spite of their common feature as food programs, the restrictions on consumer choice vary considerably among the three programs. Students either eat the free or reduced price lunches the school produces or they do not. There is no way to substitute the cash equivalent of the lunch or other goods for the lunch. Recipients of FD benefits are also prevented from substituting other types of food or other goods for the specified allowance of each available commodity. If 4 pounds of flour and 2 pounds of eggs are allotted per FD recipient, the recipient generally cannot increase his consumption of eggs at all regardless of the reduction in flour he is willing to accept. The FS program interferes least with the choices of recipients. Food stamps can pay for any type of food produced domestically. However, one cannot use food stamps to purchase beer or other alcoholic beverages. Also, the purchase price of stamps may well be less than the family's cash outlay for food in the absence of the stamp program. Obviously the, different limitations on consumer choice makes valuation of these noncash benefits difficult.

The locational availability of food benefits also varies. Of course, SL recipients eat their free or reduced price school lunches at a school. Otherwise eligible students are not able to obtain the lunch subsidy

unless they attend one of the 82,000 schools (out of a total of 108,000) that participate in the SL program. FD recipients may pick up their food allotments only at a few distribution centers within each county having the program. In many cases the centers are distant from the recipients. Although FS recipients must purchase the stamps at a specified government office or bank, the stamps may be used at any store certified by the Department of Agriculture.

Of primary interest are the benefit-income relationships which vary among programs. The SL and FD programs contain severe notches. Families or persons below specified income levels for each family size are eligible for the full SL and/or FD benefits.[45] Incomes $1 above these levels make persons completely ineligible for benefits. In the FS program net benefits decline gradually with increased income up to the cutoff level. At this point an added dollar earned reduces FS benefits of up to $10 a month per person to zero. A detailed schedule sets the price of a given value of food stamps at any level of countable income. The analysis below concentrates on the FS program because of the wide income range over which benefit reductions apply and because of the program's growing importance. In fiscal year 1973, it is estimated that 13.2 million persons will receive food stamps benefits, 3.0 million will receive food distribution benefits, and 8.4 million will receive school lunch benefits. The fiscal year 1973 estimate of total expenditures on the three programs is $3.4 billion.

A. Sources of Income

The notches embodied in the national school lunch program and the food distribution program occur at a variety of income levels depending on the State, the local community, and the school district. Definitions of income under these programs also vary. Generally the following sources are fully counted as income: earnings, property income, and public and private cash transfers. The FD program often allows mandatory payroll deductions to be subtracted from earnings for eligibility purposes but the general guidelines for SL do not mention such deductions. In the case of both programs there is no precise record of the differing treatment of income sources by area.

There are especially severe gaps in knowledge of the SL program. It is known that school administrators try to avoid spending time and money formulating criteria and checking on reported income. In fact, the limited knowledge concerning school income standards and the change in them, and the virtual absence of any income verification, suggest that the income-benefit relationship is so casual, and the notch so elusive, that families cannot discern how benefits may fall with increased income.

The connection between eligibility for benefits and income is much more definite under the FD program. Each State has clearly specified maximum allowable levels of income by family size. The notch implies that the maximum income level is the only income parameter relevant to a family's benefit level. Although the complete dropoff in benefits

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[45] There is a reduced-price lunch provision but apparently most schools ignore it for bookkeeping reasons.

at a particular income level does not constitute a tax in the normal sense, caseworker discretion may make the income-benefit relation more continuous and the tax analogy more appropriate. Caseworkers realize that families with a countable income $1 below the maximum are eligible for full benefits. Since caseworkers realize the high stakes involved in how they count income within a certain range and have great discretion when doing so, many may calculate family income so as to help the family. It is easy to prevent a family from becoming ineligible if its income is $1 above the maximum. However, as income rises above the statutory maximum, the job becomes increasingly difficult. If an expected benefit criterion is used (actual benefits times the probability of remaining eligible), then the decline in benefits associated with rises in income is continuous within a certain range.

Monthly income maximums vary by State from $200 to $370 for a family of four. The mean maximum was $267 in 1971. Thus, the annual income at which FD benefits fall to zero ranges from $2,400 to $4,440 of countable income for a family of four.

Public assistance recipients receive more favorable treatment than do nonrecipients under both the FD and food stamp programs. Public assistance recipients remain eligible for full FD benefits and for some FS benefits regardless of family income and the amount of the public assistance grant. Thus, the dollar of income that removes a family from public assistance also may cause a total loss in FD benefits or some partial loss in FS benefits—usually $24 per month for a family of four.

The FS benefit reductions act as a tax on income in a relatively continuous manner up to income cutoff levels. At this income level, FS benefits fall abruptly—$20 to $30 for units with more than one person—with a $1 rise in income. In the remainder of this paper it is assumed that eligible FS families purchase the maximum number of stamps available to them and that the recipient families in any case would have purchased food quantities at least equal to the value of the stamps. [46] These assumptions allow us to count the difference between the market value of the stamps and the price paid for them by recipients as the cash value to recipients.

The income definition is similar to that used in the other two programs. Earnings, property income, public cash transfers, and some private cash transfers are generally included as income countable for benefit reduction purposes. Excluded are earnings of those children under 18 who are attending school or in a training program at least half-time; also excluded are in-kind earnings and in-kind transfers, irregular income not exceeding $30 in a 3-month period, and training allowances of up to $30 per month. Not all work expenses may be deducted to determine net earnings. The only allowable expenses are mandatory payroll deductions, such as social security and personal income taxes and union dues. There is also an exclusion of up to $30 per month for 10 percent of wages and salaries.

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[46] Until recently FS recipients were forced into an all or nothing choice. They could buy only the maximum amount of stamps or none at all. The rules have been revised as of May 1, 1972, to allow recipients to purchase 25 percent, 50 percent, 75 percent, or 100 percent of the stamps for which they are eligible.

Table 6 illustrates that the marginal benefit reduction rate with respect to gross earnings is about 25 percent over much of the earnings range. This rate is lower than the 30-percent rate prescribed in the law due to the exclusions from countable income of mandatory payroll deductions and 10 percent of gross earnings up to $300. Although benefits decline slowly with income, the net income gain to the recipient after taxes and work expenses from a $50 increase in gross income is only about $30, or 60 percent.

The accounting period is 1 month. The short accounting period means that families with equal 2 month incomes may receive different food stamp benefits. The family of four with steady earnings of $350 per month would receive $60 in food stamp benefits for 2 months ($30 per month) while benefits to the family earning $700 during 1 month and nothing the other month would be worth $112. As in the case of public assistance, the short food stamp accounting period is a disincentive to steady employment as compared with concentrating one's earnings.

TABLE 6.—*Effects of gross earnings on food stamp benefits to non-aged husband, wife, and two children*

	Monthly gross earnings								
	$0	$50	$100	$150	$200	$250	$300	$350	$400
(1) Gross income	0	50	100	150	200	250	300	350	400
(2) Taxes and work expenses [1]	0	8	15	23	30	38	46	58	67
(3) Food stamp benefits [2]	112	105	93	81	65	53	41	30	26
(4) Average (marginal) benefit reduction rates with respect to gross income [3]	0	14%	19%	21%	24%	24%	24%	23%	22%
	0	(25%)	(25%)	(25%)	(25%)	(25%)	(28%)	(19%)	(9%)
(5) Total income = (1) − (2) + (3)	112	147	178	208	235	265	295	322	359

[1] Social security taxes equal 5.2 percent of gross earnings and other work expenses equal 10 percent of gross earnings.

[2] Benefit schedules appear in *Handbook of Public Income Transfer Programs*.

[3] See table 1, footnote 4. The marginal benefit reduction rates are in parentheses.

NOTE.—It is assumed that rent does not exceed 0 percent of gross income less mandatory deductions.

Source: *Handbook of Public Income Transfer Programs.*

B. Uses of Income

Some uses of income influence food stamp benefit levels and eligibility for the FD program. Although there are close similarities between FS and FD in the treatment of some uses of income, the FD policy varies by State and is harder to examine. Thus, we focus again on FS policy.

Expenditures on some goods and services reduce countable income under both the FS and FD programs. The reductions would generally have no effect on FD benefits since countable income is relevant only for determining eligibility. Countable income reductions would affect FS benefits over ranges of income below the cutoff point.

Medical expenses, child care payments, and tuition and other mandatory educational fees, all reduce income countable for food stamp purposes by the full amount of the expenditures. Housing expenditures above 30 percent of gross income (less payroll deductions) also reduce countable income dollar for dollar. This implies that a rise in some expenditures reduces the price of food stamps and, thus, increases total income. One may view the effect on the recipient as a negative tax or as a decline in the price of some goods and services. The negative rate is equal to the food stamp benefit reduction rate in the relevant income range. The deduction for child care also reduces its effective price to the recipient. A recipient spending $10 more on child care finds his countable income reduced by $10, which in turn reduces his food stamp cost by $3. Thus, the effective price of the added $10 worth of child care is $7 to the food stamp recipient, or 70 percent of the total increase.

The housing expenditure exclusion is very important since many low income families may pay rents in excess of 30 percent of their incomes. Thus, many families are eligible for higher food stamp benefits than one would expect by examining income data alone.

Another effect of the housing expenditure exclusion is to raise the benefit reduction rate applied to increases in income of families paying over 30 percent of their income on housing. As their income rises, their exclusion from countable income to cover large housing expenditures falls. Thus, countable income rises faster than gross income, which, in turn, raises the benefit reduction rate. The approximate increase in the benefit reduction rate on earnings would be from 25 to 34 percent, or a rise of about 9 percentage points.

Assets tests are part of the eligibility criteria for FD and FS programs. As in the case of AFDC such tests can act as a disincentive to save. Allowable liquid assets are set particularly low. All liquid assets are included while many physical assets are excluded in the computation of total assets. Since countable assets may not exceed $1,500 for FS eligibility for families of any size and in some States may not exceed $1,000 for FD eligibility, savings can make families ineligible by increasing asset values. Again the poorest of the poor may receive the worst treatment because they own the fewest physical assets. Further, the fact that cash savings are the easiest form of savings for low-income families means that the treatment of liquid assets constitutes an important disincentive to save.

VIII. FEDERAL HOUSING PROGRAMS

A large number of Federal income-tested programs subsidize housing for low and middle-income families. There are at least 11 Federal programs, eight of which are administered by HUD, and three of which are for rural areas and are administered by the Department ot Agriculture. These programs vary with respect to coverage, types of subsidy, income definitions, and levels of appropriations. It is impossible in a short space to cover all the programs in detail. The focus here is on those programs in which benefit levels change with income (for those receiving some benefits).

In three rural programs and three mortgage insurance programs, the benefit levels do not vary by income level of participants. Family income is relevant only for the eligibility decision. This treatment is another example of the notches built into transfer programs. Potential benefits drop off to zero at a particular point on the income scale.

The extreme inequity and large work disincentives associated with these notches are moderated by two factors. One is that the budget for each program is far less than the level required for full coverage of all eligible families. A large horizontal inequity results because some eligible families receive benefits while many eligible families do not receive benefits. It also means that the vertical inequity and disincentive effects only apply in a small number of cases.[47] Secondly, the vagueness built into the income definitions suggests that administrators do not use a fixed, invariant income cutoff. It is probably more appropriate to consider that a rise in family income above a certain point gradually reduces the chances for participation by that family.

The housing programs in which marginal benefit reduction rates do apply are low-rent public housing, public housing homeownership, rent supplements, section 235 homeownership assistance, and section 236 interest reduction payments. These programs subsidized about 1.7 million units in fiscal 1972. Although Federal law mandates the maximum payment and maximum benefit reduction rates in the rental programs, local authorities may charge lower rents. These local determinations must follow Federal criteria with respect to the relationship between maximum rents and income eligibility levels and market rents in a local area. Thus, local officials decide on maximum rents and income eligibility by determining market rents. Given the local variations, there is no attempt in this paper to examine maximum rent and income eligibility levels. The discussion below focuses on benefit reduction rates on sources and uses of income, assuming particular market rents. Since these housing programs differ only slightly with respect to the definition of income and benefit reduction rates, the following sections consider only a few programs in detail.

A. Sources of Income

The housing programs use a comprehensive definition of income. The few excluded income sources are unusual occupational expenses, casual or sporadic income, lump-sum additions to assets, educational

[47] See Henry Aaron, "Federal Housing Programs," in *The Economics of Federal Subsidy Programs*, pt. 5—Housing Subsidies, Joint Economic Committee, U.S. Government Printing Office, Washington: 1972.

scholarships, special pay to servicemen under hostile fire, Government relocation payments, and the value of the food stamp subsidy. In terms of the income source categories used in earlier sections, income is equal to wage and salary earnings, property income, and cash transfer income. In-kind transfers are excluded. Nothing is said concerning in-kind earnings. Benefit reduction rates are the same on all sources included as income.

The benefit reduction schedules depend on two other major factors. In the housing laws and regulations, the income definition excludes 5 percent of gross income and $300 for each person who is either a dependent (other than the head or spouse) or a secondary wage earner. One could treat these two exclusions as lowering the benefit reduction rates. This is appropriate here in order to highlight benefit reduction rates.

It is difficult to derive benefit reduction rates from the relationship between benefit levels and income because benefit levels are not in general known. The straightforward view is that the benefit level equals either (1) the market rent for those paying zero rent or (2) the difference between market rent and actual rent for others. The first difficult problem is determining what an equivalent housing unit would cost if sold on the private market. A second problem is that benefits provided in kind are often worth less to the recipient than the cash cost of the subsidy. Confronted with the choice of receiving a public housing subsidy or not, the recipient might choose the subsidy. If the recipient had instead received the difference between the market rent and actual rent in cash, he might have spent less (or more) on rent and more (or less) on other commodities. The public housing subsidy is conditional on his living in a public housing unit. Third, there is the problem of area variations in market rents and, thus, in benefit levels.

In spite of the difficulty of determining the benefit level, maximum benefit reduction rates may be derived directly from the program rules. The benefit reductions in table 7 are calculated on the assumption that housing authorities charge the maximum rent allowed under the Brooke amendment and that income is reported accurately. Of course, some housing authorities would use a different rent-income schedule. Assuming a particular cash value for living in a public housing unit at zero rent, one can compute how the subsidy changes with income. The increase in rent payments associated with a rise in income is an accurate measure of the dollar value of benefit reductions. Table 7 illustrates public housing benefit reductions, counting income from all sources other than those minor sources noted above.

The illustration in table 7 would also apply to the section 236 interest reduction program for rental housing, the rent supplement program, and public housing homeownership program. With similar income disregards, the rent levels (or benefit reduction) would go from $11 at $100 per month of income to $83 at $400 per month of income. The benefit reduction rate would be lower for the elderly. In determining the monthly payments of the elderly, 10 percent of gross income is excluded instead of the 5 percent normally excluded. This rule reduces marginal benefit reduction rates from 23.5 to 22.5 percent. The benefit reductions would be slightly lower under the section 235 home ownership program. The marginal tax rate under 235 is 19 percent.

Table 7.—Effects of gross income on public housing benefits of nonaged husband, wife, and two children

	Monthly gross income								
	$0	$50	$100	$150	$200	$250	$300	$350	$400
(1) Gross income_____	$0	$50	$100	$150	$200	$250	$300	$350	$400
(2) Taxes and work expenses [1]____	0	8	15	23	30	38	46	56	67
(3) Maximum rent=benefit reduction [2]_____	0	0	12	23	35	47	59	71	83
(4) Public housing subsidy= value of unit−rent [3]_____	130	130	119	106	94	83	71	59	47
(5) Average, (marginal) benefit reduction with respect to gross income [4]_____	0 (0)	0 (0)	11% (24%)	15% (24%)	18% (24%)	19% (24%)	20% (24%)	20% (24%)	21% (24)%
(6) Total income=(1)−(2)+(4)__	130	172	204	234	265	295	325	353	380

[1] Social security taxes equal 5.2 percent of gross earnings and other work expenses equal 10 percent of gross earnings.

[2] See text for rules concerning the relation between rent and income.

[3] Public housing unit assumed equivalent to private unit whose rent equals $130 per month.

[4] See table 1, footnote 4. The marginal benefit reduction rates are in parentheses.

Source: *Handbook of Public Income Transfer Programs.*

One complication worth noting is the benefit reduction rate on income as rent payments approach the level equivalent to the market rent for the units. Under low-rent public housing, families may have to vacate their units as income rises to the point at which they can pay market rents. This rule can induce a kind of notch in the sense that a marginal increase in income can force a family to incur substantial relocation costs. In rent supplements, the subsidy cannot be less than 10 percent of market rent. Thus, as income approaches the level at which a family's rent payments equal 90 percent of market rent, a small rise in income of $1 might raise the rent by $10 if the market rent were $100. The homeownership programs continue the linkage between mortgage payments and income until the payments gradually equal the unsubsidized level. Assuming an unsubsidized mortgage of $150, the annual gross income level (for a head and three dependents) at which the subsidy would fall to zero is $10,373.

B. Uses of Income

Housing benefits may depend partly on a family's uses of income. Deductions from income for medical expenses in excess of 3 percent of family income, for child care expenses,[48] and for unusual occupational expenses reduce rent or homeownership payments and, thus, increase benefits. In one sense these deductions act as a negative tax on particular expenditures. For example, a $1 increase in child care expenses results in a 24 cent decline in monthly rent payments by reducing countable income by $1.

The medical deduction attempts to mitigate the unavoidable financial hardships on families unlucky enough to incur large medical expenses. Allowing the deductions for child care and unusual occupational expenses pushes the definition of income toward a net income concept. Since most work expenses are not deductible, the income definition is still largely gross income. The limited work expenses that are allowed do provide some offset to any financial disincentives to work. Without the allowed deductions, the change in the net return from work would be the change in gross earnings (say $1) less the change in rent (24 cents), plus the change in unallowed work expenses (15 cents), and the change in allowed expenses (15 cents). The net return in this example would be only 46 percent of gross earnings. Allowing some work expenses as deductions increases the net return in this example to 61 percent.

Asset tests exist in sections 235 and 236 programs and may exist in the public housing programs at the discretion of local authorities. As in AFDC, liquid assets receive the harshest treatment. The implications are also the same as in other programs. An increase in cash savings near the cutoff point can result in a total loss in benefits. Alternatively, a small divestiture of assets near the cutoff point could result in eligibility and large increases in benefits. This treatment is another example of the notches built into public transfer programs.

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[48] The deduction for care of children or sick or incapacitated family members is allowed only when the expenses are determined to be necessary for the employment of the family head or spouse and when the amount deducted does not exceed the income received by the family member thus enabled to work.

51

IX. Medicaid

Medicaid is a program that pays the medical expenses of particular groups of low-income persons. In fiscal year 1972, over 20 million persons were covered by medicaid. Federal, State, and local governments participate in the administration and the financing of medicaid. States determine the rules concerning eligibility and types of medical expenses covered, although they must fall within the range of alternatives specified by the Federal Government. Although the existence of State variations prevents a complete description of program rules, the discussion below does consider the major differences in provisions that affect benefit reductions.[49]

There are essentially three types of persons eligible for medicaid benefits. The largest group is recipients of public assistance under one of the Federal programs. Such recipients are covered in every State except Alaska and Arizona. Of all persons utilizing medicaid services, 82 percent received cash assistance under AFDC, OAA, AB, or APTD.[50]

The second group consists of low-income persons who qualify because they fall under another allowable category which the State covers. These include those eligible but not receiving assistance (35 States), those spouses of public assistance recipients whose needs are included in the assistance grant (28 States), children under 21 ineligible for AFDC only because of a Federal or State school attendance requirement (all States), and parents of such children (25 States). In addition, medicaid in 18 States covers all individuals under 21 who meet the financial eligibility criteria for public assistance even though they do not meet the other qualifications for public assistance.

The third group covered by medicaid is made up of some persons who are ineligible for public assistance only because their income or asset level is too high. Medicaid programs in 24 States allow coverage for many persons in this group. If the income of these persons is less than 133⅓ percent of the AFDC maximum payment of the appropriate size, they may be eligible for medicaid.[51] Otherwise eligibility depends on the level of medical expenses as well as gross income. This third group is known as the medically needy.

A. Source of Income

Benefit reduction rules of AFDC, OAA, AB, and APTD are relevant to medicaid for two reasons. First, the rules determine whether persons receive any public assistance at all, which in turn determines medicaid coverage. Second, the public assistance benefit reduction rules legally apply to the groups that are eligible for medicaid although they are not receiving public assistance. In fact, however, States

[49] Ignored are State variations in medical expenses covered despite the fact that these affect benefit levels.
[50] James R. Storey, *Public Income Transfer Programs: The Incidence of Multiple Benefits and the Issues Raised by Their Receipt, Studies in Public Welfare, Paper No. 1*, a study prepared for the use of the Subcommittee on Fiscal Policy, Joint Economic Committee, U.S. Government Printing Office, Washington, Apr. 10, 1972, p. 26.
[51] The Federal Government shares medicaid expenses of States whose standard is no higher than 133⅓ percent of AFDC payment standards.

apparently do not follow public assistance rules in order to determine medicaid eligibility for most of those not receiving public assistance.[52]

The impact of medicaid on public assistance recipients from the standpoint of benefit reduction rates is simple. The income received from any source that reduces public assistance payments from a small dollar amount to zero results in a much higher benefit reduction than the loss of public assistance payments. For many, the increased income that removes a family from the public assistance rolls casuses a large loss in total income because of the elimination of medicaid benefits. This is another example of a notch.

Medicaid recipients not on public assistance find that all income sources other than in-kind benefits are subject to the same benefit reduction treatment, For those in the second group of recipients noted above, those falling under an allowable category other than public assistance, there is a notch rather than a gradual reduction in benefits with a rise in income. As gross income rises $1 above the public assistance payment maximum for a family of the appropriate size, medicaid benefits vanish entirely. A decline in gross income to the maximum payment level restores the full medicaid benefits. This treatment applies only to those in the second group who are not eligible to move into the third group, the medically needy.

Benefit reduction rules applying to the medically needy also treat all income sources (other than in-kind income) in the same way. However, most medically needy families would be affected by a more gradual decline in benefits with income rather than the sudden cutoff faced by the other two groups. Medically needy families with gross incomes less than $133\frac{1}{3}$ percent of the maximum public assistance are fully reimbursed for all covered medical expenses while their income is within the range from zero to $133\frac{1}{3}$ percent times the maximum grant. As income rises above this high point, medicaid reimburses only a portion of covered expenses. The amount reimbursed is the difference between total expenses and "excess income," where excess income is the amount by which gross income exceeds $133\frac{1}{3}$ percent times the maximum grant. This policy implies a 100-percent benefit reduction rate on all income sources within the range of (a) $133\frac{1}{3}$ percent of the maximum grant and (b) the amount in (a) plus medical expenses. For example, suppose $133\frac{1}{3}$ percent of the monthly maximum grant is $400. A family with earnings of $450 and medical expenses of $125 will be eligible for $75 of medical expense reimbursement after it spends $50 on medical costs.[53] An increase of up to $75 of earnings lowers the medicaid payment and raises the family's medical expenses $1 for each $1 of added earnings. Thus, added earnings would mean no added spendable income.

B. Uses of Income

The relation between medicaid benefits and uses of income differs among types of recipients. For medicaid beneficiaries who are also

[52] This statement is not based on hard evidence about actual State practices but on informal statements by those familiar with local practices. One such practice is to calculate the potential medicaid recipient's income without deducting work expenses.

[53] These provisions make the program difficult to administer. Eligibility determination requires information on when the medical costs were incurred, when payments were made, and when income was earned.

public assistance recipients, uses of income affect medicaid benefits only to the extent that such uses affect continued presence on the public assistance rolls. The reader may consult sections II and III to see how work expenses, housing expenditures, and savings influence public assistance payments.[54] A change in any use of income may have only a gradual effect on reducing public assistance payments to zero but may have a sudden effect on medicaid benefits.

The second group consist of those outside the public assistance categories. The only use of income that could affect their medicaid benefit is savings. As in the case of other programs, families with assets above some specified level are ineligible for benefits. The result in some cases is to impose a large benefit reduction for savings. A dollar of savings can push assets above the specified asset maximum and prevent a family from receiving any medicaid benefits. This sudden benefit reduction is another example of a notch. This treatment provides a strong incentive to misreport assets.

Medicaid recipients in the third group, the medically needy, are also subject to the benefit reduction notch associated with added savings. The other use of income affecting benefit levels for some of this group is medical expenses. If gross income of a medically needy family is below 133⅓ percent times the maximum grant, medicaid pays for all covered medical expenses. Suppose gross income rises above 1.33 times the maximum payment by $100. Then medical expenses up to $100 will not affect medicaid benefits. Benefits would remain at zero. As medical expenses exceed $100, medicaid benefits fully reimburse medical expenses above $100. This implies a 100 percent credit on medical expenses above a certain point. In most cases the credit pertains only to allowable medical expenses as specified by the State. However, in at least one State medicaid may reimburse families for other types of medical expenses.[55]

X. Benefit Reductions and the System of Public Transfers

Recipients of public transfer programs generally face more severe benefit reduction rates than the previous eight sections suggest. Although the sections above demonstrate how benefits from a single program decline with the recipient's income, many families receive benefits from more than one program.[56] These families often find that increased income reduces benefits in more than one program, thereby resulting in a total benefit reduction that is larger than the individual program benefit reductions. For example, while an added dollar of earnings would cause an AFDC recipient to lose 67 cents in AFDC payments and would cause a food stamp recipient to lose 30 cents in food stamp benefits, the effect of the added dollar earned on families receiving both AFDC and food stamps is a 77 cent benefit reduction.[57]

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[54] Apparently, some States do not follow Federal law requiring the deduction of work expenses from earnings to determine eligibility for medicaid.

[55] The reimbursement can occur because the State allows families to deduct nonallowable medical expenses from their gross income. This deduction may reduce excess income which raises the medicaid payment for allowable medical expenses.

[56] See Storey, op. cit., pp. 26–27, for estimates of the incidence of multiple benefits.

[57] The cumulative benefit reduction is less than the sum of individual reductions because food stamp prices depend on income of recipient including all transfer income.

54

This section examines the complex way in which many program combinations affect benefit reductions. Given the fact that most families benefit from a mix of programs and not one program in isolation, the analysis adds realism to the discussion of work incentives, equity, and program linkage issues.

Determining the financial effect of program combinations on families requires a working defintion of income. Total net income, defined as income less taxes and work expenses plus transfers, is the concept used here. Total net income represents the flow per period of cash and goods-in-kind available for consumption.[58]

Some simplification is necessary to illustrate the impact of program combinations. First, the discussion excludes many programs and combinations of programs. Second, the precise effects of programs have been calculated for only two States despite the fact that recipients confront somewhat different situations in each State. Third, we use a common 1-month accounting period for all programs. Fourth, we derive cash values for in-kind benefits based on simple assumptions.[59] Fifth, we ignore asset tests and other nonincome eligibility rules. Finally, we assume that administrators and caseworkers follow the appropriate laws and regulations and that recipients accurately and promptly report their incomes.

The assumption of a 1-month accounting period simplifies the analysis considerably at the cost of diverting attention from some incentive effects. To the extent that public transfers use short accounting periods, recipients have a large financial incentive to concentrate their earnings in particular periods and a disincentive to maintain a stable earnings pattern. Short accounting periods also may discourage savings because of benefits available to cover temporary income deficiencies and because too much savings may produce high enough asset levels to disqualify the recipient. Some program combinations utilize short accounting periods more than others and, therefore, produce larger incentive effects on work and savings. Those programs with short accounting periods are unemployment insurance, food stamps, social security, and all the public assistance programs (AFDC, OAA, APTD, AB, and GA). Accounting periods are longer under the tax laws, public housing, medicaid, and veterans pensions.

The simple assumptions concerning the value of in-kind benefits may be inaccurate and somewhat misleading. Unfortunately, there is no easy way around this problem. The assumed value of the medicaid benefit probably has the largest margin of error, followed by the assumed value of public housing. The assumed value of food stamps is probably most accurate given that food stamps are most similar to cash. If the assumed values of in-kind benefits are overestimates of actual values, then some guarantee levels and benefit reductions over some income ranges are also overestimates.

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[58] This net income figure excludes leisure which is, of course, an important element in any family's economic welfare.
[59] Food stamp benefits equal the cash value of the maximum number of stamps a family may purchase less the amount paid by the family. Public housing benefits equal the market rent of an equivalent unit in the area less the family's rental payment. Medicaid benefits equal the average medicaid cost per AFDC family in the appropriate State. This value assigned to medicaid probably exaggerates the actual value to many recipients because in the absence of medicaid, they would have access to other avenues of free medical care such as charity hospitals and neighborhood health centers.

The analysis covers programs relevant to three kinds of families. These are: (1) an elderly couple over age 65; (2) a non-aged mother with three children; and (3) a non-aged husband and wife with two children. Each type of family is eligible for various transfer benefits depending on its current gross and net income, its earnings history and veteran status, and its State of residence. The calculations below highlight the relationship between current income and combined program benefits, given assumptions· about other family characteristics. Although the precise figures that appear apply only to residents of New Jersey and Tennessee, the pattern in most other States is similar to one of the two displayed below.

Tables 8 through 13 show the effects of gross earnings, property income, taxes, work expenses, and transfers on total net income. There are two State tables for each of three types of families. The tables demonstrate (1) how total net income changes with changes in gross earnings, given participation in a particular set of transfer programs; (2) how total net income changes with changes in property income given participation in a particular set of transfer programs; and (3) how total net income changes with participation in transfer programs, given a particular level of gross earnings or of property income.

For any given transfer program or set of programs listed below row (4), the reader may see the changes in total net income associated with a rise in gross earnings (assuming zero property income) or with a rise in property income (assuming zero gross earnings) by starting in the first column and reading across the appropriate row. In table 8, ·column (9) illustrates for an aged couple in New Jersey receiving a veterans pension and social security that total net income rises by only $30 per month ($254 to $284) as monthly gross earnings rise from zero to $300 per month. An equivalent rise from zero to $300 in property income would raise total net income of this aged couple from $254 to $440, or by $186. Note that as earnings and property income grow, the family's transfer benefits may fall to zero. Thus, ·comparing row (4) with row (9), columns (5) and (6) show that the .aged couple receives no VP or OASI benefits at $400 or $500 of .monthly earnings.

TABLE 8.—*Effects of gross earnings, property income, taxes, and public transfers on total income of married couple, age 65 or over, living in New Jersey*

	Monthly gross earnings						Monthly property income		
	$0	$100	$200	$300	$400	$500	$100	$200	$300
(1) Gross income, before taxes and transfers_____	$0	$100	$200	$300	$400	$500	$100	$200	$300
(2) (1) Less personal income and social security taxes__	0	95	190	284	374	454	100	200	300
(3) (2) Less work expenses= .10 gross earnings_____	0	85	170	254	334	404	100	200	300
(4) Net income before transfers__	0	85	170	254	334	404	100	200	300
TOTAL NET INCOME [1] OF THOSE RECEIVING THE FOLLOWING TRANSFERS									
(5) Old-age assistance_____	222	222	222	254	334	404	222	222	300
(6) Old-age and survivors insurance_____	140	225	280	284	334	404	240	340	440
(7) Old-age assistance and old-age and survivors insurance_____	222	225	280	284	334	404	240	340	440

(8) Veterans pension	140	208	257	297	334	404	223	287	343
(9) Veterans pension and old-age and survivors insurance	254	303	323	284	334	404	317	340	440
(10) Food stamps	64	149	213	274	334	404	164	233	300
(11) Food stamps and old-age assistance	250	250	250	274	334	404	250	250	300
(12) Food stamps and old-age and survivors insurance	186	253	300	304	334	404	268	340	440
(13) Public housing	130	193	255	317	374	422	207	285	363
(14) Public housing and old-age assistance	302	299	295	317	374	422	302	302	363
(15) Public housing and old-age and survivors insurance	238	304	347	350	389	439	316	393	471
(16) Public housing and food stamps	194	242	277	317	374	422	248	305	363
(17) Public housing, food stamps, and old-age and survivors insurance	268	324	347	350	389	439	336	393	471
(18) Public housing, food stamps, and old-age assistance	322	319	315	317	374	422	322	322	363

[1] Total net income equals gross income less taxes and work expenses plus transfers.

NOTE.—It is assumed that those not receiving public housing benefits pay the market rent, which in this table equals $180.

Source: Computed by author from information in *Handbook of Public Transfer Programs.* Information on the market value of public housing unit supplied by Department of Housing and Urban Development to the subcommittee.

TABLE 9.—*Effects of gross earnings, property income, taxes, and public transfers on total income of married couples, age 65 or over, living in Tennessee*

	Monthly gross earnings						Monthly property income		
	$0	$100	$200	$300	$400	$500	$100	$200	$300
(1) Gross income, before taxes and transfers_____	$0	$100	$200	$300	$400	$500	$100	$200	$200
(2) (1) Less personal income and social security taxes_____	0	95	190	284	374	454	100	200	300
(3) (2) Less work expenses= 0.10 gross earnings_____	0	85	170	254	334	404	100	200	300
(4) Net income before transfers__	0	85	170	254	334	404	100	200	300
TOTAL NET INCOME [1] OF THOSE RECEIVING THE FOLLOWING TRANSFERS									
(5) Old-age assistance_____	142	142	170	254	334	404	142	200	300
(6) Old-age, and survivors insurance_____	140	225	280	284	334	404	240	340	440
(7) Old-age assistance and old-age survivors insurance_____	142	225	280	284	334	404	240	340	440
(8) Veterans pensions_____	140	208	257	297	334	404	223	287	343

(9) Veterans pensions and old-age survivors insurance____	254	303	323	284	334	404	317	340	440
(10) Food stamps_____	64	145	200	254	334	404	154	220	300
(11) Food stamps and old-age assistance_____	183	183	200	254	334	404	183	220	300
(12) Food stamps and old-age and survivors insurance___	181	245	280	284	334	404	260	340	440
(13) Public housing_____	80	137	205	266	334	404	157	235	312
(14) Public housing and old-age assistance_____	189	187	205	254	334	404	189	235	312
(15) Public housing and old-age and survivors insurance_____	188	251	290	290	334	404	266	343	440
(16) Public housing and food stamps_____	144	183	227	266	334	404	198	255	312
(17) Public housing, food stamps, and old age and survivors insurance_____	218	271	290	290	334	404	286	343	440
(18) Public housing, food stamps, and old-age assistance_____	218	218	227	266	334	404	218	255	312

[1] Total net income equals gross income less taxes and work expenses plus transfers.

Source: Same as table 8.

NOTE.—It is assumed that those not receiving public housing benefits pay the market rent which in this table equals $80.

TABLE 10.—*Effects of gross earnings, property income, taxes, and public transfers on total income of a mother with 3 children living in New Jersey*

	Monthly gross earnings												Monthly property income		
	$0	$100	$200	$300	$400	$500	$600	$700	$800	$900	$1,000	$1,100	$100	$200	$300
(1) Gross income, before taxes and transfers	$0	$100	$200	$300	$100	$500	$300	$700	$800	$900	$1,000	$1,100	$100	$200	$300
(2) (1) Less personal income and social security taxes [1]	0	95	190	284	374	454	532	607	685	765	843	920	100	200	300
(3) (2) Less work expenses [2]	0	75	150	224	294	354	422	487	555	625	693	760	100	200	300
(4) Net income before transfers	0	75	150	224	294	354	422	487	555	625	693	760	100	200	300
TOTAL NET INCOME [3] OF THOSE RECEIVING THE FOLLOWING TRANSFERS															
(5) Aid to families with dependent children	324	377	411	444	477	511	544	577	611	644	693	760	324	324	324
(6) Old-age and survivors insurance	200	275	350	424	494	554	622	687	755	825	893	960	300	400	500
(7) Aid to families with dependent children and old-age and survivors insurance	324	377	411	444	494	554	622	687	755	825	893	960	324	400	500
(8) Unemployment insurance	304	339	314	288	294	354	422	487	555	625	693	760	404	504	604
(9) Aid to families with dependent children and unemployment insurance	324	377	411	444	477	511	544	577	611	644	693	760	404	504	604
(10) Veterans pension, survivor benefits	138	207	260	301	370	430	498	563	631	701	769	836	232	310	377
(11) Veterans pension, and old-age and survivors insurance	322	360	426	500	570	630	698	763	831	901	969	1,036	385	476	576
(12) Food stamps	112	187	255	299	341	380	422	487	555	625	693	760	212	284	347
(13) Food stamps and aid to families with dependent children	359	403	435	468	501	535	568	601	634	668	693	760	359	359	359
(14) Public housing	150	223	276	329	378	417	462	505	555	625	693	760	245	321	398
(15) Public housing and aid to families with dependent children	416	452	475	497	517	536	555	577	611	644	693	760	416	416	416
(16) Public housing, food stamps, and aid to families with dependent children	442	476	499	521	541	560	579	601	634	668	693	760	442	442	442
(17) Medicaid	52	127	202	276	346	406	474	539	607	677	693	760	152	252	352
(18) Medicaid, aid to families with dependent children and food stamps	411	455	487	520	553	587	620	653	686	720	693	760	411	411	411
(19) Medicaid, aid to families with dependent children, food stamps, and public housing	494	504	551	573	593	612	631	653	686	720	693	760	494	494	494

[1] Personal income tax payments may be higher for families receiving survivors insurance benefits. The mother may not be able to claim exemptions for her children because most of the financial support comes from direct social security payments to the child rather than from the mother's income.

[2] Work expenses equal 20 percent of gross earnings up to $500 plus 10 percent of gross earnings in excess of $500.

[3] Total net income equals gross income less taxes and work expenses plus transfers.

NOTE.—It is assumed that those not receiving public housing benefits pay the market rent, which in this table equals $150.

Source: Same as table 8; and memorandum from Department of Health, Education, and Welfare providing average medicaid costs per AFDC family by State.

TABLE 11.—*Effects of gross earnings, property income, taxes, and public transfers on total income of a mother with 3 children living in Tennessee*

	Monthly gross earnings									Monthly property income		
	$0	$100	$200	$300	$400	$500	$600	$700	$800	$100	$200	$300
(1) Gross income, before taxes and transfers	$0	$100	$200	$300	$400	$500	$600	$700	$800	$100	$200	$300
(2) (1) Less personal income and social security taxes [1]	0	95	190	284	374	454	532	607	685	100	200	300
(3) (2) Less work expenses [2]	0	75	150	224	294	354	422	487	555	100	200	300
(4) Net income before transfers	0	75	150	224	294	354	422	487	555	100	200	300

TOTAL NET INCOME [3] OF THOSE RECEIVING THE FOLLOWING TRANSFERS

	$0	$100	$200	$300	$400	$500	$600	$700	$800	$100	$200	$300
(5) Aid to families with dependent children	129	204	279	337	370	404	437	487	555	217	217	300
(6) Old-age and survivors insurance	200	275	350	424	494	554	622	687	755	300	400	500
(7) Aid to families with dependent children and old-age and survivors insurance	217	275	350	424	494	554	622	687	755	300	400	500
(8) Unemployment insurance	220	215	190	224	294	354	422	487	555	320	420	520
(9) Aid to families with dependent children and unemployment insurance	220	270	304	337	370	404	437	487	555	520	420	520
(10) Veterans pension, survivor benefits	138	207	260	301	370	430	498	563	631	232	310	377
(11) Veterans pension and old-age and survivors insurance	322	360	426	500	570	630	698	763	831	385	476	576
(12) Food stamps	112	187	237	283	329	380	422	487	555	208	271	330
(13) Food stamps and aid to families with dependent children	228	275	320	363	394	428	461	487	555	282	282	330
(14) Public housing	100	173	226	279	327	367	422	487	555	195	271	348
(15) Public housing and aid to families with dependent children	217	271	324	365	386	404	437	487	555	284	284	348
(16) Public housing, food stamps, and aid to families with dependent children	298	330	359	391	410	428	461	487	555	337	337	378
(17) Medicaid	25	100	175	249	319	379	447	487	555	125	225	325
(18) Medicaid, aid to families with dependent children, and food stamps	253	300	345	388	419	453	486	487	555	307	307	355
(19) Medicaid, aid to families with dependent children, food stamps, and public housing	323	355	384	416	435	453	486	487	555	362	362	403

[1] See table 10, footnote 1.
[2] See table 10, footnote 2.
[3] Total net income equals gross income less taxes and work expenses plus transfers.

NOTE.—It is assumed that those not receiving public housing benefits pay the market rent, which in this table equals $100.

Source: Same as table 10.

61

TABLE 12.—*Effects of gross earnings, property income, taxes, and public transfers on total income of a nonaged husband, wife, and 2 children in New Jersey*

	Monthly gross earnings								Monthly property income		
	$0	$100	$200	$300	$400	$500	$600	$700	$100	$200	$300
(1) Gross income before taxes and transfers	$0	$100	$200	$300	$400	$500	$600	$700	$100	$200	$300
(2) (1) Less personal income and social security taxes	0	95	190	284	373	454	533	610	100	200	300
(3) (2) Less work expenses	0	85	170	254	333	404	478	550	100	200	300
(4) Net income before transfers	0	85	170	254	333	404	478	550	100	200	300
TOTAL NET INCOME [1] OF THOSE RECEIVING THE FOLLOWING TRANSFERS											
(5) Unemployment insurance	304	349	334	318	333	404	478	550	404	504	604
(6) Food stamps	112	197	266	319	363	404	478	550	212	284	347
(7) Unemployment insurance plus food stamps	351	379	364	353	363	404	478	550	428	504	604
(8) Public housing	150	224	285	345	400	448	498	550	239	315	391
(9) Unemployment insurance plus public housing	394	425	410	394	400	448	498	550	471	547	623
(10) Public housing plus food stamps	262	317	350	387	427	448	498	550	326	374	421
(11) Public housing, food stamps, and unemployment insurance	424	451	436	420	427	448	498	550	471	547	623
(12) General assistance [2]	216	274	293	310	333	404	478	550	216	216	300
(13) General assistance and food stamps	294	333	340	351	363	404	478	550	294	294	347
(14) General assistance, food stamps, and public housing	380	403	409	414	427	448	498	550	380	380	421
(15) General assistance, food stamps, public housing, and medicaid	432	454	462	465	427	448	498	550	432	432	421
(16) General assistance, food stamps, and medicaid	346	385	392	403	363	404	478	550	346	346	347

[1] Total net income equals gross income less taxes and work expenses plus transfers.
[2] In New Jersey, general assistance provides $216 to a family of 4 with no other income. The benefit declines 67 cents for each dollar of gross earnings above $60 per month and declines $1 for each dollar of unearned income. This program in New Jersey is called "Aid to Families of the Working Poor (AFWP)."

Note.—It is assumed that those not receiving public housing benefits pay the market rent for housing, which in this table equals $150. Work expenses equal 10 percent of gross earnings up to $500 plus 5 percent of gross earnings in excess of $500.

Source: Same as table 10; and communication from the State of New Jersey.

TABLE 13.—*Effects of gross earnings, property income, taxes, and public transfers on total income of a nonaged husband, wife, and 2 children in Tennessee*

	Monthly gross earnings						Monthly property income		
	$0	$100	$200	$300	$400	$500	$100	$200	$300
(1) Gross income, before taxes and transfers_____	$0	$100	$200	$300	$400	$500	$100	$200	$300
(2) (1) Less personal income and social security taxes_	0	95	190	284	373	454	100	200	300
(3) (2) Less work expenses =.10 gross earnings_____	0	85	170	254	333	404	100	200	300
(4) Net income before transfers_____	0	85	170	254	333	404	100	200	300
TOTAL NET INCOME [1] OF THOSE RECEIVING THE FOLLOWING TRANSFERS									
(5) Unemployment insurance_____	220	225	210	254	333	404	320	420	520
(6) Food stamps_____	112	197	251	301	359	404	208	271	330
(7) Unemployment insurance and food stamps_____	285	284	275	301	359	404	346	420	520
(8) Public housing_____	100	174	235	295	351	404	188	265	341
(9) Unemployment insurance and public housing____	280	281	266	295	351	404	357	433	520
(10) Public housing and food stamps_____	212	267	300	337	377	404	276	324	371
(11) Public housing, food stamps, and unemployment insurance_____	334	334	319	337	377	404	383	433	520
(12) General assistance [2] _____									

[1] Total net income equals gross income less taxes and work expenses plus transfers.
[2] General assistance is typically available only on an emergency basis.

NOTE.—It is assumed that those not receiving public housing benefits pay the market rent for housing, which in this table equals $100.

Source: Same as table 8; and Department of Health, Education, and Welfare, Social and Rehabilitation Service, *Characteristics of General Assistance in the United States as of 1969* (Report 39).

Each column represents the total net income available to a family at a particular earnings or property income level but with participation in different sets of transfer programs. Reading down column (1) in table 8, one finds that while social security benefits do not increase the total net income of OAA recipients (row (5) to row (7)), food stamp benefits do raise income by $28 per month (row (5) to row (11)). To see that the value of an additional transfer program varies with the monthly earnings level, compare movements down one column with movements down another. For example, note in table 9 that a veteran's pension adds $114 to total net income of a social security recipient with zero earnings (column 1, row (6) and row (9)), but adds nothing to the social security recipient with $300 of earnings (column 4, row (6) and row (9)).

Space does not permit a detailed discussion of the large amount of information contained in these tables. The purpose here is to highlight some of the benefit reduction rates on earnings, on property income, and on other transfer income and to point our the implications of the benefit structure for work incentives and horizontal equity.

A. Benefit Reductions and Work Incentives

The primary concern about high benefit reduction rates is their effect on work incentives. Sections II–VIII show how increases in earnings reduce benefits in individual programs, thereby decreasing the financial gain from work. The purpose here is to compare work incentive effects resulting from the various individual programs and to examine the work incentive effects resulting from different combinations of programs.

The measure of work incentives is the change in total net income associated with a change in gross earnings. This criterion measures the net gain in potential consumption available to the worker's family.[60] Some authors focus on the effect of gross earnings on benefit levels. This benefit reduction criterion is not appropriate for judging work incentives because it ignores taxes and work expenses associated with work effort. However, the benefit reduction criterion is appropriate for estimating the impact of gross earnings on program expenditures.

Explicit consideration of work expenses and taxes is necessary even at low earning levels. Work expenses, social security taxes, and some State and local income taxes all begin with the first dollar of earnings. The Federal personal income tax does not affect these families until monthly income reaches about $360 for a family of four. The estimates of work expenses used in tables 8–13 are to some extent arbitrary, but err on the low side, if at all. In general, the tables assume that work expenses are a fixed percentage of monthly gross earnings. This assumption is reasonable if the increases in gross earnings are considered as the result of increases in hours worked rather than as the result of increases in wage rates.[61] The percentage assumed for

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[60] As noted above, total net income assigns no dollar value to leisure. Thus, the net benefits from increased earnings and decreased transfers measured by total net income may overstate the total gain in economic welfare. On the other hand, ignoring stigma effects associated with receipt of welfare may bias the measure in the other direction.

[61] Work expenses assumed are 10 percent of monthly gross earnings for male and for aged family heads. Work expenses of female heads are 20 percent of gross earnings up to $500 plus 10 percent of gross earnings above $500.

female family heads is much higher than that assumed for aged or for male heads largely because of the substantial costs associated with child care. The tax payments appearing in these tables understate tax payments in most States since New Jersey and Tennessee have no general State income tax. Taxes and work expenses alone lower the net return from increases in gross earnings by 15–30 percent. In many cases these reductions add to already high benefit reduction rates and prevent workers from gaining much from increased gross earnings. The existence of payroll taxes and work expenses also means that net income before transfers rises more slowly with gross earnings than with property income.[62]

The examination of individual programs brings out a number of factors influencing work incentive differences. One factor is the wide differences in the initial amount of gross earnings not subject to any benefit reductions. Social security retirement benefits do not begin declining until gross earnings of $140 per month; the comparable figure for AFDC is at least $60 and it can run higher in States with maximums. Table 8 or 9, row (6) and table 11, row (5) show these disregards. On the other hand, OAA and UI benefits fall rapidly and almost immediately with gross earnings.

A second program difference concerns the treatment of work expenses. OASI, UI, veterans pensions, and public housing do not allow work expense deductions from the earnings level used to compute benefits. As a result the net gain from gross earnings to workers receiving these benefits is lower than would be the case with such deductions. Alternatively, food stamps, OAA, and AFDC all permit higher net gains from gross earnings than otherwise because of their work expense deduction. AFDC rules are especially liberal, providing credits or full reimbursement for allowable work expenses.[63] This treatment is in large part the reason AFDC mothers may earn fairly high salaries and remain on AFDC. Note in table 3, row (5), that a New Jersey mother of three may continue as an AFDC recipient with a $19 monthly grant despite gross earnings of $900 per month.[64]

As a result of differential benefit reduction rules, there is often no easy way to judge the generosity of different programs. Some programs that appear generous because of high payments to those with zero nontransfer income cease to be so when we consider beneficiaries with even small amounts of earnings. Compare in table 11, rows (5) and (8), unemployment insurance with AFDC in Tennessee. The UI maximum is worth almost $100 more to those with no earnings than the low AFDC maximum payment. However, the gap is nearly erased at $100 a month of gross earnings, and at $200 a month AFDC becomes more valuable than UI by $80 per month. A similar pattern occurs in New Jersey when one compares OAA with veterans pensions in table 8 and UI with general assistance in table 12. For the aged couple, the initial OAA advantage over veterans pensions of $82 per month falls to $16 per month at $100 of monthly gross earnings and becomes a disadvantage at $200 of gross earnings. The New Jersey father entitled to the maximum UI payment finds his UI

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[62] We assume property income accrues through sources that are costless in terms of current expenses. Prime examples are dividends and interest.

[63] State policies vary considerably with respect to the type and amount of work expenses credited.

[64] In this example, personal and social security taxes equal $135 and other allowable work expenses equal $140.

rights are worth $88 per month if he is fully unemployed, but only $41 per month if he can obtain employment paying $200 per month. The differential between UI and GA recipients is even smaller at $300 of monthly earnings and if the UI beneficiary is entitled to less than the UI maximum.[65]

Combinations of programs add to work incentive problems in two important ways. First, benefit reduction rates increase. An extra dollar of earnings often causes benefit losses from each transfer pro- gram. Generally the total benefit reduction rate from combinations of programs is greater than the benefit reduction rate from any com- ponent program but smaller than the sum of individual program rates. For example, consider the benefit reductions in food stamps or public housing as gross earnings of male-headed families rise from $200 to $300 per month. The $100 gain in gross earnings means a $31 benefit reduction ($34 in Tennessee) to the food stamp recipient and a $24 benefit reduction to the public housing recipient. The sum of the individual program reductions, $55 in New Jersey and $58 in Ten- nessee, is greater than the actual combined benefit reduction of $47 affecting recipients of both programs. Note in tables 12 and 13, row (10) that the net return to the worker after taxes, work expenses, and benefit reductions is only $33.

In a number of cases, combined benefit reductions can create abso- lute declines or very low increases in net income with a $100 increase in gross earnings. Tables 8 and 9, row (9) illustrates that recipients of OASI and veterans pensions actually lose $19 in total net income as their gross earnings rise from $100 to $300. The New Jersey recipient of general assistance and food stamps retains only $11 to $12 of increases in gross earnings from $200 to $300 or from $300 to $400. The AFDC mother in New Jersey who lives in public housing would raise her total net income only by about $19 to $22 for each $100 of increased gross earnings in the $200 to $500 range. These are a few of the many cases in which receipt of benefits from a second or third program reduces the marginal return for increased work effort.

Combinations of programs may also reduce work incentives by raising the total benefits available to families with no other income. The higher income guarantee may induce reduction in work effort partly because work is less attractive relative to other activities when unearned income is high enough to provide for a family's basic needs. Much more importantly, a high income guarantee coupled with high benefit reduction rates leads to low net returns over wide ranges of earnings. Stated differently, given high benefit reduction rates, the higher the guarantee is, the higher the salary has to be before a full- time job becomes attractive financially. A New Jersey man who is fully unemployed and whose family receives general assistance, food stamps, public housing, and medicaid would find a $500 per month job virtually worthless in terms of increased net income. However, if he faced similar benefit reduction rates while receiving only general assistance, the $500 monthly job would add about $200 to net income.

To the recipient under a single program, the poor work incentives apply only to low ranges of gross earnings. After a small amount of

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[65] In some States with AFDC–UF, male workers receiving UI fare even more poorly relative to those receiving public assistance. The absolute dollar advantage of AFDC–UF over UI is largest for those with partial employment of less than 100 hours per month.

earnings would reduce benefit levels to zero, normal market incentives would prevail. The higher guarantee often brought about by multiple program benefits broadens the earnings range over which benefit reductions occur and net gains from increased earnings remain far lower than net gains to nonrecipients. The New Jersey mother of three children receiving multiple benefits is subject to benefit reductions throughout the 0–$1,000 per month range. Moving from no work at all to a job paying $1,000 per month adds only $200 to her net income. This case is extreme but a look through tables 8–13 reveals many other situations in which a full-time job at a moderate wage offers low net gains.[66]

B. Benefit Reductions and Horizontal Equity

Families of similar size and equal pretransfer incomes may receive vastly different treatment under public transfer programs. One reason is the categorical nature of current programs. Program rules limit eligibility to specific subgroups of the poor. A second cause is the benefit reduction rules in many programs. A discussion of many effects of these rules on horizontal equity appears in earlier sections. The purpose here is to summarize how differently families fare under transfer programs if their income is from earnings rather than property and if the family head is female rather than male.

Earnings and property income tend to reduce transfer benefits by different amounts. The nature of these differences depends on the specific program. Some programs allow property income more favorable treatment than earnings while other programs follow the opposite policy. UI and OASI benefits do not decline at all with property income but fall rapidly with earnings. This policy leads to an inequitable result. Workers with equal contributions, equal benefit entitlement, and equal current incomes receive vastly different UI or OASI payments. Of two aged couples entitled to OASI benefits of $140 a month and with the same pretransfer gross incomes of $300 per month, the one with $300 in property income retains the full OASI benefit for a total monthly income of $440 while the one with $300 in gross earnings loses all but $30 of the OASI benefit and ends up with a total monthly income of $284. The source of income is even more important to UI recipients. The workingman in New Jersey who is partially unemployed and earning $300 per month suffers a UI benefit reduction of $240, from $304 to $64, cutting his total net income to $318. His counterpart in terms of UI entitlement who has no earnings but $300 in monthly property income would receive the full $304 UI payment, for a total net income of $604.

In contrast to the policies of two major social insurance programs, some public assistance programs treat property income more stringently than earnings. AFDC benefits decline dollar for dollar with property income while an added dollar of earned income reduces AFDC benefits a maximum of 67 cents. In New Jersey the same applies to general assistance. Aid to the blind (AB) is another public assistance program allowing a more liberal treatment for earnings than for property income. On the other hand, OAA, aid to the permanently and totally disabled, and many general assistance pro-

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[66] The estimates of poor work incentives noted above are partly dependent on the values assigned to in-kind benefits. If recipients place lower values on medicaid and public housing than those assumed above, then the actual financial gain from work would be higher than the amounts noted here.

grams reduce benefits because of income from both property and earnings at the same 100-percent rate (above small disregarded amounts of earned income). It is interesting that social insurance programs, serving those with a demonstrated attachment to the labor force, treat earnings more harshly relative to property income than do public assistance programs, which ostensibly serve those with only a limited attachment to the labor force.

Differences in transfer benefits available to male and female-headed families raise another horizontal equity issue. Strictly speaking, program rules often distinguish between one and two-parent families and not between male and female-headed families. Generally, the effect is the same. In 1970, only 2 percent of male parents were not in husband-wife families while 88 percent of one-parent families were headed by women.[67] Male-headed families are at a disadvantage under public assistance programs relative to female-headed families. In terms of the programs analyzed in this paper, the male family head's primary disadvantage is that he is not nearly as likely to be eligible for AFDC as is a female head. Some 27 States do not provide AFDC–UF, leaving families with two able-bodied parents ineligible. Other factors are that male heads may not receive AFDC–UF while eligible for UI and that the work test in AFDC is more firmly applied to males. In some cases, ineligibility for AFDC causes the loss of other benefits such as medicaid. In other cases, male heads do receive other transfer benefits, thereby reducing benefit differentials between male- and female-headed families.

Differences in guarantee levels and in benefit reduction rates by sex of family head depend on the State and the programs considered. Suppose that the family head is ineligible for UI. Guarantee levels will not differ by sex of head in those States with AFDC–UF.

A generally unequal treatment of male and female-headed families prevails not only for AFDC payments but also for other programs. In States without AFDC–UF, families headed by women are eligible for much higher transfers from AFDC than intact families are for cash payments from general assistance (which in some locations are available to fathers). Food stamps and public housing reduce the transfer payment differentials while medicaid usually widens them, especially in States without AFDC–UF.[68] In Tennessee, families of four headed by women receive a cash payment guarantee of $129 as compared to the zero guarantee level for intact families.[69] If both types of family are in public housing and receive food stamps, the advantage to those with a female head over intact families becomes $297 to $212. Medicaid widens the guarantee differential to $110, $322 as against $212, since intact families are ineligible for medicaid in Tennessee.

The New Jersey situation is exceptional in that there is a Statewide cash general assistance program for intact families but no AFDC–UF program. The general assistance program in New Jersey is very similar to the House-passed family assistance plan contained in H.R. 1. While the GA cash payment guarantee is $108 lower than AFDC, differen-

[67] U.S. Bureau of the Census, Census of Population: 1970, *General Population Characteristics, Final Report PC(1)–B1 United States Summary*, U.S. Government Printing Office, Washington, D.C. 1972, p. 278.

[68] The widening due to medicaid may be small given the existence of avenues of free medical care other than medicaid that are available to male-headed families.

[69] General assistance in Tennessee and in many other States is only an emergency program and does not offer cash aid for continuing maintenance of a family.

tials in the guarantee level from all transfers is only $61, in part because GA recipients in New Jersey qualify automatically for medicaid and food stamps. The total guarantee to an AFDC family of four including the value of medicaid and food stamps is $411, or $65 more than the $346 total guarantee for the GA family of four. As noted above, cash and total guarantees are the same for male- and female-heads in States with AFDC–UF.

Another important program that affects the guarantee available to one and two-parent families is unemployment insurance. Since the head of an intact family is more likely to qualify for UI than is the head of most one-parent families because of a greater attachment to the job market, it is instructive to compare the transfer guarantees of intact families receiving UI with those of female-headed families not eligible for UI. From the point of view of cash payments alone, UI maximum payments are lower than or about the same as AFDC guarantees in States with high welfare standards but much higher than AFDC guarantees in States with low welfare standards. Including other major transfer programs, public housing, food stamps, and medicaid, improves the AFDC family's position relative to the UI family largely because the AFDC family is eligible for medicaid while the UI family is not. In New Jersey, AFDC families of four not in public housing with no nontransfer income would receive $411 worth of benefits compared to $351 worth of benefits available to UI families of the same size and income. In Tennessee, while the maximum cash guarantee to UI families is $220 per month, or $91 more than the AFDC guarantee of $129, the guarantees differ by only $32 when food stamps and medicaid are included. Thus, even when male family heads are eligible for the UI maximum female-headed families may have the advantage in high payment States and near equality in low payment States in terms of the cash and in-kind income guarantees from transfer program combinations.

Horizontal equity between male and female-headed families concerns the transfer differentials by sex of head not only for families with zero nontransfer income but also for families with some nontransfer income. In general, the advantage to female-headed families over male-headed families grows as earnings increase. Another way of looking at the changing differentials is to note that benefits generally decline more rapidly with increased earnings by male heads than with increased earnings by female heads. The larger disincentives to work confronting male heads largely result from the different benefit reduction rates in the cash programs. AFDC benefit reductions are less severe than those in AFDC–UF, in UI, or in most general assistance programs. Although earnings of male heads in AFDC–UF are subject to the same benefit reductions as those of female heads in AFDC, male heads become ineligible for AFDC–UF by working 100 or more hours per month while female heads may work any number of hours and retain eligibility for AFDC. Tables 10–13 illustrate the much higher benefit reduction rates under UI than under AFDC. These occur partly because AFDC recipients, but not UI recipients may deduct work expenses. In New Jersey, an increase in gross earnings from zero to $200 per month reduces UI benefits by $164 but reduces AFDC benefits by only $33. Most general assistance programs also build in larger work disincentives than those present under AFDC. In many cases, GA payments fall by $1 for each $1 of earnings.

Thus, programs primarily designed for intact families, whose members are most easily drawn into the labor force, contain more severe work disincentives than those facing female-headed families. In terms of horizontal equity, these differences in benefit reductions mean that any advantage to female heads generally increases as the earnings level of the male and female heads being compared increases.

XI. Impact of Recently Enacted Legislation

Congress passed and the President signed important amendments to the social security law in October 1972 after the bulk of this paper had been completed.[70] These new amendments, which were a part of H.R. 1,[71] mandate significant changes in the public assistance programs for adults effective January 1974 and changes in old age and survivors insurance effective January 1973. Since all of the preceding sections represent the policies in effect as of September 1972, they do not incorporate any of the recent changes. This section analyzes the impact of the new amendments on benefit reductions facing recipients of adult public assistance, recipients of old age and survivors insurance, and recipients of both. Although the new amendments also affect the linkages between these programs and others, such as veterans pensions, this section does not reexamine them.

The changes in the cash benefit provisions of the two programs are by no means similar in importance. While the amendments alter only a few financial parameters in the OASI program, the adult public assistance programs will undergo complete restructuring. The Federal Government will take over administration of adult public assistance from the States; will compress the aged, blind, and disabled categories into one classification, to provide equal treatment for all three groups; and will set the basic financial parameters, such as the benefit level and the benefit reduction schedule. A full analysis of these changes is well beyond the scope of this paper. The purpose here is to cover only those changes that affect the relationship between benefit levels and income.

A. Supplemental Security Income for the Aged, Blind, and Disabled

Supplemental security income (SSI) is the new Federal program that will replace the present Federal-State public assistance programs for the aged (OAA), blind (AB), and disabled (APTD) on January 1, 1974.[72] The Federal law mandates the basic financial parameters of the new program although States may supplement the Federal payment as long as the supplement provisions apply to all recipients. The discussion begins by examining the basic Federal program; following this explanation is an analysis of the impact of State supplementation.

The Federal income guarantees to aged, blind, or disabled persons with no other income are $130 per month for an individual and $195 per month for a couple. These guarantees exceed the July 1971 State

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[70] The conference report which summarizes the new amendments appears in the Congressional Record, October 14, 1972, pp. H10167–H10186.

[71] A great deal of the H.R. 1 provisions which were passed by the House and which would have affected the AFDC program significantly did not pass the Senate or survive the conference committee.

[72] The new program does not replace current adult programs in Puerto Rico, Guam, or the Virgin Islands. See section III for a discussion of the current OAA, APTD, and AB programs.

maximum payments to aged individuals in 24 States, to disabled individuals in 27 States, and to blind individuals in 25 States. However, these numbers overstate the impact of the Federal program on income guarantees partly because some States would have increased their guarantees by January 1974 above 1971 levels and because individuals eligible for the supplemental security income program will be ineligible for food stamps. Comparing the income guarantee under SSI with the combined guarantee of State maximum payments and food stamp benefits, one finds that the SSI program would raise the income guarantee available to aged couples in 13 States.

Comparisons of guarantees become even more complex when one takes account of medicaid coverage and rent payments. Although the law does not require medicaid coverage for persons newly eligible for SSI payments because of higher income guarantees, States may find exclusions of some SSI recipients on this basis administratively if not politically impossible. If States do provide medicaid coverage to all SSI recipients, then income guarantees will rise for all who would not have been covered under State programs and who will become eligible for SSI payments. This group includes some currently covered by medicare, since medicaid would pay their medical costs not paid by medicare. Added medicaid benefits to such individuals with incomes between current State standards and SSI guarantees may occur in from 22 to 27 States.

Other recipients may gain higher guarantees as a result of a shift from an "as paid" rent policy to the flat payment implicit in the SSI program. In States that guarantee a cash income independent of rent and a variable payment dependent on rent, the cash income of many recipients is lower than the State maximum payment. Since the SSI guarantees are generally independent of rent, the cash guarantee may rise for some of the recipients living in States whose maximum payments exceed the SSI guarantee.

Benefit reduction rates under the new Federal program are generally lower than those under the adult public assistance programs. Income countable for SSI purposes excludes $20 per month of income from any source, an additional $65 per month of gross earnings, and one-half of gross earnings above the other exclusions.[73] The SSI payment is equal to guarantee level minus countable income. Thus, the benefit reduction rates are: (1) zero for the initial $20 from any source in addition to the initial $65 of gross earnings; (2) 100 percent on all unearned income above $20; and (3) 50 percent on gross earnings above $65 or $85. The rates on earnings are a good deal lower than the 100-percent marginal rates that are in effect in the OAA and APTD program over most ranges of earned income and are about the same as the marginal rates facing those now in the AB program. Although the apparent decline for aged and disabled recipients will be from 100 to 50 percent, the actual improvement in work incentives will be less because the OAA and APTD programs now allow work expense deductions while the SSI program will not.[74] Assuming work expenses are 10 percent of gross earnings and increases in social security and income taxes are 10 to 20 percent of increases in gross earnings, the

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[73] Also excluded from countable income are earnings necessary for fulfillment of a plan for self-support. Such a provision currently exists in all State AB programs and in many State APTD programs. See section III.

[74] Blind recipients may continue to deduct work expenses from countable income.

net return on work becomes 20 to 30 percent of the increase in gross earnings instead of the apparent 50 percent. Nevertheless, these benefit reduction rules do provide some limited work incentives to SSI recipients.

Another effect of the SSI program on work incentives is a change to a quarterly accounting period from the current monthly accounting period. The recipient's benefit in a given month will be based on earned and unearned income during a 3-month period. Currently, high earnings in 1 month have no impact on benefits in other months. Thus, the change reduces the incentive to concentrate one's work effort.

The improved work incentives substantially increase the breakeven income level in States currently paying about the median. The breakeven annual income for an OAA couple in a State with the median payment is currently about $2,650. The comparable SSI figure is $5,700 for an aged couple whose only income source is earnings. Actual breakevens under the SSI program will be much lower for most aged couples since they receive some income other than earnings. The breakeven annual income for aged couples with only unearned income is $2,580, or only $240 above the guarantee level of $2,340.

The benefit reduction rates discussed above apply to States which will not supplement SSI. Although the new SSI program does not require States to supplement SSI payments, many States will likely add to the basic SSI grant levels, at least to the point of maintaining current payment levels. While the effects of State supplements on the income guarantee will be important, we are interested here in the relationship between the State supplement, the SSI payment, and nontransfer income. The benefit reductions implicit in State rules on supplementation could more than offset the positive work incentive features in the SSI.

To avoid excessive benefit reduction rates, States would have to include the Federal SSI payment as countable income for purposes of computing the State supplement. Otherwise, the benefit reduction rate facing recipients will be the sum of the SSI rate and the State supplement rate. For example, each dollar of added earnings, might reduce the State supplement by 50 cents. This 50-cent reduction, along with a 50-cent reduction in the SSI payment, implies a 100-percent rate on earnings. Any addition to the SSI benefit reduction rate on unearned income would imply a combined benefit reduction rate of over 100 percent. On the other hand, if the SSI payment were included as countable income, benefit reduction rates on State supplements would have a less severe effect on the combined rate facing a recipient. A 50-percent rate on the State supplement would increase the combined rate on earnings to 75 percent and would not change the combined rate on unearned income.

The break-even income would also rise in States providing supplements. However, the extent of the increase depends on the size of the State supplement and on State rules regarding benefit reductions. At the very least, the break-even income level will equal the SSI break-even for those with only earned income and exceed the SSI break-even by the size of the State supplement for those with only unearned income.[75]

[75] If the State supplement is constant until the recipient's SSI payment falls to zero but declines $1 for each added dollar of income, then the break-even income equals the SSI break-even plus the State supplement.

Benefit reductions with respect to uses of income will also differ somewhat in the SSI program from those under current adult public assistance programs. First, the SSI program generally eliminates the negative tax on housing expenditures noted above.[76] Instead of paying recipients an amount that could rise dollar for dollar with an increase in rent, the SSI program pays recipients a flat amount independent of rent. This new policy will be especially helpful to many aged recipients who are homeowners and currently receiving a good deal less than the rent maximums. Second, the asset tests are standard throughout the country, replacing the widely differing tests by States. The maximum asset levels allowable are $1,500 for an individual and $2,200 for a couple. These asset limitations do not include the value of the home, household possessions, and life insurance whose face value is less than $1,500. These limitations are generally more liberal than those under current State policies. As a result, the new assets are less of a discouragement to savings. However, the SSI limitation continues to encourage the shift from financial assets to physical assets.

B. Old-Age and Survivors Insurance

The Social Security Amendments of 1972 included provisions changing the benefit reduction rates facing OASI recipients.[77] The most important provision is the liberalization of the retirement test; that is, a decline in the benefit reduction rates applied to earnings. These lower rates affect all OASI retirees and survivors below age 72.

Effective January 1973, OASI recipients under 72 may earn up to $2,100 without suffering any reduction in benefits. Above $2,100, each dollar of gross earnings reduces OASI benefits by 50 cents. Under the current rules, OASI benefits do not decline until gross earnings exceed $1,680; thereafter benefits decline 50 cents for each dollar of gross earnings between $1,680 and $2,880, and decline a full dollar for each dollar of gross earnings above $2,880. In addition to the change in the effect on annual earnings on OASI benefits, the new amendments also increase from $140 to $175 the monthly amount of earnings allowed before any OASI benefit reductions are made. This liberalization constitutes a significant improvement in the incentive to work for many elderly persons.

The discussion in section V noted that one effect of the monthly disregards is to impose the largest OASI benefit reductions on those with earnings spread most evenly through the year. By concentrating his annual earnings in a few months, the OASI recipient may suffer lower benefit reductions. Another point discussed above is that the OASI monthly disregards produce notches in total income. With the 140th dollar earned in a month (after reaching $1,680 or $2,880), benefits decline by $70 or $140. Under the new rules, the 175th dollar earned in a month after annual earnings exceed $2,100 reduces benefits by $87.50. Thus, the disincentive to earn more than $175 will remain severe in those months after annual earnings exceed $2,100. A rise in gross earnings from $175 per month to $500 per month would yield a

[76] There remains a provision which reduces the SSI payment by one-third to those who live in another person's household without paying a reasonable amount as rent. Such a provision is easily avoided by intrahousehold arrangements allowing the recipient to claim payment of rent without actually making the payment.

[77] See sec. V for a discussion of current OASI rules concerning benefit reduction rates.

net gain of only $75 after OASI benefit reductions [78] and virtually a zero net gain after added work expenses, social security taxes, and Federal and State income taxes are deducted. Although Congress intended that OASI recipients face a maximum benefit reductic n of 50 percent, many working recipients will be subject to reductions in monthly benefits that are much higher than the 50 percent benefit reduction rate.

In addition to the immediate increase in exempt earnings from $1,680 to $2,100, the increases in the exempt amount will depend on the percentage increase in first quarter average earnings reported to the Social Security Administration. The amount recipients may earn in 1975 without penalty will be the ratio of first quarter average earnings in 1974 to first quarter average earnings in 1973 times $2,100.[79] The use of first quarter rather than annual earnings means that the automatic increases largely will reflect percentage increases in money wages [80] and not increases in the maximum annual earnings subject to social security taxes.[81]

Another new amendment affecting work incentives of OASI recipients is the credit for delaying retirement. Retirees above 65 will receive an increase in grant levels of one-twelfth of 1 percent for each month in which earnings reduce benefit levels to zero. The future benefit from an entire year in which OASI benefits are zero is a 1 percent increase in grant levels. This new credit for months of zero OASI benefits extends to those over age 65 a policy currently in effect for those retirees and survivors who draw early benefits. As noted in section V, grant levels of these younger OASI recipients rise for each month in which earnings reduce benefit levels to zero.

C. The 1972 Amendments and Social Security—Public Assistance Linkages

The recent controversy over the fact that increased social security payments did not help many of the poorest OASI recipients illustrates that different programs for the aged are often closely related. This section examines how the new amendments affect the important linkage between old age insurance and public assistance programs for the aged.

The first issue concerns the value of social security to aged persons who qualify for low or moderate OASI benefits. To the aged currently receiving old age assistance, eligibility for social security in some States adds only $4 to total monthly income, and no more than $11.50 in the most generous States. As noted above, OAA generally applies a 100 percent benefit reduction rate on social security income above these amounts. This fact became highly publicized when Congress and the

[78] In a month after the recipient has earned $2,100 during the year, the $500 of gross earnings reduces OASI benefits by $250. The $250 of income after the OASI benefit reduction is $75 more than the $175 earned and not subject to benefit reductions.

[79] The exempt amount may not decline. If the amount computed by this formula is less than the amount in the previous year, the previous year's figure continues in effect.

[80] Other factors such as changes in average hours and changes in the composition of the employment may also influence the formula.

[81] An increase in the maximum earnings subject to Social Security taxes (often called the wage base) raises the annual amount of actual earnings reported to social security. It has little effect on the amount of first quarter reported earnings because few workers earn more than the wage base in the first quarter.

public learned that the recent 20 percent increase in social security benefits typically was offset by dollar-for-dollar reductions in OAA payments, and. in some cases, actually hurt recipients by making them ineligible for medicaid and food stamps. In response to the public outcry, Congress passed an amendment in H.R. 1 which mandates that States ignore $4 of the social security increase for purposes of computing OAA grants so that OAA recipients may benefit by at least a small amount from the general increase.[82]

Social security payments will continue to add little to the incomes of elderly public assistance recipients when the SSI program becomes effective in January 1974. Although the initial $20 of OASI benefits will have no effect on SSI payments, SSI payments will decline $1 for each dollar of OASI benefits above $20. Thus, the value of social security to SSI payments will not exceed $20 per month.[83] From one standpoint, this low value of social security benefits to public assistance recipients is not necessarily inequitable because the actuarial value of the contributions by these recipients is also low. Actually, in some cases the $20 of OASI not subject to SSI benefit reductions, will be less than the actuarial value of their contributions. Further, these OASI recipients will not derive special benefits associated with a social insurance program. The social insurance nature of OASI causes benefits to exceed the actuarial value of contributions through upward adjustments for increases in the cost-of-living and the standard-of-living. These special benefits, which raise payments well above the value of contributions, do not accrue to the many low income OASI recipients receiving public assistance but greatly increase payments to other OASI recipients.

Another effect of the interaction between OASI and SSI is to encourage early retirement for low income OASI recipients. The OASI recipient who draws OASI benefits before age 65 reduces his OASI payment available after age 65. However, the reduced OASI benefit after age 65 would have no effect on his total income if he were to receive SSI payments. Whether or not the SSI recipient had drawn early OASI benefits, the value of OASI to the SSI recipient will be $20 per month. Thus, the 62 year-old who expects to receive SSI payments after age 65 would lose nothing after age 65 and would gain monthly payments between age 62 and 65 by retiring early.

A third issue concerning program linkages is the effect of the improved work incentives in adult public assistance and in social security. Earnings will reduce SSI benefits less than they now reduce OAA payments, so there will be an increase in the number of aged workers eligible for both OASI and the new public assistance SSI. The increases in dual eligibility will be largest among those persons receiving low OASI benefits and among persons in States providing supplements to SSI and applying liberal earnings disregard policies. An aged couple receiving the OASI minimum with no other unearned income may earn as much as $243 per month and remain eligible for SSI in States with no supplement. As Table 14, rows (5), (8), and (9) illustrate, States with supplements to SSI and a liberal earnings

[82] This measure is a temporary one, in effect until the supplemental security income program is operational.

[83] Those in States which provide supplements to SSI may find social security payments worth less than $20. This can occur if the State rules call for a decline in the supplement with the initial $20 of OASI benefits.

disregard policy provide payments to OASI recipients at $500 per month of gross earnings. The increase in dual eligibility is not necessarily undesirable, but it does add to the number of aged persons who find that their social security payments add little to their total incomes. The additional dual eligibility is the inevitable consequence of improving guarantees and work incentives.

TABLE 14.—*Effects of gross earnings, property income, old age insurance, and supplemental security income on total income of an aged couple*

	Gross monthly earnings						Monthly property income		
	$1	$100	$200	$300	$400	$500	$100	$200	$300
(1) Gross income	0	$100	$200	$300	$400	$500	$100	$200	$300
(2) (1) Less social security and personal income taxes	0	95	190	284	373	454	100	200	300
(3) (2) Less work expenses=0.10 gross earnings	0	85	170	254	333	404	100	200	300
(4) Net Income before transfers	0	85	170	254	333	404	100	200	300
TOTAL NET INCOME [1] OF THOSE RECEIVING THE FOLLOWING TRANSFERS									
State with no supplement to social security insurance:									
(5) Old-age and survivors insurance	$180	265	337	371	401	422	280	380	480
(6) Supplementary security income	195	273	308	342	371	404	215	215	300
(7) Old-age and survivors insurance and supplementary security income	215	283	337	371	401	422	280	380	480
State with supplement to supplementary security income=75 (liberal disregard):[2]									
(8) Supplementary security income and supplement	270	348	383	417	446	466	290	290	300
(9) (10) Old-age and survivors insurance	290	358	402	436	466	485	290	380	480
State with supplement to supplementary security income=75 (limited disregard):[3]									
(10) Supplementary security income and supplement	270	273	308	342	371	404	290	290	300
(11) (12) Old-age and survivors insurance	290	283	337	371	401	422	290	380	480

[1] Total net income equals gross income less taxes and work expenses plus transfers.

[2] The State supplement does not begin to decline until the Federal supplementary security income payment falls to zero. Beyond that point each dollar of added earnings reduces the State supplement by 50 cents and each dollar of added property income reduces the State supplement by $1.

[3] The State supplement declines $1 with each dollar of gross earnings. Property income has no effect on the State supplement until the supplementary security income payment falls to zero. Beyond that point each dollar of added property income reduces the State supplement by $1.

Source: Computed by author from rules explained in the text.

The liberalization of the social security retirement test offers another example of linkages between OASDI and SSI. Raising from $1,680 to $2100 the earnings level not subject to OASI benefit reductions will improve work incentives for most OASI beneficiaries. However, those OASI beneficiaries who will receive SSI payments—largely the poorest OASI beneficiaries—will find their work incentives unaffected by the lower OASI benefit reductions. Since reductions in SSI payments fully offset any OASI benefits above $20, the fact that OASI benefits begin declining at $2,100 instead of $1,680 does not change the total income of a working SSI recipient. For example, consider an elderly couple who earns $200 per month of earnings, who qualifies for $150 per month of OASI benefits, and who may obtain an SSI payment. Under the current OASI rules which disregard $1,680 of annual earnings and $140 of monthly earnings, the couple's total income of $347.50 per month is made up of $200 of earnings, $120 of OASI payments, and $26.50 of SSI payments.[84] Increasing the OASI disregard to $175 per month would raise the OASI payment to $137.50, reduce the SSI payment to $10, but leave total income at $374.50.

A fourth point relevant to program integration concerns the elimination of food stamp benefits for all persons receiving SSI payments or persons who would receive SSI benefits upon application. Many believe that this provision will mean the complete dismantling of the food stamp program for the aged. Although a large reduction will undoubtedly occur, some aged persons will remain eligible for food stamps. Aged single persons and couples could claim food stamp benefits if their incomes were a few dollars above SSI payment levels even if all income were countable for the purpose of computing food stamp benefits. Because of deductions allowed in the food stamp program, actual incomes of aged persons may exceed SSI payment levels by $100 or more per month without making such persons ineligible for food stamps. An aged couple which pays $140 per month in rent may remain eligible for food stamps with unearned income up to $300 per month, or $105 more than the SSI guarantee. The cutoff point for food stamp eligibility would be higher (lower) if rent were higher (lower). Thus, eliminating food stamp benefits for aged public assistance does not mean the end of food stamps for many of the aged.

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[84] The OASI payment is $150 less one-half of earnings above $140, (one-half times $200 minus $140 or $30). The SSI payment is $195 less all but $20 of OASI benefits ($100) and less one-half of earnings above $65 (one-half times $200 minus $65, or $67.50).

ALTERNATIVE APPROACHES TO INTEGRATING INCOME TRANSFER PROGRAMS*

By Thad W. Mirer

Introduction and Summary

The nature of existing income transfer programs and the problems of reforming them are now receiving considerable attention. One of the most significant of these is how to coordinate the many public benefit (and taxation) programs so that the resulting system is equitable and contains positive work incentive features. This paper looks at the overall problem of program integration in a schematic and mechanical fashion, as a background for analysis and design. The first section discusses the need for and elements of rational design; the second illustrates how alternative schemes can be used to link pairs of programs; and the third provides an example illustrating how several programs could be integrated.

The rational approach to designing a well-integrated set of income transfer programs entails identifying the main goals of the whole system as well as its constraints, and then establishing links between the various programs so as best to achieve these goals. The goals discussed here are those of equity (horizontal and vertical) and of encouraging work effort, while the constraint of total costs is recognized.

In designing links between programs, the definition of countable income used in each program is a key element. Six alternative schemes are analyzed in simple cases. First, independent addition of programs allows effective tax rates on earnings to increase without limit. Second, a tax ceiling on programs serves to keep the system's effective tax rate below some ceiling while increasing the total costs relative to case one. Third, sequencing programs for the purposes of defining countable income keeps the combined effective tax rate less than 100 percent while making the whole system less generous (i.e., cost less) than case one. Fourth, the full benefit offset is a special version of sequencing. In some ranges of income the family receives no more from combined programs than it would from just one program. Fifth, expense deductibility provides a way for reimbursing certain expenses, and its effects depend upon the way in which expenses are related to

(79)

earnings. Sixth, tax reimbursement allows a program to fully offset the "taxes" of another, thereby increasing the total costs of the reimbursing program.

A full analysis of any particular scheme and set of programs can be carried out along similar lines. The essential point of these examples is that the choice of linking schemes, especially with regard to the programs' definitions of countable income, is an important determinant of the nature of the whole transfer system.

When considering a close-to-real-life situation involving many programs and sources of family income, it is helpful to arrange programs into blocks and to be concerned separately with links within blocks and links among blocks. An example is analyzed here.

What is important to achieve seems also to be what is most difficult to achieve by political decisionmaking: for a system of transfer programs to achieve efficiently its declared social goals, each program must be designed with an understanding of how it is to be integrated with other programs and how it will affect the entire system.

I. RATIONALES AND RATIONALITY IN PROGRAM INTEGRATION

The mélange of current income maintenance and related income programs appears chaotic and irrational because most of the programs have been designed to achieve a limited set of goals, with relatively little concern for the overall effects of the entire set of programs. The results are work disincentives (due to extraordinarily high tax rates) for many people over broad ranges of income, gross inequities among persons and families of similar characteristics, and general dissatisfaction among recipients and others.

Less than comprehensive welfare reform may result in the demise of some programs, but it will leave the operation of many of them basically unchanged. Each of the programs remaining after reform probably will continue to operate with its own set of goals and requirements. Public housing programs, for example, may continue to offer decent housing to only a fraction of the persons eligible and may need to generate revenue (through rent collection) to cover some part of their total cost. Veterans pensions may continue to be awarded to those among the needy who qualify by veteran status. What "reform" is achieved depends in part on the rules by which the various programs which survive it (and any new ones which may appear) are linked, or integrated.

To design a well-integrated set of welfare programs, it is essential to analyze and identify the purposes and unique features of each program, so that coordinating it with others will not destory its basic integrity. Some aspects of the programs are not essential and justifiably may be changed in the reform process. In addition, some programs now in existence may be judged unnecessary under a new, broader income maintenance program.

The whole set of welfare or transfer programs might well be thought of as a system. It is the properties of the system as a whole—its equity, and its work incentive features—rather than those of individual programs which are most important. The design of links between various programs must be aimed at the goals of the system rather than those of its individual elements.

General agreement probably can be reached on two main goals for a new transfer system: (1) fostering equity (vertical and horizontal); and (2) encouraging work effort. The difficulty in designing such a system is that a plan to promote one goal is likely to be detrimental to the other.

First, the primary goal of the whole system is to better the lives of the Nation's poor by redistributing resources to them from those who are better off. The system should try to assure some minimal standard of living for all citizens. In addition, it should be designed with the need for horizontal equity in mind, because of reasons ranging from social philosophy to constitutional law. Serious breaches of this principle occur when assistance programs (such as public housing) are made available to fewer than all eligible persons, and when aid to different "categories" varies in generosity.

Second, for social, economic, and political reasons a goal of the welfare system should be to encourage work effort. One property of the system which most analysts consider quite important is the effective marginal tax rate on earnings, which is a combination of the statutory rates in each program. It is reasoned that a low tax rate encourages work effort more than a high one, but the available evidence yields a wide range of estimates of labor force behavior in the face of different tax rates. It seems certain that tax rates on earnings greater than 100 percent are socially unjust. Effective marginal tax rates in the range of 50 to 70 percent may be reasonable for current welfare program recipients, because these rates are lower than those that they now face, at least nominally; but if a reformed system extends income transfers to large numbers of persons not now covered, these rates would be viewed as excessive. The difficulty with establishing low rates, of course, is that this causes program costs and the number of persons covered to soar.

Achievement of these goals is subject to the political and economic constraint of keeping total income transfer costs low. The lower the total system's costs, the less will be its achievement of its goals. But the prospects for welfare reform may be enhanced by a low cost program. The costs attributable to particular programs under alternative plans for welfare reform may be important in the choice to be made between them.

In the next section, alternative schemes for linking programs in a reformed income transfer system are considered in relation to these goals and constraints.

II. Schemes for Linking Transfer Programs

An important concept in the determination of a recipient's benefit under an income transfer program is that of countable income. Typically, a transfer program offers a recipient a lump sum gross benefit (or "guarantee") and then diminishes the net benefit as "countable income" increases; in effect, there is a tax on countable income. Up to now, each program has had its own definition of countable income.

Usually, countable income includes earnings and property income, minus some deductible items. Some programs consider the benefits of other transfer programs as countable income—and thereby tax these other benefits—while others do not. The various components of countable income may be taxed at the same or different rates by each program. Other important aspects of the definition of countable

income are the recipient unit (which is usually the family) and the accounting periods. As will be seen, the definition of countable income used by each program is one of the most important determinants of how the various programs operate together.

Here, six schemes for linking transfer programs will be analyzed by examining some simple cases. The building blocks of the analysis are two hypothetical transfer programs named T (for transfer) and NIT (for negative income tax). Heuristically, the first transfer program may be thought of as a commodity program (like housing) or an income program (like social security), and the second as a negative income tax program. These names make the analysis more interesting, but the conclusions do not depend on the identity of either program. In addition to these two transfer programs, the family's earnings (E) and its net income (Y) will be considered in each case.

The net benefit from each program or the net amount of income of each type for a family are denoted as

$$E \qquad\qquad \text{earnings}$$
$$T = G_1 - t_1 \cdot Y_T \qquad \text{(first) transfer program}$$
$$NIT = G_2 - t_3 \cdot Y_{NIT} \qquad \text{(second) transfer program}$$
$$Y = E + T + NIT \qquad \text{net family income}$$

where G_1 and G_2 are the guarantee payments, t_1 and t_2 are the marginal tax rates, and Y_T and Y_{NIT} are the countable incomes for the first and second transfer programs, respectively. The system's effective marginal tax rate on earnings (θ), expressed as a fraction rather than in percentage terms, is equal to one minus the increase in net family income which results from a given increase in earnings; in calculus notation, $\theta = dY/dE$. Property income is assumed to equal zero in these examples, but this does not affect the qualitative conclusions which are drawn.

Associated with each transfer program is a "natural breakeven point."—the level of countable income (Y_T or Y_{NIT}) at which net benefits of the program become zero and above which a family is phased out of the program. The natural breakeven points of the two transfer programs examined here are $Y_T = G_1 t_1$ and $Y_{NIT} = G_2 t_2$, respectively, determined by setting the net benefit in each program equal to zero and solving each resulting equation. The "earnings breakeven point"—the level of earnings (E) at which net benefits of the program become zero—can be computed for each program only when all the links in the transfer system have been completely specified. (Clearly, when countable income is defined solely as earnings, the natural breakeven point is equal, in dollar terms, to the earnings breakeven point).

In the simple cases examined below, specific values for the programs' guarantees and tax rates will be assumed. For the T program G_1 is set equal to $1,000 and t_1 is set equal to $\frac{1}{4}$ in most examples; these parameters are representative of existing public housing programs. For the NIT program G_2 is set equal to $2,400 and t_2 is set equal to $\frac{2}{3}$; these are the parameters of the family assistance plan passed by the House of Representatives in 1971.

By considering only two programs at a time, it is possible to focus on how the alternative linking schemes affect the goals and constraints discussed in section I. Later, in section III, a more complex analysis in which taxes and other transfer programs are explicitly considered is presented.

Scheme I. Independent Addition

In this case, the programs ignore each other. For each transfer program countable income is defined as earnings.

$$NIT = \$2,400 - \tfrac{2}{3} \cdot E$$
$$T = \$1,000 - \tfrac{1}{4} \cdot E$$
$$Y = E + NIT + T$$

In table I-1 the basic nature of these programs is shown. The system's effective tax rate of earnings (θ) is the sum of the tax rates of the programs operating in any earnings range. The effective tax rate declines in steps (from $\tfrac{11}{12}$ to $\tfrac{1}{4}$ to 0) as earnings rise, because the family is phased out of the programs at different earnings levels. (The table also shows the net real income, Y_1, resulting from a system consisting of only the NIT program, and the net real income, Y_2, resulting from a system consisting of only the T program.)

With more than two programs, or with two programs having high tax rates, the effective tax rate on earnings of the entire system may exceed 100 percent if the independent addition scheme is used: a family may be worse off by earning more money. Loosely, this characterizes the whole current system. The case of independent addition serves as a base with which other schemes are compared.

TABLE I-1.—*Independent addition*

$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot E$$
$$T = \$1,000 - (\tfrac{1}{4}) \cdot E$$
$$Y = E + NIT + T$$
$$(Y_1 = E + NIT)$$
$$(Y_2 = E + T)$$

E	NIT	(Y_1)	T	(Y_2)	Y	θ
$0	$2, 400	$2, 400	$1, 000	$1, 000	$3, 400	
1, 000	1, 733	2, 733	750	1, 750	3, 483	
2, 000	1, 066	3, 066	500	2, 500	3, 566	$\tfrac{11}{12}$
3, 000	400	3, 400	250	3, 250	3, 650	
3, 360	160	3, 520	160	3, 520	3, 680	
3, 467	88	3, 555	133	3, 600	3, 688	
3, 600	0	3, 600	100	3, 700	3, 700	
4, 000	0	4, 000	0	4, 000	4, 000	$\tfrac{1}{4}$
5, 000	0	5, 000	0	5, 000	5, 000	
5, 100	0	5, 100	0	5, 100	5, 100	0
6, 000	0	6, 000	0	6, 000	6, 000	

Scheme II. A Tax Ceiling Program

In this scheme, also, countable income for each program is defined as earnings, but the NIT program guarantees that the effective rate θ does not exceed some level. This is accomplished by adjusting the NIT program's tax rate on earnings to take into account the tax rate of the other program in which the family participates.

$$T=\$1,000-(\tfrac{1}{4})\cdot E$$

$$NIT=\$2,400-t\cdot E \qquad \text{such that } \theta\leq\tfrac{2}{3}$$

$$Y=E+T+NIT$$

As shown in table II-1, the T program is unaffected relative to its operation under the independent scheme. The family remains in the system up to earnings of \$5,100, always with an effective rate $\theta=\tfrac{2}{3}$. As earnings rise, the NIT program reduces its payments at an effective tax rate of $\tfrac{5}{12}$ while the family is accepting the T benefit, and at $\tfrac{2}{3}$ when not (i.e., $t=\theta-\tfrac{1}{4}$ in the former situation, and $t=\theta$ in the latter). The family is always better off (or at least as well off) than under the independent addition scheme.

When the T program is like that of the example, the tax ceiling guarantee with NIT makes the system equivalent to simply adding the T guarantee (\$1,000) to the NIT basic guarantee. If the T program had a much higher breakeven point (higher than \$5,360, which would result from $G_1=\$1,340$) the result would be modified: NIT would be phased out before T, and the recipient would continue in the T program at a $\tfrac{1}{4}$ tax rate.

When guaranteeing a ceiling rate, the NIT program will cover more families than under the independent addition scheme and pay higher benefits at all earnings levels. The T program operates as under independent addition.

Under the 1971 House-passed version of H.R. 1, State supplementation programs to the basic FAP benefit plan were constrained to operate under a scheme similar to that of a guaranteed ceiling rate.

TABLE II-1.—*A tax ceiling program*

$$T=\$1,000-(\tfrac{1}{4})\cdot E$$
$$NIT=\$2,400-t\cdot E \qquad \text{such that } \theta\leq\tfrac{2}{3}$$
$$Y=E+T+NIT$$

E	T	NIT	Y	θ
\$0	\$1,000	\$2,400	\$3,400	↑
1,000	750	1,983	3,733	
2,000	500	1,566	4,066	
3,000	250	1,150	4,400	2/3
3,360				
3,467				
3,600	100	900	4,600	
4,000	0	733	4,733	
5,000	0	67	5,067	↓
5,100	0	0	5,100	
6,000	0	0	6,000	↑0

Scheme III. Sequencing Programs

The rule of sequencing is that the countable income taxed by any program includes earnings plus the net benefit of all "previous" programs in which the individual participates, with the order of programs established by law. In the independent addition and tax ceiling scheme, the benefits of the previous program (T) are ignored by the second program (NIT).

If some set of programs are sequenced, the effective tax rate of the set will be less than 100 percent. At any earnings level, the effective tax rate depends on the programs in which the person participates and is less than the sum of the tax rates of these programs:

$$\theta = 1 - (1-t_1)\cdot(1-t_2) < 1$$
$$\theta < t_1 + t_2 \text{ (for } 0 < t_1, t_2 < 1);$$

these results are obtained by substituting the program formulas into the identity for net family income, differentiating to calculate θ, and rearranging terms.

While the order of the sequencing does not affect the effective tax rate for the program participants, the order does affect: (1) the net benefits of each program; (2) the earnings ranges in which the person can participate in some programs; and (3) the total system benefits. Two sequences are illustrated:

Taking *NIT* first	Taking *NIT* second
$Y_{NIT} = E$ $NIT = \$2,400 - (\frac{2}{3})\cdot Y_{NIT}$ $Y_T = Y_{NIT} + NIT$ $T = 1,000 - (\frac{1}{4})\cdot Y_T$ $Y = Y_T + T$	$Y_T = E$ $T = \$1,000 - (\frac{1}{4})\cdot Y_T$ $Y_{NIT} = Y_T + T$ $NIT = \$2,400 - (\frac{2}{3})\cdot Y_{NIT}$ $Y = Y_{NIT} + NIT$

(1) In the second sequence (table III–2), benefits from the T program are determined as in the independent case. The NIT program "taxes" Y_{NIT}.) (not just E) at the nominal rate of $\frac{2}{3}$, which amounts to taxing E at an effective rate of $\frac{1}{2}$; the benefits which it pays are reduced relative to its operation as an independent program. In the first sequence (table III–1) it is the T program whose benefit schedule is reduced; in the range of earnings in which a family participates in both programs, the T program's effective rate of tax on earnings is only $\frac{1}{12}$.

(2) The effective rate of tax on earnings for the system as a whole is $\frac{3}{4}$ when the family participates in both programs, the same for both sequences because $\theta = 1 - (1-t_1)\cdot(1-t_2)$. In the first sequence (when NIT is the "first" program) the NIT program acts as in the independent case, with its earnings breakeven point equal to its natural breakeven point (here, $E = \$3,600$), By contrast, in the second sequence (when NIT is the "second" program) NIT phases out with a lower earnings breakeven point (here, $E = \$3,467$). In this second sequence, the NIT program will have a lower earnings breakeven point the higher the guarantee or the lower the nominal tax rate in the T program.

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(3) The systems are not equally generous: the first yields a higher net real income, Y (and hence higher net systems benefits), for all earnings levels. Either order makes the net benefits of the sequencing scheme less generous than those of the independent addition scheme.

Currently, food stamp benefits are determined by including AFDC benefits in the calculation of countable income; this is an example of sequencing programs.

TABLE III–1.—*Sequencing programs*

$$Y_{NIT} = E$$
$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot Y$$
$$Y_T = Y_{NIT} + NIT$$
$$T = \$1,000 - (\tfrac{1}{4}) \cdot Y_T$$
$$Y = Y_T + T$$

E	NIT	Y_T	T	Y	θ
$0	$2,400	$2,400	$400	$2,800	
1,000	1,733	2,733	317	3,050	
2,000	1,066	3,066	234	3,300	¾
3,000	400	3,400	150	3,550	
3,360					
3,467	89	3,556	111	3,667	
3,600	0	3,600	100	3,700	
4,000	0	4,000	0	4,000	¼
5,000	0	5,000	0	5,000	
5,100					0
6,000	0	6,000	0	6,000	

TABLE III–2.—*Sequencing programs*

$$Y_T = E$$
$$T = \$1,000 - (\tfrac{1}{4}) \cdot Y_T$$
$$Y_{NIT} = Y_T + T$$
$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot Y_{NIT}$$
$$Y = Y_{NIT} + NIT$$

E	T	Y_{NIT}	NIT	Y	θ
$0	$1,000	$1,000	$1,733	$2,733	
1,000	750	1,750	1,233	2,983	
2,000	500	2,500	733	3,233	¾
3,000	250	3,250	233	3,483	
3,360					
3,467	133	3,600	0	3,600	
3,600	100	3,700	0	3,700	¼
4,000	0	4,000	0	4,000	
5,000	0	5,000	0	5,000	
5,100					0
6,000	0	6,000	0	6,000	

Scheme IV. Full Benefit Offset

This linking scheme, which might be viewed as a special case of sequencing, proposed in H.R. 1 (92d Congress) for determining FAP benefits for persons who also receive social security. The net benefits of the T program are taxed at 100 percent by the NIT program (i.e., the net T benefit is subtracted from the NIT benefit which would otherwise be given):

$$T = \$1,000 - (\tfrac{1}{4}) \cdot E$$
$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot E - T$$
$$Y = E + T + NIT$$

As illustrated in table IV-1, the entire system yields the same benefits as would NIT alone, up to the point where NIT is phased out ($E = \$3,360$). Above that level of E, the family continues to participate in the T program with a $\tfrac{1}{4}$ tax rate on E. The T program is unaffected relative to the independent case, and the NIT benefits are reduced. The effective tax rate on E of the NIT program is $\tfrac{5}{12}$.

If the nominal tax rate of the T program is increased to $\tfrac{1}{2}$, so that its natural breakeven point is lower than that of NIT (see table IV-2), the full benefit offset linkage makes the whole system's net benefit schedule identical to that of the NIT program operating independently. If the T program were more generous than NIT, say $T = \$2,500 - (\tfrac{1}{2})$ E, then the family would not enroll in the NIT program.

AFDC programs currently apply the full benefit offset to some other programs' benefits, such as unemployment insurance. However, the true effect of this scheme in AFDC is difficult to ascertain because of the peculiarities of various States' plans, such as allowing deductibles against unearned income and paying only a fraction of recognized need.

TABLE IV-1.—*Full benefit offset*

$$T = \$1,000 - (\tfrac{1}{4}) \cdot E$$
$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot E - T$$
$$Y = E + T + NIT$$

E	T	NIT	Y	θ
$0	$1,000	$1,400	$2,400	
1,000	750	983	2,733	⅔
2,000	500	566	3,066	
3,000	250	150	3,400	
3,360	160	0	3,520	
3,467				
3,600	100	0	3,700	¼
4,000	0	0	4,000	
5,000	0	0	5,000	
5,100				0
6,000	0	0	6,000	

88

TABLE IV-2.—*Full benefit offset*

$T = \$1,000 - (\%) \cdot E$ (new tax rate)
$NIT = \$2,400 - (\frac{1}{2}) \cdot E - T$
$Y = E + T + NIT$

E	T	NIT	Y	θ
$0	$1,000	$1,400	$2,400	
1,000	500	1,233	2,733	
2,000	0	1,066	3,066	⅔
3,000	0	400	3,400	
3,360	0	160	3,520	
3,467				
3,600	0	0	3,600	
4,000	0	0	4,000	
5,000	0	0	5,000	0
5,100				
6,000	0	0	6,000	

Scheme V. Expense Deductibility

One way to encourage the use of a government or privately sold service (such as day care) is to allow these expenses to be deducted from the countable income to be "taxed" by some other program. In some cases, these deductions also may serve to promote horizontal equity among different groups of recipients.

For example, the NIT program might be structured

$$NIT = \$2,400 - (\%) \cdot (E - bD)$$

where D are the expenses and b is the proportion of them which are deductible. In analyzing the properties of this scheme, a clear statement as to whether the deductible expenses are required to be less than total earnings can be important. Consider the case where this constraint is not binding (or where $bD > E$ is allowed and the negative tax paid as a benefit). The program formula can be rewritten

$$NIT = \$2,400 - (\%) \cdot E + (\%) \cdot bD$$

The parameter b could be set to allow partial, full, or multiple deductibility. For example, if b is equal to the inverse of the tax rate ($b = \%$) and day care costs are constant, then the deductibility scheme would be equivalent to an increase in the guarantee equal to the full cost of day care: day care would be "free."

If earnings increase while day care expenses remain constant (such as would happen if the worker received a wage increase), $\theta = \%$ and the day care deduction remains an augmentation of the NIT guarantee. If day care costs increase proportionately with earnings (such as would happen if earnings increased because of more weeks worked per year or because the charge for day care varied with earnings) then $D = kE$, and the effective tax rate on earnings would be less than $\%$ so long as deductible day care expenses were less than total earnings ($bk < 1$):

$$NIT = \$2,400 - (\%)(E - b(kE))$$
$$NIT = \$2,400 - (\%) \cdot (1 - bk) \cdot E$$

If the deductible expenses are really "work expenses," then net family income as defined here is not the same as the familiar concept of "disposable income." Effective tax rates defined with respect to disposable income would be higher in some cases.

Scheme VI. Tax Reimbursement

If the "taxes" paid in the T program are reimbursed by the NIT, this scheme has the effect of decreasing the tax rate of the NIT program.

$$T = -(\tfrac{1}{12}) \cdot E$$
$$NIT = \$2,400 - (\tfrac{2}{3}) \cdot E + (\tfrac{1}{12}) \cdot E$$
$$NIT = \$2,400 - (\tfrac{7}{12}) \cdot E$$

The earnings breakeven point of NIT is raised and so are the net benefits payable at all levels of earnings.

Such a scheme is now in effect in most States in calculating AFDC benefits for working women who pay income taxes. Their AFDC benefits are adjusted to compensate them fully for income and other payroll taxes paid.

Other Schemes

Other schemes for integrating various programs in an income transfer system serve to separate them rather than link them. One possibility is to prohibit persons enrolled in one program from participating in another. Another is to limit the number of different programs in which any family may enroll. These schemes may prove to be politically acceptable or administratively convenient, and do provide somewhat more horizontal equity than is found in the current system without involving alteration of the operations of any programs.

III. An Example of Designing an Integrated Set of Transfer Programs

A rational way to approach the problem of system design might be to group the programs according to their purpose and operation. Within each group, some scheme or combination of schemes can be used to link the programs into a block. Each of the blocks then can be linked to form an integrated system. The linking schemes need not be the same within each of the blocks, nor the same among blocks as within them.

A hypothetical example, based on one view of the world and the tradeoffs between system goals, can be made from the following list of items which affect family income and programs which might exist after an overall reform. This list is already sorted into blocks.

1. Nonlabor private income (pensions, income from wealth, alimony).
2. Earnings.
3. Payroll and income taxes.
4. Housing assistance, day care assistance, and health care assistance.
5. Social insurance benefits, veterans' payments, and basic income maintenance benefits.
6. General (local) assistance and private charity.

The first two blocks comprise the nontransfer sources of income for a family, and when payroll and income taxes (the third block) are subtracted out, a net private income can be calculated. In a more detailed system, business and work expenses might be put in the third block, and then they could be deducted in calculating net private income.

The fourth block contains programs predominantly serving to subsidize and influence family budget decisions for housing, child care, and health care items. Within the block, these programs could be allowed to "add up," as in the independent addition scheme. When programs offer commodities (such as housing) rather than cash income, calculating the value of the benefits presents some thorny problems of economic analysis—but this calculation must be made for the purposes of determining benefits in "higher numbered" blocks.

The fifth block contains three programs which serve predominantly to provide cash income and which are, therefore, substitutes for one another. One of the three, a new "basic income maintenance" program (such as a negative income tax), might serve as a residual program (with universal eligibility) by taxing social insurance benefits and veterans' payments at 100 percent (full benefit offset). If one wanted to reward those eligible for either of these other two programs, a simple arrangement would be to add (for these persons) a small flat sum to the basic income maintenance program's guarantee.

Linking the fourth and fifth blocks presents the most difficulty in designing the whole system. The plan here is to sequence the fourth block before the fifth, so that countable income for determining benefits from fourth-block programs is net private income, while countable income for the fifth block is net private income plus net benefits from the fourth block. The fifth block's tax rate on the fourth block's net benefits might be the same as that on private income, or it might vary up to 100 percent (which would amount to a full benefit offset). An advantage of this sequence, especially with a high fifth block tax rate on the fourth block's net benefits, is that it achieves greater horizontal equity than would be possible if the sequence of the two blocks were reversed. A disadvantage is that program costs in the fourth block are made higher. If it is desired to attract families into the budget subsidy (fourth block) programs, the tax rate (in the fifth block) on these programs' net benefits should be less than 100 percent.

The sixth block (general assistance and charity) could be allowed to operate with considerable discretionary authority (even undermining the work incentives built up by the rest of the system) in order to care for special and emergency cases. Benefits from this block would not be taxed by any others.

The methods of integration used in this example depend on a particular set of analyses of program purposes and effects and on a particular view of system goals. These views may not be consensus views. For instance, day care has been implicitly classified as an expense of raising children, not of going to work, and hence is put into block of budget programs. In this example, families are free to participate in publicly owned housing and day care facilities if they wish, and the programs are viewed predominantly as efforts to correct private market supply failures. Within the cash payments block, a social insurance program operating like the current old age insurance program is treated as more of a publicly determined transfer than a

privately earned insurance benefit; hence taxation of these benefits at a high level—perhaps 100 percent—is recommended. (A reformed social insurance program in which benefits are more closely related to contributions might well be classified in block one.)

The particular sequence of the fourth and fifth blocks, which results in a high tax rate on budget programs, derives from placing a high value on the goal of horizontal equity and from a concern for total system cost.

CUMULATIVE TAX RATES IN ALTERNATIVE INCOME MAINTENANCE SYSTEMS

By Leonard J. Hausman*

SUMMARY

This paper focuses on the problem of attaining low "cumulative marginal tax rates" in any *system* of tax and transfer programs. A cumulative marginal tax rate measures the change in all regular taxes paid plus the change in all transfer payments received by a family unit as its income changes by $1. As the income of a family receiving AFDC and food stamps while living in public housing rises, for example, its AFDC payment is reduced and the purchase price of the stamps and the public housing rent are increased; simultaneously, of course, its social security and income tax payments would rise. The resulting cumulative tax rate may influence the work effort of labor force participants in such a family. Consequently, the designers of tax and transfer systems want to keep the cumulative tax rate at reasonably low levels.

Prior to detailing the cumulative tax rates in the current transfer system, the paper reviews briefly the extensive reform effected in the last decade in the AFDC and related programs. The reforms include a sharp rise in benefit levels, a marked reduction in tax rates on earnings, and an integration of the AFDC with the food stamp and Federal housing programs.

In the existing tax and transfer system, these objectives have been partially attained through the AFDC program. AFDC recipients are permitted to deduct from their gross earnings $30 plus one-third of remaining earnings; and, from earnings net of these deductions, all work-related expenses. Since work-related expenses typically are defined broadly to include all income and social security taxes, in addition to food, clothing, transportation expenses, and the cost of necessary child care, AFDC benefits fall slowly as earnings rise. To illustrate the point, consider an AFDC family of four in Chicago whose earnings rise from $400 to $500 per month. Its social security taxes will rise by $5.20, as will its State income tax by $2.50 and its Federal income tax by $14. With a deduction of $33.33 from the $100 increase in earnings, as well as roughly $3.30 in work-related expenses in addition to the $21.70 in added taxes, the family's AFDC benefit will fall by $42. In Chicago its food stamp bonus remains unchanged at this level of income. (If it lives in public housing, its rent rises by roughly $14 per

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month.) Thus, associated with this $100 increase in earnings is an increase in taxes and a decrease in benefits amounting to nearly $64 (for the family that does not live in public housing). Given the rules on allowable deductions from earnings, this family's AFDC benefit is zero only when its monthly earnings reach $725. The AFDC benefit reduction rate effectively is kept below the 66⅔ percent level ordered by the 1967 amendments to the Social Security Act by the rules on deductions—but these deductions do allow recipients to receive some AFDC benefits (and medicaid) until earnings reach surprisingly high levels. These same rules, then, keep the cumulative tax rate within tolerable limits; for they have the effect cf rebating all income-related taxes and werk-related expenses.

The paper proceeds to demonstrate that the welfare reform plan (OFP–FAP) that occupied the Congress from 1969 to 1972 would have raised cumulative tax rates for all low-income families substantially. Since work-related expenses would not have been deductible and since medicaid benefits would have become income conditioned, cumulative tax rates would have exceeded 80 percent on the average for all poor families. The Congress understood that the inclusion of the working poor would have been much more costly had cumulative tax rates not been raised above levels reaching in the existing system. The recent experience with welfare reform in Britain is reviewed and points up the difficulties of maintaining low cumulative tax rates when the working poor and other low-income families receive transfer under a number of transfer programs.

Alternative tax and transfer systems are shown to face a common problem: if families have a variety of income-related tax obligations and receive benefits under a number of transfer programs, cumulative tax rates can be kept to tolerable levels only at the cost of allowing families to receive benefits until their earnings reach rather high levels. Even a cash transfer program that itself contains a low tax rate does not solve the cumulative tax rate problems, for other transfer programs are shown to add more percentage points to the cumulative rate the lower the rate in the initial cash program. No new cash transfer program can escape the cumulative tax rate problems posed by the coexistence of other cash and in-kind transfer programs.

I. Introduction

On some widely accepted criteria, much welfare reform has been effected in the past decade: in the AFDC program, income guarantees [1] have been raised, coverage has been extended, and implicit tax rates [2] on earnings have been reduced; in housing and food assistance programs for low-income families, income conditioning of benefits has been rationalized and a partial integration of these programs with AFDC has been achieved. Yet in each of these and in other respects,

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[1] This term refers to the payments made to families who have no nonassistance income. Since the application of AFDC eligibility rules is alleged to be inequitable in many States, some may find questionable the use of the word "guarantees."

[2] This term refers to the reduction in cash payments that results from a $1 change in earnings. The term is used interchangeably in the paper with the terms "tax rate" and "benefit reduction rate."

the process of welfare reform is incomplete. For example, rationalization of income accounting [3] has not begun. From the point of view of many, though, the most urgently needed reform is the extension of coverage under a cash transfer program to low income families which are headed by working males. This paper demonstrates the difficulty of retaining income guarantees and tax rates at their present levels while extending cash transfers to families headed by working males. Since guarantees are quite high in many instances for current AFDC families while implicit tax rates are quite low, extending the system so as to treat similiarly male and female headed families of the same income would be very expensive: in a large number of States, families of four would receive partial benefits until their incomes were $7,000 or more.

The paper focuses on the problem of attaining a low "cumulative tax rate" in a system of tax and transfer programs. A cumulative marginal tax rate measures the change in all regular taxes paid plus the change in all transfer payments received by a family unit as its income changes by $1. A family receiving AFDC in Chicago will have its monthly payment reduced as its monthly earnings rise from $200 to $201. Simultaneously, however, it is receiving food stamps and living in public housing, it may lose a fraction of its food stamp bonus and be required to pay a slightly higher rent; and, of course, it must also pay additional social security and income taxes. The sum of the lost benefits and the additional taxes associated with the $1 increase in earnings measures the cumulative marginal tax rate that this family faces.

A cumulative tax rate, like any individual benefit reduction or tax rate, is a matter of concern because it helps determine the coverage of a system of programs and because it may influence the work behavior of beneficiaries. In a single transfer program with a $4,000 income guarantee, a 50-percent tax rate reduces benefits to zero at $8,000 of earnings, whereas a 25-percent rate does this at $16,000 of earnings. While the former tax rate vastly reduces the number of eligible family units in comparison to the latter rate, the 50-percent rate is more likely to affect work effort negatively. The same dilemma arises in determining a cumulative tax rate. Even when a family receives many types of transfers and faces a number of income-related taxes, to preserve work incentives the cumulative tax rate can be held to a minimum by a variety of devices, some of which are detailed below. But the same problem of balancing coverage and cost goals arises as with a single program. This paper illustrates cumulatives tax rates in the current transfer system as well as in alternative schemes. It stresses the difficulty of maintaining cumulative tax rates at their present low levels. It is impossible under any scheme to maintain low cumulative tax rates while extending substantial cash and in-kind transfers to the working poor without also extending the coverage of these programs to middle-income brackets.

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[3] This term refers to the complicated system of procedures involved in adjusting payments in a given period to past, present, and future income. In the positive income tax system, a unit's tax bill is determined every April 15 for its income in the previous year. In the AFDC system, payments are adjusted for current monthly income. These procedures indicate the "accounting period" in the respective tax and transfer programs; and this period is but one feature of the accounting system in the transfer program.

To provide perspective on the problems involved in determining the cumulative tax rate in a new system of cash and in-kind transfers, it would be useful first to document briefly the mentioned reforms. The rise in guarantees in AFDC is suggested by the data in columns 2 and 3 of table 1. In six of the nine listed States, the maximum possible payment to a family of four with no nonassistance income rose by nearly 50 percent or more between 1961 and 1971. By contrast, over this same period, the consumer price index rose by 35 percent.

TABLE 1.—*Changes in AFDC guarantee levels for a family of 4 and tax rates over time*

State	Year [a]	Monthly guarantee as paid [b]	Percentage change in guarantee (percent)	Average monthly earnings [c]	Average costs of employment [d]	Average disregarded earnings [e]	Other retained earnings [f]	Average tax rate on earnings [g] (percent)
	1	2	3	4	5	6	7	8
Illinois	1	$182	49	$195.0	$43.6	$13.1	0	71
	2	272		254.2	59.2	97.0	0	39
Pennsylvania	1	148	111	127.6	75.1	5.4	0	37
	2	313		246.0	50.1	101.1	0	39
Kansas	1	183	75	166.4	32.3	17.4	0	70
	2	321		212.0	85.2	81.4	0	21
Missouri	1	110	20	189.6	54.4	13.7	$142.1	[h]0(62)
	2	130		276.5	92.3	94.0	116.8	[h]0(25)
Indiana	1	110	86	169.7	53.0	11.5	100.4	[h]3(64)
	2	205		269.7	92.0	109.7	81.2	[h]0(33)
Delaware	1	99	74	154.7	49.7	16.4	82.8	[h]4(57)
	2	172		214.6	68.3	103.0	94.9	[h]0(20)
Florida	1	78	72	149.2	31.3	21.9	39.4	38
	2	134		191.0	52.3	82.8	22.4	13
Mississippi	1	50	20	80.5	18.9	19.2	31.0	14
	2	60		125.6	25.5	59.7	23.2	14
New Mexico	1	177	1	117.9	43.2	8.6	3.2	53
	2	179		95.6	22.2	42.2	3.7	29

a Years 1 and 2 refer to the years 1961 and 1971, respectively, for the figures in col. 2 and 3; and to 1967 and 1971, respectively, for the figures in col. 4–8; with the exception of the figures in cols. 4–8 for the State of Florida, where year 1 is 1969 and year 2 is 1971.

b The monthly guarantees are the amounts paid to those with no other income. These figures assume that recipients pay the maximum amount allowed for rent. The data come from 2 sources. U.S. Department of Health, Education, and Welfare, Social and Rehabilitation Service, National Center for Social Statistics, "State Maximums and Other Methods of Limiting Money Payments to Recipients of the Special Types of Public Assistance October 1961;" the same publication for July 1971; *Ibid*, "OAA And AFDC: Standards For Basic Needs For Specified Types of Assistance Groups, January 1961; "The same publication for March 1971. The 1st publication is in the NCSS report D-3 series and the 2d is in the D-2 series.

c The averages were derived from data taken directly from the computer tapes containing the 1967, 1969, and 1971 surveys of the AFDC populations conducted by the National Center for Social Statistics in the Department of Health, Education, and Welfare. This average, as well as those in cols. 5–8, are computed from data on *employed* AFDC mothers.

d Costs of employment, or work-related expenses, are defined by each State. They include transportation, meal and child care costs, as well as income and social security taxes in many States. They are deducted from earnings before welfare benefits are adjusted for earnings.

e In 1967, "disregarded earnings" probably included the 1st $85 and ⅓ of earnings in excess of $85 received by AFDC mothers enrolled in the work experience and training program, a special training program for welfare recipients. Women in regular market jobs were not able to retain such a large fraction of their earnings. This factor would lead to an understatement of the average tax rate in effect in 1967. Since 1969, disregarded earnings

c onsist largely of earnings deducted from gross earnings under the "30 and ⅓ rule", which is explained in detail in sec. II.

f These include that part of earnings, net of deductions made for work-related expenses or made under the "30 and ⅓ rule," which does not reduce welfare payments in 2 groups of States. In the first, net earnings equal to the difference between the State "cost standard" and the maximum payment to a particular type of family do not reduce welfare payments.

In the second, payments are reduced by a given proportion of earnings. One minus that proportion equals "other retained earnings." These procedures also are explained in detail in sec. III.

g This is equal to:

$$1 - \frac{\text{column } 5 + \text{column } 6 + \text{column } 7}{\text{column } 4}$$

h These tax rates are exceptionally low because the numbers in col. 6 for 2 reasons are overestimates of "other retained earnings." One is that the estimate of the maximum payment per family used in computing those numbers did not account for variations among families of given size in allowances for rent in the welfare budget; given our technique, the estimate of the maximum is likely to be low. Therefore, the estimate of retained earnings would be too high. More importantly, nonearnings income could not be separated from earnings in roughly 15 percent of the families—only in making the estimates for col. 6—and thus overstated family earnings. Thus, "other retained earnings" often included retained nonearnings income. The change in average tax rates between 1967 and 1971 is better indicated for the 3 footnoted States by the percentages which are derived by dividing the sum of col. 4 and col. 5 by col. 3 and subtracting the result from 1.

98

Over the period 1959–71, coverage of the AFDC program has been increased substantially among both female-headed and male-headed families. Among the former, there has been an increase from 609,000 to 2,059,000 cases. As a rough indication of the increase in coverage, consider the fact that the ratio of female-headed AFDC assistance units to all female-headed families below the standard poverty lines was 40 percent in 1959 but had increased to 112 percent of such families in 1971.[4] Among male-headed families, 160,000 received AFDC for incapacitated fathers in 1959 and 466,000 received AFDC for incapacitated and unemployed fathers by 1971. This means an increase from 4 percent to 25 percent in the ratio of these AFDC units to all male-headed families below the poverty lines.[5] Even if the accepted poverty lines were made a constant proportion of the median income, one would have to say that the coverage of the AFDC program has been extended.

The data in table 1 also show the marked decline in the average tax rate on earnings in the AFDC program for female-heads of families

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[4] It should be noted that this increase results from the fact that all States now supplement the earnings of working mothers whose incomes initially fell below the State AFDC "cost standard" or eligibility level of income; and that a few States have guarantees above current poverty lines for some families. However, since less than 15 percent of all AFDC mothers work; since the figure has remained stable over the 1961–71 period; and since only three or four States have above-poverty line guarantees, the mentioned increase in coverage probably still supports my point. The observations in this footnote explain how "coverage" presently can exceed 100 percent.

[5] Data is available on the number of *children* in female-headed and male-headed AFDC families in 1959 and 1961, while data on the number of each type of AFDC *family* is available only for 1961. On the other hand, data is available for the number of female-headed and male-headed families below standard poverty lines with one or more children for 1959 and not for 1961. What was missing, therefore, was data on the number of AFDC families headed by females and males in 1959. Therefore, the 1961 AFDC family data were used in combination with the 1959 and 1961 data on AFDC children to estimate the number of female-headed and male-headed families on AFDC in 1959. For 1959, AFDC families other than those with an incapacitated father or with a stepfather were considered female-headed. For 1961, families other than those with an incapacitated or unemployed father or with a stepfather were considered female-headed. (Sources of public assistance data: Department of Health, Education and Welfare, Welfare Administration, *Trend Report: Graphic Representation of Public Assistance and Related Data*, December 1964, pp. 56 and 58; Ibid., *Study of Recipients of Aid to Families with Dependent Children, November–December 1961: National Gross-Tabulations*, August 1965, table 1; Ibid., National Center for Social Statistics, *Findings of the 1971 AFDC Study:* Part I, table 15. Source of the data on the low-income population: Department of Commerce, Bureau of the Census, *Consumer Income: Characteristics of the Low Income Population, 1971.* Series P–60, No. 82, July 1972, table 8..

99

between 1967 and 1971.[6] Except in States like Pennsylvania, where work-related expenses were defined broadly even before the 1967 amendments to the Social Security Act, and in Mississippi, where the tax rate was exceptionally low in 1967 because of the State's method of determining payments, the average amount of benefits lost as earnings rose dropped sharply. In Illinois, for example, the average dollar of earnings reduced AFDC benefits by 71 cents in 1967 but by only 39 cents in 1971.

An example of reform in the treatment of income in the in-kind transfer programs is the Brooke amendment to the Housing and Development Act of 1969, which mitigated the "notch"[7] in the public housing program: families in most projects no longer have to leave their apartments and enter the more expensive private market when their incomes rise above eligibility levels, but merely pay higher rents for their public housing units. New housing programs, such as the section 235 subsidies to moderate-income homeowners, the section 236 program for apartment dwellers in federally assisted developments, and the rent supplement program for apartment dwellers in unassisted developments, also contrast with traditional housing subsidy (i.e., mortgage subsidy) programs in that subsidies more frequently are scaled to a well-specified definition of income; although imperfections in the private market may retain notches for certain types of ineligible families.[8] Lastly, in the food stamp and the housing programs, income now is defined to include adjusted assistance payments,[9] thereby effecting an integration of the former with the AFDC program through what may be called sequencing. It is important to note that when income is defined to include assistance payments that already are adjusted for any change in earnings, the cumulative tax rate is lower than what it would be if this adjustment were not considered. This is explained in detail in section IV.

To reiterate, reforms that raise guarantees and lower cumulative tax rates are expensive. They will become more expensive if the next urgent reform, including the working poor in the cash transfer program, is realized. The problem of maintaining low cumulative tax rates on earnings in an income transfer system will be discussed further in the section on income maintenance schemes.

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[6] The tax rates differ for male and female heads of AFDC families. This is explained in section II. An explanation also is provided there for the observed reduction in the AFDC tax rate and of three types of techniques used by States in determining payments. Mississippi used the third of the three techniques described in that section.

Note also that the observed decline in average tax rates probably would have been greater had we been able to hold earnings constant between 1967 and 1971. The increase in average earnings meant that more people were in the higher welfare tax brackets in 1971. Thus, had there been no change in the law in 1967, average tax rates would have shown an increase for this reason. This effect partially offset the reductions in AFDC tax rates induced by the legal changes.

[7] A notch occurs in a transfer program when a small increase in earnings results in a precipitous drop in benefits.

[8] The rules that are used to implement the Brooke amendment, as well as those for the section 235 and 236 programs, are available in various circulars and transmittal notices from the Housing Programs Management Branch, Department of Housing and Urban Development. (The two circulars are RHM 7475.1 and RHM 7465.3. The two transmittal notices are HM 7465.10 (March 16, 1971) and HM 7465.10 (April 14, 1972).

[9] Department of Agriculture, Food and Nutrition Service, "Food Stamp Program—Current as of February 1, 1972," pp. 9 and 26–30.

II. CUMULATIVE TAX RATES IN THE CURRENT TRANSFER SYSTEM FOR LOW-INCOME FAMILIES

Since the 1962 and 1967 amendments to the Social Security Act have been applied in State AFDC programs, there no longer is a 100-percent tax rate on earnings for two reasons. In 1967 the "30 and ⅓ rule" was adopted; it provides that the first $30 of monthly earnings and one-third of all earnings above $30 are retained by the recipient and do not result in a reduction of benefits. A provision in 1962 allowed for the deduction from earnings of broadly defined work-related expenses; this deduction is now made after the "30 and ⅓ rule" is applied to earnings, and serves as an additional reduction on the amount of earnings used as an offset to benefits. These two major modifications in the AFDC tax structure will be illustrated with examples from three States that are representative of the three major varieties of tax structures that exist in the AFDC program.

The AFDC tax structure in Illinois is representative of what was in effect in 35 States (including the District of Columbia) in December 1971.[10] The procedure for adjusting benefits to earnings is as follows: From gross monthly earnings, $30 and one-third of earnings above $30 are deducted; then work-related expenses, as defined by each State, are deducted from earnings net of the "30 and one-third." Earnings net of all these deductions are then subtracted from the payment made to the family at zero earnings.[11] The result of the procedure is that AFDC payments are reduced by under 67 cents for each dollar of earnings above $30. The deduction of work-related expenses from earnings after the "30 and one-third" deduction means that earnings equal to such expenses do not affect AFDC payments.[12] In effect, a recipient deducts 33 cents from each dollar of earnings above $30 and then deducts that part of the remainder of the dollar which he spent on work-related expenses. If such expenses are 25 cents per dollar of earnings, then 42 cents (=$1—33—25 cents) of each dollar

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[10] The group of 35 States subdivides into groups of 12 and 23, with the 12 paying 100 percent of the State cost standard and the 23 paying some amount below their cost standards to families with no other income. In the group of 23, payments are reduced when earnings rise in the same manner as they are reduced in the group of 12. (The States are divided here based on information available from: Department of Health, Education, and Welfare, Social and Rehabilitation Services, "State's Methods for Determination of Amount of Grant for an AFDC Family Size of Four (1 Adult and 3 Children) as of December 1971," unpublished table, March 31, 1972).

[11] This procedure can be expressed by the equation

(1) $B = G - [E - (S + 1/3[E - S] + F)]$

where B = the net benefit received by a family,
G = the payment made to a family when its non-assistance income is zero,
E = gross earnings,
S = the monthly set-aside of $30,
F = work-related expenses.

Other income is assumed to be zero throughout this paper.

[12] A regulation issued by HEW in early 1969 specified that work-related expenses were to be deducted from earnings net of the "30 and 1/3" rather than before the 30 and one-third deductions were made. (Gary L. Appel, *Effects of a Financial Incentive on AFDC Employment: Michigan's Experience Between July 1969 and July 1970*, Minneapolis, Institute for Interdisciplinary Studies, March 1972, pp. 19–22).

of earnings reduces the AFDC payment by 42 cents.[13] This 42-cent reduction in the AFDC benefit per dollar of earnings is the implicit AFDC tax or benefit reduction rate.[14]

Note, though, that although a recipient in Illinois loses only 42 cents of AFDC benefits for every dollar earned above $30, his net gain in spendable income always is less than 58 cents (=$1—42 cents). This is because he does incur actual expenses in producing his income. Thus we may distinguish between total tax rates resulting from the reimbursement of work related expenses that are relevant for AFDC administrators and those facing AFDC recipients.[15] In Illinois for example, the 42-percent benefit reduction rate is what concerns administrators because it affects actual AFDC payments and thus government costs. For AFDC recipients, the reimbursement of work-related expenses never reduces the cumulative tax rate to 42 percent. Lerman points out that it does put a ceiling of 67 percent on the total tax rate facing an AFDC recipient who receives no other transfers. He then notes that an employed recipient always pays social security taxes and may consider actual work expenses as taxes in the sense that they reduce spendable income. If actual work-related expenses are considered by the recipient to be a tax on spendable income, then only to the extent that an employed recipient is reimbursed for consumption expenditures that are defined by welfare departments to be work-related expenses, does the total tax rate facing this type of AFDC recipient fall below 67 percent. In view of this argument, the reader should be careful when viewing the tax rates in Tables 1–6, not to overstate the financial incentive to work afforded to recipients by the current system. (Of course, the 42 percent rate always retains some relevance for the recipient: it determines the level of earnings at which his AFDC benefit is reduced to zero—his breakeven point—and at which, consequently, he loses his eligibility for medicaid.)

[13] This can be demonstrated by rearranging terms in equation (1):

(1a) $B = G - [(1 - 1/3)E - (1 - 1/3)S - F]$

(1b) $B = G + F - 2/3 (E - S)$

Equation (1b) indicates that benefits are raised by the full amount of work-related expenses; or, alternatively, the net reduction in benefits associated with an increase in earnings is decreased by the full amount of work-related expenses.

[14] The *net* change in benefits per dollar of earnings above $30 per month where $F = .25E$ and $S = 30$ is:

(1c) $B = G + .25E - 2/3(E - 30)$

(1d) $\dfrac{\partial B}{\partial E} = -.42$

[15] See Robert I. Lerman, "Incentive Effects in Public Income Transfer Programs," this volume, for an emphasis on the net gain in spendable income resulting from a rise in earnings.

TABLE 2.—*Earnings, transfers, and taxes for a female-headed AFDC family with 3 children in Chicago, Ill., 1971*

A	B	C	D	E	F	G	H	I	J	K	L	M
Gross earnings (dollars)	Take home pay a (dollars)	Deductible work-related expenses b (dollars)	AFDC benefit c (dollars)	Net income₁ (B+D) (dollars)	Cumulative marginal tax rate₁ $\left(1-\dfrac{\Delta E}{\Delta A}\right)$ (percent)	Food stamp bonus d (dollars)	Net income₂ (B+D+G) (dollars)	Cumulative marginal tax rate₂ $\left(1-\dfrac{\Delta E}{\Delta A}\right)$ (percent)	Average medicaid benefit e (dollars)	Public housing subsidy f (dollars)	Net income₃ (B+D+G+J+K) (dollars)	Cumulative marginal tax rate₃ $\left(1-\dfrac{\Delta L}{\Delta A}\right)$ (percent)
0	0	0	3,384	3,384		408	3,792		888	1,341	6,021	
					> 5			> 30				> 52
576	546	144	3,384	3,930		264	4,194		888	1,214	6,296	
					> 50			> 50				> 64
4,300	3,968	1,075	1,832	5,800		264	6,064		888	689	7,641	
					> 61			> 61				> 76
8,600	7,414	2,150	42	7,456		264	7,720		888	92	8,700	
					> 120			> notch				> notch
8,698	7,436	2,175	0	7,436		0	7,436		0	79	7,515	

a Entries in this column are computed by subtracting the social security tax, Federal income tax, and State income tax from "Gross Earnings," col. A. The social security tax is determined by multiplying gross earnings by 0.052. The Federal income tax payment is computed in the following manner. Under the 1971 income tax law, a family of 4 which claimed 4 exemptions at $750 per exemption and the minimum standard deduction of $1,300 would not pay any income tax on the first $4,300 of annual income. Above $4,300, the following schedule was in effect:

Income:	Tax rate (percent)
$4,301 to 5,300	14
5,301 to 6,300	15
6,301 to 7,300	16
7,301 to 8,300	17
$8,301 to 12,300	18

(Source: U.S. Internal Revenue Service, Form 1040). The State income tax payment is obtained as follows: The Illinois income tax law allows $4,000 of exemptions for a 4 person family. Income above $4,000 is taxed at a 2.5 percent rate. (Source: State of Illinois Department of Revenue, Form IL–1040.)

b After $360 and ⅓ of earnings above $360 are deducted from earnings in the process of computing the AFDC benefit, The Illinois Department of Public Aid allows the deduction of all mandatory payroll deductions, like taxes and health insurance premiums. Child care expenses are added to the benefit rather than deducted from earnings. Both of these procedures involve the complete reimbursement of all work-related expenses. Gary Appel has estimated the relationship between payroll deductions, work-related expenses, and recipient earnings for the State of Michigan in fiscal year 1970. Relying on his findings and on the comparability of the definitions of payroll deductions and work-related expenses in Illinois and Michigan, I assumed that on the average they totaled 25 percent of gross earnings. The data used for Table I attest to the reasonableness of this assumption. (Sources: Department of Health, Education, and Welfare, Assistance Payments Administration, "Summary of State Agency Policy On Expenses Reasonably Attributable to the Earnings of Income—AFDC," a mimeographed chart, 1971; and Gary L. Appel, *Effects of a Financial Incentive on AFDC Employment: Michigan's Experience Between July 1969 and July 1970,* Minneapolis, Institute for Interdisciplinary Studies, March 1972, pp. 21–2.)

^c The *annual* AFDC benefit is determined by first deducting $360 (=12×$30) and ⅓ of earnings above $360 from gross earnings. Then work-related expenses, which are assumed to be 25 percent of gross earnings are deducted from earnings net of the $360 and ⅓ deductions. Earnings net of these 3 deductions (are sometimes called "countable income" and) reduce the welfare payment on a dollar-for dollar basis. This procedure may be summarized in the following equation:

$$B = 3384 - [E - (360 + \tfrac{1}{3}[E - 360] + 0.25E)]$$

where the notation is the same as that given in footnote 11 in the text.

^d The value of the food stamp bonus at zero income is $1,272. Money income reduces the bonus at a rate of 25 percent, until the family is paying $1,008 for its stamps—or receiving a bonus of $264. Then the bonus is not reduced any further until the AFDC benefit is zero. This procedure may be summarized in the following equations:

if $0 < Y < 3960$,	$X = 1272 - 0.25Y$
$3960 < Y < 8698$,	$X = 264$
$Y > 8698$,	$X = 0$

where Y = gross money income, and is the sum of E and B, and
X = food stamp bonus

^e The average medicaid expenditure per month for AFDC recipients in Illinois was $19.54 in October, $18.33 in November, and $16.09 in December of 1971. From these data, I assumed that the average monthly expenditure was $18.50 throughout 1971. For a 4 person family, the average medicaid expenditure would be $888. The family receives medicaid until its welfare benefit is reduced to zero. (Source: Correspondence from Harold Nudelman, Illinois Department of Public Aid, July 20, 1972.)

^f The estimated market value of a 2 bedroom public housing unit in Chicago in 1971 was $1,920. The subsidy is equal to $1,920 less the rent paid by the family. Rents in public housing units in Chicago are determined according to secs. 212 and 213 of the Housing and Urban Development Act of 1969 (the Brooke Amendment). From gross money income, a family deducts 5 percent of income, child care expenses, and $300 for each dependent. Then rent is set equal to 25 percent of net income. At $3,384 of gross money income, the rent is $579 per year and the subisdy is $1,341 (=1920—579). (Source: U.S. Senate, Committee on Finance, *Hearings on H.R. 1*, July 27 and 29 and August 2 and 3, 1971, p. 56; and U.S. Department of Housing and Urban Development, Housing Programs Management Branch, Transmittal Notice 15. HM 7465.10, Apr. 4, 1972.)

^g The "Δ" symbols in parentheses means the "change in." For example, "ΔL" means the change in net income in col. L between $6,021 and $6,296, $6,296 and $7,641, etc.

Table 2 contains information on the tax rates faced by a female-headed AFDC family of four in Chicago. An important observation to make is that a family receiving AFDC, food stamps, and medicaid faces relatively low tax rates both in the AFDC program alone, and cumulatively. This holds true over a broad range of earnings for families not in public housing (or in some other type of federally subsidized housing unit).[16] Between $576 and $4,300 of annual earnings,[17] the family head faces a 42-percent tax rate in AFDC, a 5.2 percent social security tax rate, and a 2.5-percent State income tax rate on the last $300 of this amount of earnings.[18] These yield a cumulative tax rate ($CMTR_1$) in column F of 50 percent.[19] Above $4,300 of earnings, the individual also begins to pay Federal income taxes, which add roughly 14 points to the cumulative tax rate. Considering the tax rate built into the public housing program, the average cumulative tax rate over the range of earnings between $576 and $8,600 is roughly 70 percent. Given the number of transfer programs considered, the cumulative tax rate is kept this low by a substantial "notch" at the breakeven level of earnings in AFDC. At $8,698 of annual earnings, the family loses its free medical care [20] and its remaining food stamp benefits.

In the AFDC–UF program,[21] the tax structure is the same as that in AFDC, except for one rule. That is that an AFDC–UF father foregoes the family's monthly benefit if he works 100 or more hours in the month, without regard to his earnings at that point. For example, if a man in Chicago worked exactly 100 hours in every month of the year at a wage of $1 per hour or $1,200 per year, his AFDC–UF benefit would be zero [22] (see table 3, line 4). By contrast, if he worked exactly

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[16] An estimate provided by James R. Storey is that 13 percent of all AFDC recipients live in public housing. In Chicago, given its extensive public housing program, this figure probably is higher. (U.S. Congress, Subcommittee on Fiscal Policy, Joint Economic Committee, "Public Income Transfer Programs: The Incidence of Multiple Benefits and the Issues Raised by their Receipt," Washington, D.C., April 10, 1972, table 8.)

[17] Note that although the accounting period in AFDC is 1 month, the tables are drawn as if it and the ones in the housing, food stamp, and medicaid programs are annual. The use of annual data in this context implies that earnings are assumed to be fairly stable throughout the year.

[18] This is somewhat below that the cumulative rate would be in other States of this first group. The Illinois welfare department puts a ceiling on the amount of money that an AFDC family can spend on food stamps at $1,008 per year. This ceiling is reached before gross money income, the sum of gross earnings and AFDC benefits, reaches $3,960 (in table 2). Thus above $576 of earnings, the food stamp bonus is constant until AFDC benefits are zero.

[19] Cumulative tax rates were computed, in general, over ranges of earnings in which marginal tax rates—which are changes in benefits and/or taxes per *single* dollar of a change in earnings—are constant. That is, except to illustrate motches as in the fourth line of table 2, the amounts of earnings selected in column A of tables 1–16 are those at which new taxes take effect or the benefits of a transfer program are reduced to zero.

[20] Under the medicaid "spend-down" rule, this family can begin receiving medicaid benefits if its income remains at the AFDC breakeven level, only if its medical costs exceed $4,194 (= $8,698 − $4,504) per year. $4,504 is ⅔ of G, and is the level of income below which non-AFDC families may receive full medicaid benefits.

[21] The AFDC–UF program is a segment of the AFDC program in which families with unemployed male heads receive federally aided public assistance. The program operates, with varying degrees of coverage, in just over 40 percent of the States.

[22] This would not be the case if he could establish eligibility for general assistance. His chances of doing so would vary by locality and State, and might be relatively good in Chicago.

99 hours in every month at a wage of $7.23 per hour and earned $8,600 per year, his earnings would be treated according to the 30 and one-third and work-related expense rules, and he would receive an AFDC-UF benefit of $42 per year (see table 2, line 4).[23] His loss of AFDC-UF benefits would be cushioned by the fact that food stamp and public housing subsidies are income-conditioned, which means that those benefits would rise as his gross money income falls. In Illinois, he would also be eligible for medicaid benefits until his income rose to four-thirds of the State cost standard, or $4,504.[24]

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[23] It would have been preferable to use data for California, since it had over one-third of the 138,000 AFDC-UF cases in early 1972. Illinois had the second largest AFDC-UF caseload, amounting to roughly one-seventh of the national caseload. (Department of Health, Education, and Welfare, Social and Rehabilitation Service, "Public Assistance Statistics, January 1972," table 8.)

[24] At that point, he would not lose all of his medicaid benefits, as is shown in table 3. Rather, he would be subjected to the medicaid "spend-down" described in footnote 10.

TABLE 3.—*Earnings, transfers, and taxes for a male-headed AFDC–UF family with 2 children in Chicago, Ill., 1971*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Gross earnings (dollars)	Take home pay[a] (dollars)	Deductible work-related expenses[b] (dollars)	AFDC benefits[c] (dollars)	Net income$_1$ (B+D) (dollars)	Cumulative marginal tax rate$_1$ $\left(1-\dfrac{\Delta E}{\Delta A}\right)$ (percent)	Food stamp bonus[d] (dollars)	Net income$_2$ (B+D+G) (dollars)	Cumulative marginal tax rate$_2$ $\left(1-\dfrac{\Delta H}{\Delta A}\right)$ (percent)	Average medicaid benefit[e] (dollars)	Public housing subsidy[f] (dollars)	Net income$_3$ (B+D+G +J+K) (dollars)	Cumulative marginal tax rate$_3$ $\left(1-\dfrac{\Delta L}{\Delta A}\right)$ (percent)
0	0	0	3,384	3,384	> 5	408	3,792	> 30	888	1,341	6,021	> 52
576	546	144	3,384	3,930	> 47	264	4,194	> 47	888	1,214	6,296	> 62
1,170	1,109	293	3,137	4,246	> notch	264	4,510	> notch	888	1,122	6,520	> notch
1,200	1,138	0	0	1,138	> 6	972	2,110	> 31	888	1,860	4,858	> 74
4,504	4,237	0	0	4,237	> 13	147	4,384	> 52	0	1,076	5,460	> 75
5,016	4,630	0	0	4,630	> 13	0	4,630	> 13	0	954	5,584	> 37
10,724	9,032	0	0	9,042		0	9,042		0	0	9,032	

[a] See table 2, footnote a.

[b] See table 2, footnote b.

[c] The AFDC benefit is determined by the same procedure for male-headed families as that specified for female-headed families in footnote c for table 2, until the male head works 100 or more hours per month. Regardless of their earnings (and other income), AFDC–UF units become ineligible for assistance benefits when their heads work 100 hours in a given month.

[d] The value of the food stamp bonus at zero income is $1,272. Money income reduces the bonus at a rate of 25 percent, until the family is paying $1,008 for its stamps—or is receiving a bonus of $264. Then the bonus is not reduced any further as long as the family is receiving assistance. Once it is off assistance, the family's bonus is determined (roughly) by the equation: $X=1,272-0.25\,Y$, where the notation is given in footnote d of table 2.

[e] In Illinois, a family can receive medicaid benefits until its income exceeds 4/3 of the assistance standard, or $4,504 ($=4/3X\$3,384$) in this instance. At that point, it must pay a medicaid deductible equal to the difference between its income and $4,504 before it receives medicaid benefits once again. (See table 2, footnote e.)

[f] See table 2, footnote f.

The AFDC tax structure in Missouri is representative of that of a second group of States, of which there were nine in December 1971. Their procedure for adjusting benefits to earnings is the following: from gross earnings, $30 and one-third of the remainder are deducted; then work-related expenses. as defined by each State, are deducted from earnings net of the $30 and one-third. Next, earnings net of these deductions are compared to the difference between the State's "cost standard" and its maximum payment at zero income. Where net earnings are less than this difference, the earnings remained "untaxed" in the sense that the AFDC benefit is not reduced; where earnings are larger than the difference, the family retains earnings equal to the difference, with earnings in excess of that difference reducing payments on a dollar-for-dollar basis. In sum, earnings net of all these deductions are then subtracted from the payment made to the family at zero earnings (and other income).[25]

The result of this procedure is that AFDC payments are reduced by less than 67 cents for each dollar of earnings above $30. As in the first group of States, the deduction of work-related expenses from earnings after the 30 and one-third rule has been applied means that earnings equal to such expenses do not affect AFDC payments. Here, too, a dollar of earnings eventually reduces the AFDC payment by 42 cents. In addition, though, in the instance of a family of four whose cost standard is $338 and whose maximum payment is $130, earnings net of the standard deductions equal to $228 (=$338−$130) do not reduce the welfare payment. Therefore, in this case, not until gross monthly earnings reach $518 do they begin to affect the welfare payment. Below $518 of monthly earnings, the AFDC benefit of $130 is not reduced at all; all earnings are absorbed by the various deductions, including the special one of this group of States; which is less than or equal to the cost standard minus the maximum payments. This special deduction varies by State and family size within the nine States.

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[25] Using the same notation as that used in footnote 11, the procedure can be represented by equation (2).

$$(2) \quad B = G - [E - (S + \tfrac{1}{3}(E - S) + F + K)]$$

where K equals the State cost standard, C minus G, if earnings net of prior deductions equal or exceed C−G; and K < C−G, if net earnings are less than C−G, in which case K equals net earnings. For a family of four in Missouri, C equals 338 and G equals 130, so C−G equals 228. On the assumption that net earnings equal $228, K equals 228; and, if S equals 30 and F equals 0.25E, then

$$(2a) \quad B = G - [(1 - \tfrac{1}{3})E - (1 - \tfrac{1}{3})30 - 0.25E - 228)]$$

$$(2b) \quad B = G - [0.42E - 228]$$

For a family of 4, where 0.42E − 228 > 0, or where E > 518 per month. the marginal tax rate on earnings is

$$(2c) \quad \frac{\partial = B}{\partial = E} = -0.42$$

The consequence of these deductions, apparent in table 4, is that the combined tax rate from taxes and AFDC benefit reductions, $CMTR_1$, is 5.2 percent for the first $4,300 of annual earnings and then barely exceeds 20 percent over the next $3,000 of annual earnings. Even $CMTR_3$, which is the cumulative rate faced by recipients of AFDC, food stamps, and public housing, is kept around 50 percent up to $6,568 of annual earnings. This implies that the current transfer system in this group of States affords recipients substantial financial incentive to work. Again, though, there is a sizable notch at $10,311 of annual earnings.

TABLE 4.—*Earnings, transfers, and taxes for a female-headed AFDC family with 3 children in St. Louis, Mo., 1971*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
					Cumulative marginal tax rate 1			Cumulative marginal tax rate 2				Cumulative marginal tax rate 3
Gross earnings (dollars)	Take home pay [a] (dollars)	Deductible work-related expenses [b] (dollars)	AFDC benefits [c] (dollars)	Net income 1 (B+D) (dollars)	$\left(1-\frac{\Delta E}{\Delta A}\right)$; (percent)	Food stamps bonus [d] (dollars)	Net income 2 (B+D+G) (dollars)	$\left(1-\frac{\Delta I}{\Delta A}\right)$ (percent)	Average medicaid benefit [e] (dollars)	Public housing subsidy [f] (dollars)	Net income 3 (B+D+G +J+K) (dollars)	$\left(1-\frac{\Delta L}{\Delta A}\right)$ (percent)
0	0	0	1,560	1,560		1,038	2,598		450	1,600	4,648	
					> 6			> 17				> 30
4,300	4,062	1,075	1,560	5,622		554	6,176		450	632	7,258	
					> 24			> 33				> 52
6,568	5,832	1,642	1,560	7,392		300	7,692		450	206	8,348	
					> 66			> 71				> 81
8,550	7,339	2,138	734	8,073		200	8,273		450	0	8,723	
					> 64			> 69				> 69
10,300	8,699	2,575	4	8,703		113	8,816		450	0	9,266	
					> 55			> notch				> notch
10,311	8,708	2,578	0	8,708		0	8,708		0	0	8,708	

[a] See table 2, footnote a, but substitute the following in computing the State income tax. A female-headed family with 3 children may claim $3,200 of personal exemptions. Beyond that, it may deduct 5 percent of income and Federal income taxes from income. Starting at 1 percent on the 1st $1,000 of taxable income, the tax rate rises by ½ of a percentage point for each $1,000 of taxable income. (Source: Missouri Department of Revenue, form 28-10.)

[b] Missouri has a schedule for relating the expenses of producing earned income to earnings. The average proportion of earnings spent producing them is roughly 0.25. (Source: Missouri Division of Welfare, Caseworker's Manual, sec. VI, appendixes A and D.)

[c] For a family of 4, the AFDC benefit can be computed as follows: If [E−(360+½ (E−360)+0.25E)]>0, B=1,560−[E−(360+½(E−360)+0.25E)−2496]; if [E−(360+½ (E−360)+0.25E)]<0, B=1,560; where the notation is the same as that given in footnote 11 of the text.

[d] We were unable to obtain the formula used by the St. Louis Welfare Department in computing food stamp bonuses. Although we knew that the technique used is similar to that described in table 2, footnote d, we assumed for convenience that food stamp benefits declined gradually as income rose. The equation used here was: X=1,272−0.10(E+B−F); where X=food stamp bonus and the rest of the notation follows footnote 11.

[e] Source: Correspondence from Bruce E. Smith, Missouri Department of Public Health and Welfare, Aug. 7, 1972.

[f] The St. Louis Housing Authority determines rents by setting rents, R, at R=0.25 (0.75E+0.80B−600), where the notation follows footnote 11. The family's subsidy in this instance would be equal to the difference between the estimated market rental of its, apartment ($1,600) and its rent. (Source: St. Louis Housing Authority, "Rental Policy, Definition of Aggregate Gross Family Income and Definition of Adjusted Gross Income or Eligibility and for Rent.")

The AFDC tax structure of Delaware is representative of that which is, in effect, in a third group of States, of which there were seven in December 1971. This procedure is the same as that used in the other two groups of States for the first two steps. But after earnings net of the $30 and one-third and work expense deductions are subtracted from the State cost standard, the family receives an AFDC payment equal to a percentage of this difference.[26] The result of this procedure is that AFDC payments are reduced by less than 67 cents for each dollar of earnings above $30. Again, the deduction of work-related expenses from earnings after the $30 and one-third rule has been applied means that earnings equal to such expenses do not affect AFDC payments. But now the marginal tax rate net of these deductions works out to be the product of multiplying 67 percent by the percentage applied to the cost standard minus countable earnings. In the case of Delaware, the percentage is 0.60, so 0.60 times 0.667 is 0.40, which is the marginal tax or benefit reduction rate.

The tax rates for States in this third group are suggested by the numbers in table 5, in which earnings, taxes, and benefits are computed again on an annual basis. Note that for a family receiving food, housing, and medical subsidies, $CMTR_4$ is below 50 percent over the first $3,200 of annual earnings. Again, though, there is a severe notch at the AFDC break-even level, where the rules of the surplus commodities and medicaid programs dictate that families suddenly lose their benefits from these programs. Having such a notch, of course, makes it easier to retain low cumulative tax rates without raising break-even levels of income.

Delaware is among a growing group of States that has come to recognize the effects of a broad definition of work-related expenses. Appel has cited Michigan as another such State:

> According to Michigan regulations covering the period of July 1969–July 1970, the actual reported work expenses for women AFDC recipients should be $20 per month for miscellaneous expense, such as cosmetics, plus an amount equal to (1) business expenses, such as cost of tools, special clothing or uniforms; (2) transportation; (3) training expenses where required by the employer; (4) FICA tax; (5) income tax withheld; (6) mandatory payroll deductions, such as retirement funds, union dues, and group insurance plans; (7) court-ordered payments, such as wage garnishments * * * [27]

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[26] Using p for some percentage of the difference between the cost standard and net earnings (countable income), and otherwise using the same notation employed in footnotes 11 and 24, their procedure can be expressed in this manner:

$$(3) \quad B = p[C - (E - [S + \tfrac{1}{3}(E-S) + F])]$$

In Delaware, S equals 35 and F is fixed at $70, which divides into $20 for child care and $50 for other work-related expenses; p equals 0.60; thus

$$(3a) \quad B = 0.60[C - \tfrac{2}{3}E + 105]$$

Therefore, the marginal tax rate in the AFDC program is

$$(3b) \quad \frac{\partial B}{\partial E} = -0.40$$

[27] Appel, p. 21.

TABLE 5.—*Earnings, transfers, and taxes for a female-headed AFDC family with 3 children in Wilmington, Del., 1971*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Gross earnings	Take-home pay [a]	Deductible work-related expenses [b]	AFDC benefit [c]	Net income 1 (B+D)	Cumulative marginal tax rate 1 $\left(1-\frac{\Delta E}{\Delta A}\right)$ (percent)	Value of surplus commodities [d]	Average medicaid benefit [e]	Public housing subsidy [f]	Net income 2 (B+D+G+H+I)	Cumulative marginal tax rate 2 $\left(1-\frac{\Delta J}{\Delta A}\right)$ (percent)
$0	$0	$0	$2,066	$2,066		$661	$695	$755	$4,177	
					> 5					> 30
420	398	0	2,066	2,464		661	695	650	4,470	
					> 29					> 39
1,600	1,517	420	1,786	3,303		661	695	530	5,189	
					> 26					> 46
3,200	3,027	840	1,459	4,486		661	695	212	6,054	
					> 47					> 76
3,930	3,708	840	1,166	4,874		661	695	0	6,230	
					> 55					> 55
6,838	6,175	840	3	6,178		661	695	0	7,534	
					> 50					> notch
6,850	6,184	840	0	6,184		0	0	0	6,184	

[a] See table 2, footnote a, but substitute the following in computing the State income tax: The Delaware tax law allows a $600 exemption for each member of the family, a standard deduction of 10 percent of income, and the deduction of Federal income taxes. The tax schedule for taxable income is:

Taxable income:	Tax rate in bracket
$60 to $1,000	1½
$1,000 to $2,000	2
$2,000 to $3,000	3
$3,000 to $4,000	4
$4,000 to $5,000	5
$5,000 to $6,000	6

(Source: Delaware Division of Revenue, form 200.)

[b] The Delaware Welfare Department allows the deduction from earnings of $50 per month for work-related expenses and up to $20 per month for day-care costs. We assumed that the maximum deduction was applied to earnings above $133 per month, with half of the maximum deducted up to that level of earnings.

[c] The welfare benefit, B, is determined by the following formulas:

Where earnings, E=0, 420, 1600,
B=.60(3444−[E−(420+⅓(E−420)+420)])
Where E 1600,
G=.60(3444−{E−(420+⅓(E−420)+420)])

[d] The estimated market value of surplus foods for a family of 4 in 1971 was $661. The total package of foods is not reduced as E increases. (Source: U.S. Senate Committee on Finance, Hearings on H.R. 1, July 27, 29, and Aug. 2, 3, 1971, p. 53.)

[e] The average expenditure per month on a family of 4 under the medicaid program was $57.90 in 1971. (Source: Correspondence from Harriet W. Duff, Delaware Division of Social Service Payments, July 28, 1972.)

[f] The estimated market rental of a 2-bedroom apartment in Wilmington in 1971 was $1,020. Rents in public housing in that city are determined according to the Brooke amendment, described in footnote f of table 2.

Recognizing the impact of this definition, Michigan put a ceiling on work-related expenses equal to $40 per month plus income and social security taxes. Note the effect of this ceiling by comparing the $CMTR_1$ and breakdown level of income in table 6 with those in table 2. The marginal tax rate above the initial set-aside in the AFDC program alone is about 20 points higher in Michigan than in Illinois. And, although the annual AFDC benefit level is only $232 higher in Illinois than in Michigan, the breakeven level of income is $1,598 more in Illinois assuming allowable work expenses in Illinois are 25 percent of gross earnings.

For families receiving AFDC, tax rates under AFDC alone and cumulatively are surprisingly low. Tables 2 through 6 also show that benefits to families receiving in-kind transfers raise total benefits at zero earnings to substantial levels. Even in Missouri, where the AFDC guarantee is $1,560 per year, total benefits can be raised to over $4,800 by the receipt of food stamps, medicaid, and public housing.[28] In States with high AFDC guarantees, the low AFDC tax rate raises breakeven levels of income for female-headed families to over $7,000 to $8,000. In States with low AFDC guarantees, even lower tax rates can raise breakeven income levels to those reached in the high payment States. The last point to make about tables 2–6 is that cumulative tax rates are kept below 80 or 90 percent by the fact that food stamp and public housing benefits are conditioned on total income—including AFDC payments adjusted for earnings. To understand this last point well, the closing part of section IV must be read carefully.

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[28] The benefits are valued at this cost to the Government, not by the recipients.

TABLE 6.—*Earnings, transfers, and taxes for a female-headed AFDC family with 3 children in Detroit, Mich., 1971*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Gross earnings	Take-home pay [a]	Work related expenses [b]	AFDC benefit [c]	Net income 1	Cumulative marginal tax rate 1 $\left(1-\frac{\Delta E}{\Delta A}\right)$ (percent)	Food stamp bonus [d]	Net income 2 (B+D+G)	Cumulative marginal tax rate 2 $\left(1-\frac{\Delta H}{\Delta A}\right)$ (percent)	Average medicaid benefit [e]	Public housing subsidy [f]	Net income (B+D+G+J+K)	Cumulative marginal tax rate 3 $\left(1-\frac{\Delta L}{\Delta A}\right)$ (percent)
$0	$0	$0	$3,152	$3,152		$326	$3,478		$850	$1,276	$5,604	
					> 5			> 16				> 45
1,106	1,048	538	3,152	4,200		156	4,356		850	1,004	6,210	
					> 5			> 5				> 14
1,170	1,109	541	3,152	4,261		156	4,417		850	998	6,265	
					> 67			> 67				> 68
4,300	4,076	704	1,229	5,305		156	5,461		850	960	7,271	
					> 67			> 67				> 67
7,060	6,210	1,330	15	6,225		156	6,381		850	960	8,191	
					> 60			> notch				> notch
7,100	6,241	1,339	0	6,241		0	6,241		0	0	6,241	

[a] See table 2, footnote a, but substitute in computing the State income tax. For a family claiming 4 personal exemptions, each of which is worth $1,200, the tax bill is equal to 0.0314 (E–4800). (Source: Michigan Department of Treasury, form MI-1040.)

[b] Work-related expenses include all income and social security taxes paid plus $40 per month for other costs of employment. (Source: Michigan Department of Social Services, items 320.11 (8) and 320 11 (a) of the Caseworkers Manual.)

[c] The equation for determining the AFDC benefit where annual earnings exceed $360 is: B=3152—[E—(360+1/3(E—360)+F)] where the notation is the same as that given in footnote 11 of the text.

[d] The food stamp bonus in Michigan was $326 per month when net income was $3,152 per year. Above $3,152, the food stamp bonus declined at an average rate of 30 percent as net income (= earnings + AFDC benefits—work related expenses) rose, until income reached $3,720 per year. At that point, the food stamp bonus was constant until AFDC benefits reached zero.

[e] Families living in public housing in Detroit have their rents computed according to different rules when they are on and off assistance. While receiving AFDC, a family's rent, R, is computed according to the Brooke amendment, (described in footnote f of Table 2). If R>$840 in the Brooke formula, R is limited at $840. When the family leaves AFDC, R under the Brooke formula is compared to what it would be under a separate schedule used by the Detroit Housing Commission; and the family's R is the lesser of the two. Under all the formulas used, income is defined comprehensively, except for in-kind benefits. (Source: Correspondence from Anne Kyker, Detroit Housing Commission, July 17, 1972.)

[f] The estimated medicaid expenditure per family of 4 in fiscal year 1973 is $850. (Source: Correspondence with Celia Lounsburg, Michigan Department of Social Service, July 18, 1972.)

In actuality, average effective cumulative tax rates may be lower than those suggested in tables 2–6 and reported in table 1. First, some earnings may go unreported by recipients or be ignored by caseworkers.[29] Second, the 1-month accounting period in AFDC allows for a family to receive no earnings and full benefit in month 1; substantial earnings and no benefit in month 2, as the family is removed from AFDC; and no earnings and full benefit again in month 3, if the earnings of month 2 were spent and the family reestablished eligibility. This allows the family to receive higher total benefits than if the accounting period were 1 year. Third, there are lags in accounting in the food stamp and housing programs; and one suspects that if lags exist they are more likely to exist when earnings rise than when they fall. That is, the food stamp and housing authorities either are too busy to adjust bonuses and rents to increases in earnings or simply are not informed of such increases. On the other hand, as earnings decline, beneficiaries are more likely to demand upward adjustments in benefits.

III. CUMULATIVE TAX RATES UNDER THE HOUSE-PASSED WELFARE
REFORM PLAN (H.R. 1, 92D CONG.) AND IN THE BRITISH WELFARE
REFORM PROGRAMS

The previous section indicated that the current transfer system contains high cumulative benefits, surprisingly low cumulative tax rates and, consequently, high breakeven levels of earnings and large notches. Given these characteristics, this system is sustainable at an acceptable cost for two reasons. One is that families do not qualify for AFDC until their incomes fall below the AFDC standards;[30] or for medicaid until their incomes are either less than three-fourths of the AFDC standards or less than the AFDC standards, depending upon the State. A second reason is that three-fourths of all poor families headed by males are excluded from the AFDC and AFDC–UF program because the males are neither incapacitated nor unemployed or because the State in which they reside does not have an AFDC–UF program. A program of welfare reform that seeks to remove the horizontal inequities that arise from these exclusions either must lower benefits or raise tax rates, unless it is to be substantially more expensive than the current system. The version of welfare reform proposed by the Nixon administration and passed by the House in 1972, the opportunities for families—family assistance plan (OFP–FAP), sought to eliminate those inequities by raising benefits for families with the lowest AFDC payments, raising tax rates substantially, tightening the income accounting system, and raising total costs by roughly $5 billion. The tax rates in OFP–FAP and related programs are discussed here.

The first major modification in the AFDC tax structure contained in the OFP–FAP proposal is the replacement of the full reimbursement of broadly defined work-related expesnes by an increase in the

[29] Joel F. Handler and Ellen Jane Hollingsworth, *The Deserving Poor: A Study of Welfare Administration,* Chicago: Markham, 1971, pp. 143–46.
[30] This does not contradict the material in section II which shows that women with earnings above AFDC guarantees can receive supplementary AFDC benefits. One cannot qualify initially for AFDC until his income falls below the guarantees, however.

monthly set-aside from $30 to $60 per month, or to $720 on an annual basis; and by making child care expenses, up to a limit of $2,000 per year, deductible from earnings. Earnings net of these deductions are deducted from the payment made to the family at zero earnings (and other income). The benefit reduction rate which results from this procedure is 67 percent above the earnings disregard, for families which incur no child care expenses. If a family incurs such expenses equal, say (very generously), to 20 percent of gross earnings, then benefits are reduced at a 53-percent rate as earnings increase.[31] The tax rates that prevail in the current AFDC program are lower than these for two reasons. One is that under AFDC work-related expenses are defined to include more than child care costs, and are more likely to include expenditures that are not purely work-related. A second is that under AFDC such expenses are deducted after the $30 and one-third deductions are made from gross earnings. Thus, in AFDC, a dollar of earnings adds more to the real net income of a family than it would under OFP-FAP.

In some States, the payment level would be $2,400 for a family of four. In others, it would exceed $2,400, if it currently is above $2,400 in the AFDC program and if the State decides to continue to support families at current levels with State supplementary payments. Table 7 shows how the payment varies with earnings in a State that makes supplementary payments. Note that the OFP-FAP proposal specifies that the Federal portion of the payment is reduced by increases in earnings before the State portion of the payment. With the same payment level as that used in table 2, the new OFP-FAP tax structure reduces the break-even level of earnings from $8,698 to $6,000. Table 8 shows how the payment varies with earnings in a State that does not make supplementary payments. In Delaware, although the guarantee level was $2,066 under AFDC and rises from there to $2,400 under OFP-FAP, the new tax structure will mean that the break-even level of earnings will fall from $6,850 per year to $4,320. Thus, even with an increase in the initial set-aside, the elimination of both the reimbursement of all work-related expenses and of the special deductions for families in the second and third groups of States described in section II means a large increase in average tax rates and thus a fall in break-even levels of income in all three groups of States. If work-related expenses are considered as taxes by recipients, than one-third of such expenses should be added to taxes. In this case, the tax rates are higher than those given in tables 7–10.

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[31] Algebraically, the procedure for determining the net benefit can be expressed as follows:

$$(4) \quad B = G - [(E - F - S) - 1/3(E - F - S)]$$

where F equals child care costs and the other notation is the same as that employed above. From (4), the marginal tax rate can be derived:

$$(4a) \quad B = G - 2/3(E - F - S)$$
$$(4b) \quad \frac{\partial B}{\partial E} = -2/3$$

Where F is some constant proportion of E, say F equals 0.20E, the marginal tax rate is:

$$(4c) \quad B = G - 2/3(E - 0.20E - S)$$
$$\frac{\partial B}{\partial E} = -0.533$$

TABLE 7.—*Earnings, transfers, and taxes for a female headed OFP-FAP family with 3 children in Chicago, Ill.*

(A) Gross earnings	(B) Take-home pay [a]	(C) Day-care subsidy [b]	(D) OFP-FAP benefit [c]	(E) State supplement [d]	(F) Net income 1 (B plus C plus D plus E)	(G) Cumulative marginal tax rate 1 $\left(1-\frac{\Delta F}{\Delta A}\right)$ (percent)	(H) Medicaid benefit [e]	(I) Net income 2 (B+C+D+E+H)	(J) Cumulative marginal tax rate 2 $\left(1-\frac{\Delta I}{\Delta A}\right)$ (percent)	(K) Public housing subsidy [f]	(L) Net income 3 (B+C+D+E+H+K)	(M) Cumulative marginal tax rate 3 $\left(1-\frac{\Delta L}{\Delta A}\right)$ (percent)
$0	$0	$2,052	$2,400	$984	$5,436		$691	$6,127		$1,329	$7,815	
						5			25			50
720	683	2,052	2,400	984	6,119		547	6,666		1,149	8,276	
						72			79			87
4,320	4,084	2,052	0	984	7,120		307	7,427		849	8,119	
						91			99			107
6,000	5,392	1,884	0	0	7,276		168	7,444		675	8,280	
						36			56			81
6,840	6,037	1,778	0	0	7,815		0	7,815		465	8,938	
						40			40			65
8,700	7,438	1,500	0	0	8,938		0	8,938		0		

[a] See table 2, footnote a.

[b] Note that we assumed that women placed their children in day-care centers on a full-time basis, no matter how many hours they worked. Had we assumed that their use of day care varied directly with hours worked, the net day-care subsidy also would have risen with hours worked. Thus, net income in col. F would have increased more rapidly with earnings and hours worked—and the cumulative marginal tax rate would have been lowered substantially. Unless the day-care subsidy is viewed by recipients as an increase in spendable income, as opposed to an offset to an expense that otherwise would be incurred, the lowered tax rate then would have overstated the financial incentive to increase work effort. If some part of the day-care subsidy is viewed by recipients as a consumption good, then the tax rates in the table should be somewhat lower.

The day-care fee schedule is taken from the Mondale day-care bill. That bill set upper limits on the fees that DHEW can charge for day-care centers. For families with 1 child in a day-care center, no fee is charged on the first $4,320 of annual income; a fee of no more than 10 percent of income above $4,320 and below 85 percent of the local BLS lower level of living budget can be charged over that range of income; and, between 85 percent and 100 percent of the BLS budget, a ceiling of 15 percent of the income is placed on day-care fees. The bill is not clear about its definition of family income, but we assumed it to exclude transfer payments.

In Chicago in the fall of 1971, the lower level of living budget for a 4-person family was $7,536, 85 percent of which is $6,406. Thus we set the fees at 0 between 0 and $4,320, at 10 percent of income between $4,321 and $6,406, and at 15 percent of income between $6,407 and $7,536, and at the same 15 percent about $7,536. The day-care subsidy is the difference between the market value of day care, estimated by Krashinsky to be $2,052 for developmental day care in 1972, and the paid fees.

(Source: Michael Krashinsky, "Day Care and Welfare," a paper presented to the conference on integrating income maintenance programs, University of Wisconsin, Madison, July 1-8, 1972.)

[c] The OFP-FAP formula for computing benefits is: B=G-t(E-F-S). The notation is the same as that given in footnotes 11 and 29.

In Illinois, where State supplementary payments would equal $984 at 0 income if current benefits are maintained, G=$3,384. S=$720 annually nationwide and "t" is assumed to equal $\frac{2}{3}$ until State supplements are reduced to zero. In this instance, F is not positive until E exceeds $4,320.

[d] Under H.R. 1 the State supplement is not reduced until the Federal portion of G is reduced to 0. The tax rate is allowed to be something other than $\frac{2}{3}$ when the Federal benefit reaches 0. In this illustration "t" always is $\frac{2}{3}$.

[e] Under a recently proposed change in the medicaid program passed by the Senate Finance Committee, eligible families would have to pay a deductible equal to 20 percent of income in excess of $2,400 before they could receive free medicaid benefits. Although this formula was designed to accompany the Finance Committee's work and assistance program, it was used here on the assumption that it was more likely to be attached to OFP-FAP than was the medicaid deductible contained in H.R. 1. The subsidy recorded in this column is the average value of medicaid benefits in Illinois, $885, less the deductible. Income is equal to take-home pay plus assistance benefit.

[f] See table 2, footnote f.

TABLE 8.—*Earnings, transfers, and taxes for a female-headed OFP–FAP family with 3 children in Wilmington, Del.*

(A) Gross earnings	(B) Take-home pay [a]	(C) Day-care subsidy [b]	(D) OFP-FAP benefit [c]	(E) State supplement [d]	(F) Net income $_1$ (B+C+D+E)	(G) Cumulative marginal tax rate $_1$ $\left(1-\dfrac{\Delta F}{\Delta A}\right)$ (percent)	(H) Medicaid benefit [e]	(I) Net income $_2$ (B+C+D+E+H)	(J) Cumulative marginal tax rate $_2$ $\left(1-\dfrac{\Delta I}{\Delta A}\right)$ (percent)	(K) Public housing subsidy [f]	(L) Net income $_3$ (B+C+D+E+H+K)	(M) Cumulative marginal tax rate $_3$ $\left(1-\dfrac{\Delta L}{\Delta A}\right)$ (percent)
$0	$0	$1,952	$2,400	$0	$4,352		$695	$5,047		$675	$5,722	
						> 5			> 25			> 50
720	683	1,952	2,400	0	5,035		551	5,586		495	6,081	
						> 73			> 79			> 88
4,320	4,067	1,952	0	0	6,019		311	6,330		195	6,525	
						> 31			> 51			> 76
5,100	4,686	1,874	0	0	6,560		155	6,715		0	6,715	
						> 36			> 56			> 56
5,875	5,261	1,796	0	0	7,057		0	7,057		0	7,057	

[a] See table 2, footnote a.

[b] We arbitrarily assume that a given quality of day care cost $100 less in Wilmington than in Chicago. The BLS budget in the area closest to Wilmington, Philadelphia costs out at $7,406, 85 percent of which is $6,295. (See table 7, footnote b.)

[c] See table 7, footnote c for the OFP-FAP benefit formula. In it, G=$2,400 for Wilmington.

[d] We assumed that Delaware would not supplement the basic Federal benefit.

[e] See table 7, footnote e for the medicaid deductible formula and table 5, footnote e for the value of medicaid in Delaware.

[f] See table 2, footnote f for the Brooke amendment formula and table 6, footnote f for the value of public housing apartments in Wilmington.

117

One qualification is in order before the last propositions are accepted. It arises from the deductibility of day-care expenditures. Tables 7 and 8 were constructed on the assumption that the female head of the family would place one of her children in a federally financed full-time day-care center under the fee schedule included in the Mondale day-care bill (S. 3617). It proposed that a family would pay no fee for this day care if its earnings were less than $4,320 per year. Above $4,320, it would be charged fees based on the schedule given in note c of table 7. In a State where the guarantee level is $2,400 and the breakdown level is $4,320, the deductibility of the day-care fee cannot affect the breakdown level—simply because no fee is charged until the breakeven level is reached. In a State where the guarantee exceeds $2,400, the deductibility of the day-care fee reduces the burden of day-care fees and does affect the breakeven level. Thus, in Illinois the breakeven level without deducting the day-care fee would be $5,796, not the $6,000 that it is with a deduction.

Table 9 illustrates a case where a family would finance completely its own day care. The deductibility of the day-care fee, which here is below the $2,000 limit on the day-care deduction, has the effect of reimbursing the recipient for two-thirds of her day-care expenses, and, thus, of keeping the sum of reduced benefits and nonreimbursed day-care costs to two-thirds of earnings above the set-aside. The deduction also raises the breakeven level by the amount of gross day-care costs. This means that the breakeven level of earnings in Illinois is raised from $6,000 (or $5,796 without the deduction of the day-care fee) to $6,440.

TABLE 9.—*Earnings, transfers, and taxes for a female-headed OFP-FAP family with 3 children in Chicago, Ill., where day care is paid for initially by recipient*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Gross earnings	Take-home pay [a]	Day care fee [b]	Implicit day care subsidy [b]	OFP-FAP benefit [c]	State supplement [d]	Net income $_1$ (B+D+E+F)	Cumulative marginal tax rate $_1$ $\left(1-\dfrac{\Delta G}{\Delta A}\right)$ (percent)	Medicaid benefit [e]	Net income $_2$ (B+D+E+F+I)	Cumulative marginal tax rate $_2$ $\left(1-\dfrac{\Delta J}{\Delta A}\right)$ (percent)	Public housing subsidy [f]	Net income $_3$ (B+D+E+F+I+L)	Cumulative marginal tax rates $\left(1-\dfrac{\Delta M}{\Delta A}\right)$ (percent)
$0	$0	$0	$0	$2,400	$984	$3,384		$691	$4,075		$1,329	$5,404	
							> −1			> 19			> 39
800	758	80	53	2,400	984	4,195		531	4,726		1,166	5,892	
							> 61			> 69			> 77
4,800	4,460	480	320	0	984	5,764		211	5,975		854	6,829	
							> 76			> 84			> 88
6,440	5,731	644	430	0	0	6,161		80	6,241		789	7,030	
							> 16			> 36			> 52
6,840	6,040	684	456	0	0	6,496		0	6,496		725	7,221	

[a] See table 2, footnote a.
[b] H.R. 1 permits the deduction of expenditures on day care from income before the benefit is computed. The assumption here is that a mother pays the full cost of day care which is assumed to equal 10 percent of earnings. Allowing the deduction when the implicit tax rate on earnings is 66⅔ percent means that the family is reimbursed for two-thirds of its day care expenditures. That is the subsidy listed in col. D.

[c] See table 7, footnote c.
[d] See table 7, footnote d.
[e] See table 7, footnote e.
[f] See table 2, footnote f.

Besides the major changes made by the OFP–FAP proposal in the deductibility of work-related expenses under AFDC, the second modification in the welfare tax structure is the elimination of the "100-hour notch" for male heads of AFDC–UF families. Male-headed families would face the same tax rates as female-headed families. (Furthermore, all families would be eligible for benefits when their incomes fell below the breakeven levels of income, not the guarantees or standards.) The OFP–FAP tax rates and benefits for male-headed families appear in table 10, where it is assumed that male-headed households would not receive State supplements and, typically, would not avail themselves of day care and the deduction for associated expenditures.

TABLE 10.—*Earnings, transfers, and taxes for a male-headed OFP-FAP family with 2 children in Chicago, Ill.*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
				Cumulative marginal tax rate 1 $\left(1-\dfrac{\Delta D}{\Delta A}\right)$ (percent)		Net income 2 (B+C+F)	Cumulative marginal tax rate 2 $\left(1-\dfrac{\Delta G}{\Delta A}\right)$ (percent)		Net income 3 (B+C+ F+I)	Cumulative Marginal tax rate 3 $\left(1-\dfrac{\Delta J}{\Delta A}\right)$ (percent)
Gross earnings	Take-home pay [a]	OFP-FAP benefit [b]	Net income 1 (B plus C)		Medicaid benefit [c]			Public housing subsidy [d]		
$0	$0	$2,400	$2,400		$888	$3,288		$1,329	$4,617	
				> 5			> 25			> 50
720	683	2,400	3,083		744	3,827		1,149	4,976	
				> 72			> 79			> 87
4,320	4,084	0	4,084		504	4,588		849	5,437	
				> 22			> 42			> 67
6,840	6,037	0	6,037		0	6,037		219	6,256	
				> 24			> 24			> 48
7,716	6,701	0	6,701		0	6,701		0	6,701	

[a] See table 2, footnote a.
[b] See table 7, footnote c.
[c] See table 7, footnote e.
[d] See table 2, footnote f.

Now it is necessary to compare the cumulative tax rates under the current transfer system with those which would obtain were OFP–FAP to be passed. OFP–FAP has generated a number of proposals about the food stamp and medicaid programs. The food stamp program would be ended for all OFP–FAP families, while the public housing rent formula would be that embodied in the Brooke amendment. When H.R. 1 passed the House in 1971, it contained a provision for a medicaid deductible to eliminate the notch in the current program. In essence, OFP–FAP families would have had to pay for those medical costs which equaled the one-third of earnings above the $720 set-aside which would be retained under the earnings deduction in OFP–FAP.[32] In mid-1972, the Senate Finance Committee developed an alternative medicaid deductible in connection with its guaranteed job opportunity program. This deductible would equal 20 percent of cash income in excess of $2,400. This would lower the potential medicaid tax rate from the level initially proposed by H.R. 1 because the deductible is based on changes in money income, inclusive of OFP–FAP benefits, rather than changes in gross earnings, as well as because it is set at 20 percent rather than 33⅓ percent.

A comparison of the figures in tables 7, 8, and 9 with those in 2, 4, 5, and 6 shows a marked increase in cumulative tax rates under the OFP–FAP system over those in the AFDC system. For families receiving only OFP–FAP and medicaid benefits, cumulative tax rate generally would be higher because of the elimination of the reimbursement of all work-related expenses and the types of deductions available in the second and third groups of States discussed in section I. For families using either income-conditioned, publically financed day care, or privately financed day care, marginal tax rates will rise, although the day care deduction will reduce that increase. For OFP–FAP families using day care, it is appropriate to compare $CMTR_2$ in tables 7, 8, and 9 with $CMTR_1$ in tables 2, 4, 5, and 6, remembering that all ought to be equally higher to the extent that work expenses are treated as taxes. Families in public housing which also use income-conditioned day care facilities generally would face marginal cumulative tax rates in excess of 80 percent under OFP–FAP. These higher cumulative tax rates would mean that in most AFDC families where the head currently is employed the implementation of OFP–FAP would reduce net income. The one great advantage of OFP–FAP with regard to tax rates would be its elimination of notches and most horizontal inequities among low-income families.

[32] This medicaid deductible took effect at different levels of earnings in the 50 States. Where States provide medicaid to the "medically indigent," for those with incomes between G and ⅔G, the deductible was to be paid when earnings exceeded $720 by G—⅓G. (U.S. Senate, Committee on Finance, "Medicare and Medicaid Amendments: Material Related to H.R. 1," July 16, 1971, pp. 20–25.)

At this point, a digression is in order, to observe how the recently instituted reforms in British income maintenance programs compare with the OFP–FAP proposal as regards cumulative tax rates.[33] In 1971, the British Government established the family income supplements (FIS) program, an income-conditioned transfer program for households headed by men who must be employed for 30 or more hours per week to be eligible for benefits. A separate transfer program, supplementary benefits (SB), is run for households headed by unemployed females. FIS contains a 50-percent tax rate on earnings, whereas SB has a 100-percent implicit tax rate. Along with FIS, an income-conditioned national rent rebate and allowance program was passed for families in public housing. The British also have an income-conditioned property tax rebate system that varies by locality but covers a substantial proportion of all families. As seen in table 11, certain food and medical programs are also income-conditioned, albeit on an eligible versus ineligible basis.

[33] I obtained the material on welfare reform in Great Britain as well as ideas about its characteristics from Martin Rein, whom I wish to thank.

TABLE 11.—*Weekly earnings, transfers, taxes, and marginal tax rates after British welfare reform for a male-headed family with 2 school-age children in Oxford City, 1972*

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Weekly earnings	National insurance tax ᵃ (5 percent of A up to 17; then +4 percent of Δ A)	Family allowance ᵃ	Total taxable income (A+C)	Income tax ᵃ (30 percent of D, above 21.50)	Family income supplement ᵃ (50 percent of 22−A)	Total income income for housing benefits (A+C+F)	Rent rebate ᵇ	Property tax rebate ᶜ	Free school meals ᵈ	Free prescriptions ᵉ	Optical-dental benefits	Net cash and in-kind income G− (B+E) +H+I+ J+K+L	Change in net income (ΔM)	Marginal tax rate 1−($\frac{N}{\Delta A}$)
(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(percent)
12.00	1.03	0.90	12.90	0	5.00	17.90	3.51	0.80	0.92	0.50	0.75	23.35	> 0.32	68
13.00	1.08	.90	13.90	0	4.50	18.40	3.38	.80	.92	.50	.75	23.67	> .36	64
14.00	1.13	.90	14.90	0	4.00	18.90	3.29	.80	.92	.50	.75	24.03	> .36	64
15.00	1.18	.90	15.90	0	3.50	19.40	3.20	.80	.92	.50	.75	24.39	> .34	66
16.00	1.23	.90	16.90	0	3.00	19.90	3.12	.77	.92	.50	.75	24.73	> .24	76
17.00	1.28	.90	17.90	0	2.50	20.40	3.03	.65	.92	.50	.75	24.97	> .25	75
18.00	1.32	.90	18.90	0	2.00	20.90	2.95	.52	.92	.50	.75	25.22	> .25	75
19.00	1.36	.90	19.90	0	1.50	21.40	2.86	.40	.92	.50	.75	25.47		

20.00	1.40	.90	20.90	0	1.00	21.90	2.78	.27	.92	.50	.75	25.72	> .25	75
20.60	1.42	.90	21.50	0	.70	22.20	2.73	.20	.92	.50	.75	25.88	> .16	84
21.00	1.44	.90	21.90	.12	.50	22.40	2.70	.15	.92	.50	.75	25.86	> −.02	102
22.00	1.48	.90	22.90	.42	0	22.90	2.61	.02	.92	0	0	24.55	>−1.31	231
23.00	1.52	.90	23.90	.72	0	23.90	2.44	0	.92	0	0	25.02	> .47	53
24.00	1.56	.90	24.90	1.02	0	24.90	2.27	0	.92	0	0	25.51	> .49	51
25.00	1.60	.90	25.90	1.32	0	25.90	2.10	0	.92	0	0	26.00	> .49	51
26.00	1.64	.90	26.90	1.62	0	26.90	1.93	0	.46	0	0	26.49	> .49	51
27.00	1.68	.90	27.90	1.92	0	27.90	1.76	0	0	0	0	26.06	> −.43	143

Given this great variety of income-conditioned cash and in-kind transfer programs, cumulative tax rates are quite high, roughly up to the mean production worker's wage of £26 ($62) per week. The British also have a social security tax (column B); and an income tax that has but a small overlap with the FIS system. The combination of tax and transfer programs produces cumulative tax rates that do not fall below 64 percent up to £23 ($55) weekly earnings, and then not below 51 percent up to the mean wage, in spite of the definitions of income used in the housing, food, and medical programs. Notch problems persist in these programs, as is evident in column O. Given the 30 hours work rule, the high tax rates are likely to affect workers who can control their hours of work above 30 per week, as well as full-time workers who consider moving to higher wage jobs.

Apparently, when the electorate demands a variety of transfer programs, it is quite difficult to keep cumulative tax rates down without extending coverage too far. The tables on the OFP–FAP and British income transfer system tend to validate that point.

IV. CUMULATIVE TAX RATES IN ALTERNATIVES TO OFP–FAP

Thus far we have demonstrated that while the current AFDC program and related transfer mechanisms have low cumulative tax rates, efforts to eliminate inequities and notches in the existing system under the OFP–FAP proposal would result in exceedingly high and sometimes confiscatory cumulative rates. Consequently, the search for alternatives to OFP–FAP continues. This section explores the cumulative rates in various negative income tax, demogrant, and earnings subsidy plans.

Table 12 shows a negative income tax plan that has a constant implicit tax or benefit reduction rate of 50 percent. Using the notation employed in footnote 11 above, the net benefit, B, under this program can be computed from the following equation: B = the family guarantee minus the tax rate on income (or the benefit reduction rate) times the quantity family income minus allowable deductions.[34] As an example, with a tax rate of 50 percent if the family guarantee is $3,600, family earnings are $3,000, and work expenses of $300 can be deducted, a family of four would have the following benefit:

$$B = \$3,600 - .50(\$3,000 - 300)$$
$$= \$3,600 - 1,350$$
$$= \$2,250$$

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[34] Algebraically expressed, the equation is:
$$B = G - t(E - D)$$
where B, G, and E are defined in footnote 11 and
t = the tax rate on income or benefit reduction rate
D = deductions from income, assumed throughout to be composed solely of work-related expenses
The marginal tax rate here is:

$$\frac{\partial B}{\partial G} = t$$

If B and D are related positively, the marginal tax rate is less than t.

TABLE 12.—*Earnings, taxes, and transfers for a family of 4 under a negative income tax program with a constant tax rate*

(A) Earnings	(B) Work-related expenses [a]	(C) Negative income tax benefit [b]	(D) Net income1 [c]	(E) Cumulative marginal tax rate1 $\left(1-\frac{\Delta D}{\Delta A}\right)$ (percent)	(F) Medical insurance subsidy [d]	(G) Net income2 (D+F)	(H) Cumulative marginal tax rate2 $\left(1-\frac{\Delta G}{\Delta A}\right)$ (percent)	(I) Housing subsidy [e]	(J) Net income3 (D+F+I)	(K) Cumulative marginal tax rate3 $\left(1-\frac{\Delta J}{\Delta A}\right)$ (percent)	(L) Day care subsidy [f]	(M) Net income4 (D+F+I+L)	(N) Cumulative marginal tax rate4 $\left(1-\frac{\Delta M}{\Delta A}\right)$ (percent)
0	0	$3,600	$3,600		$463	$4,063		$490	$4,553		$2,052	[g]$6,605	
				50			55			59			59
$2,800	$280	2,340	4,993		329	5,322		386	5,708		2,052	7,760	
				51			56			62			65
4,780	478	1,449	5,960		237	6,197		254	6,451		2,009	8,460	
				66			69			73			86
8,000	800	0	7,050		131	7,181		145	7,326		1,569	8,895	
				26			31			38			58
9,800	980	0	8,429		0	8,429		7	8,436		1,208	9,644	
				22			22			29			49
9,900	990	0	8,507		0	8,507		0	8,507		1,188	9,695	

[a] Work-related expenses are assumed to be proportional to earnings (col. A). (For some interesting thoughts on the issue of work-related expenses, see Michael K. Taussig, "Notes on Work Expenses and Related Issues for Personal Income Taxation," unpublished memorandum, Rutgers University, July 1972.)

[b] The benefit, B, is determined by the following formula; B=3600−.50(E−D) where the notation follows that given in footnote 34 of the text.

[c] Entries in this column are computed by adding earnings to the negative income tax benefit and then subtracting the social security tax payment, Federal income tax payment, and the State income tax payment. The social security tax payment is determined by multiplying earnings by 0.052. Work-related expenses are deducted from gross earnings before the Federal tax is computed. Except for this modification, the regular Federal tax schedule is assumed here. The State tax schedule that is used is that of Illinois for 1971. See table 2, footnote a.

[d] The value of the medical insurance provided to a family with zero income is assumed to be $750. The family is assumed to incur medical costs of $800 per year. It pays for a part of these costs (and thereby has its medical insurance subsidy reduced) according to a formula offered by Feldstein, Friedman and Luft: it must pay a premium for health insurance equal to $50 plus 1 percent of income in excess of $3,000 but less than $12,000 per

year; it also must pay a deductible of $50 per adult plus $25 per child, plus 5 percent of income in excess of $3,000 but less than $12,000 per year; it must also pay a portion of medical costs above the deductible and up to a maximum of $1,400 per year equal to 8 percent of those costs plus 4 percent of the costs for every $1,000 of family income above $3,000 but below $12,000. The subsidy shown is $750 less medical payments at the given level of income and with annual medical costs of $800. The assumption that medical costs do not vary with income may be weak. If medical costs rise with income, the medical "tax rate" would be higher than that shown here. (For the medical insurance formula and program, see: Martin Feldstein, Bernard Friedman, and Harold Luft, "Distributional Aspects of National Health Insurance Benefits and Finance," unpublished paper, Harvard University, 1972, p. 18.)

[e] The housing allowance is equal to $500 − .10 (net income1 −$3,500). (This is obtained from Henry Aaron, "Why Is It So Hard To Reform Welfare?" a paper presented to the Conference on Integrating Income Maintenance Programs, University of Wisconsin—Madison, July 1–8, 1972, p. 63.)

[f] See table 7, footnote b.

[g] Net income is high because of the inclusion of day care benefits. Beneficiaries may not view day care subsidies as an equivalent increase in spendable income.

In tables 12 through 16, the same formulas, contained in the notes to table 12, are used to compute work-related, medical, housing, and day care expenditures and, thus, subsidies. The medical, housing, and day care programs use a comprehensive definition of income, one that includes income cash transfer benefits adjusted for earnings. The benefit formulas are ones that have been carefully developed by other persons, and are held constant in all the transfer systems discussed here to allow comparison among the various cash transfer proposals working in conjunction with a particular set of in-kind components.

In Table 12, where the guarantee is $3,600, the tax rate is 50 percent, and work-related expenses are 10 percent of earnings, the cumulative tax rate on earnings for a family receiving only negative income tax (NIT) benefits never falls below 50 percent until earnings reach $8,000. The effect of allowing a deduction of 10 percent of earnings for work-related expenses is to reduce by 5 percentage points the effective benefit reduction rate and to increase the breakeven level of income from $7,200 to $8,000. On the assumption that all NIT families also will receive income-conditioned medical and housing subsidies, but no food subsidies, CTR_3 would never be below roughly 60 percent up to $8,000; and over the broad $4,780 to $8,000 range of earnings, in which blue collar and clerical workers would be concentrated, CTR_3 would be 73 percent. While CTR_3 might become the cumulative rate facing male heads of household, for female-headed families, among whom use of subsidized day care would be concentrated, CTR_4 in column Q would be the relevant cumulative rate. It would be yet higher than CTR_3, rising to 86 percent over the same important range of earnings.

If policymakers are concerned with reducing the cumulative tax rate on levels of earned income where full-time workers are concentrated and are not particularly troubled by a high tax rate for more marginal workers at the bottom of the distribution a regressive tax schedule in the NIT program is an alternative.[35] In table 13, the tax rate is 70 percent on the first $1,000 of earnings and declines to a constant rate of 40 percent on earnings above $3,000. While CTR_1 now is lower in the range of earnings from roughly $4,800 to $8,200, it still reaches 58 percent because of social security and income taxes. A regressive schedule reduces the cumulative tax rates in the moderate income range where workers are concentrated at the expense of reducing the net incomes of those workers who receive the lowest wages and/or work the fewest hours. It still cannot overcome the effects of other tax and transfer programs. That is the inference to be drawn by comparing either CTR_3 or CTR_4 in tables 12 and 13.

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[35] Hirshel Kasper once proposed that a solution to the problem of high marginal tax rates lay in the existence of optional negative income tax schedules; one of which would contain a high guarantee and a high tax rate and thus be suitable for non-workers and marginal workers; and another of which would contain a low guarantee and a low tax rate and thus be desirable for persons who could profit from substantial work effort. An NIT program with a regressive tax schedule would accomplish some of the same purposes and is suggested by his plan. (Hirshel Kasper, "Political Ideology and Economic Policy: A Major Conflict in an Income Maintenance System," unpublished paper, Oberlin College, 1969).

TABLE 13.—*Earnings, taxes, and transfers for a family of 4 under a negative income tax program with a regressive tax schedule*

(A) Earnings	(B) Work-related expenses [a]	(C) Negative income tax benefit [b]	(D) Net income1 [c]	(E) Cumulative marginal tax rate1 $\left(1-\dfrac{\Delta D}{\Delta A}\right)$ (percent)	(F) Medical insurance subsidy [d]	(G) Net income2 (D+F)	(H) Cumulative marginal tax rate2 $\left(1-\dfrac{\Delta G}{\Delta A}\right)$ (percent)	(I) Housing subsidy [e]	(J) Net income3 (D+F+I)	(K) Cumulative marginal tax rate3 $\left(1-\dfrac{\Delta J}{\Delta A}\right)$ (percent)	(L) Day care subsidy [f]	(M) Net income4 (D+F+I+L)	(N) Cumulative marginal tax rate4 $\left(1-\dfrac{\Delta M}{\Delta A}\right)$ (percent)
$0	0	$3,600	$3,600		$463	$4,063		$490	$4,553		$2,052	$6,605	
				63			66			70			70
2,800	280	1,990	4,643		364	5,007		386	5,393		2,052	7,445	
				44			49			55			57
4,780	478	1,229	5,760		256	6,016		274	6,290		2,009	8,299	
				58			62			66			80
8,220	822	0	7,220		116	7,336		128	7,464		1,524	8,988	
				23			31			38			58
9,800	980	0	8,429		0	8,429		7	8,436		1,208	9,644	
				22			22			29			49
9,900	990	0	8,507		0	8,507		0	8,507		1,188	9,695	

[a] See table 12, footnote a.
[b] The tax rate or benefit reduction rate in this program is 70 percent on the first $1,000 of earnings, 65 percent on the second, 50 percent on the third, and 40 percent thereafter.
[c] See table 12, footnote c.
[d] See table 12, footnote d.
[e] See table 12, footnote e.
[f] See table 7, footnote b.

130

The cash transfer program contained in table 14 is a demogrant, a program in which each person in the population is nominally eligible for a payment which typically is offset against whatever income tax is owed. The same formula used to compute benefits under the NIT program can be used in the case of a demogrant. In principle, what differentiates the NIT from the demogrant are administrative aspects of the program, not the benefit formulas. For example, one administrative difference is that under an NIT the tax rate actually serves to reduce the guarantee, reducing the size of the benefit check that a family receives as earnings rise. In a demogrant, the tax rate applies directly to earnings, with the pay check and not the benefit check being reduced as earnings increase; the benefit check always is constant for individuals with given demographic characteristics.[36] In the demogrant program in table 14, the tax rate arbitrarily is set at 33⅓ percent so as to be lower than the tax rate in table 12.[37] The lower tax rate necessitates higher rates by nonbeneficiaries, of course.

While the demogrant starts with a low tax rate on earnings, the cumulative tax rate again depends on the number of in-kind transfer programs in operation and the tax rates (and tax bases) in each of them. CTR_3 and CTR_4 for from $2,800 to $8,000 of earnings are much lower in table 14 than in table 12. Note, though, that above $9,800 of earnings the reverse is the case, because $8,000 is the breakeven earnings level in the NIT and $12,000 is the breakeven level under the demogrant. For a society concerned with the impact of cumulative tax rates on work effort, it is important to establish how work effort would respond to the various tax rates and how many workers would be affected in these ranges of earnings. The same questions arise with respect to those who have to pay increased net taxes under the two programs. Since this particular NIT plan contains higher tax rates for beneficiaries with earnings under $9,800 than does the demogrant, the former plan is more likely to cause reductions in work effort up to that level of earnings. But since the demogrant contains the same guarantee and lower tax rates than does the first NIT plan, it extends benefits to more people. At first blush, therefore, the demogrant is likely to cost more than the NIT. This implies that the demogrant will necessitate a larger tax increase among net taxpayers. Thus the income tax increase may affect work effort among net taxpayers. In order to determine the relative costs of the two programs, then, one must look at their work effort effects among all income classes. If the total work effort response to the two programs does not differ greatly, this demogrant would be more costly but offer the benefit of redistributing more income.

Also noteworthy in comparing tables 12 and 14 is the convergence in cumulative tax rates observed as one proceeds from the cash transfer programs to each CTR_4. For example, CTR_1 in table 14 is 37 percent over the range of earnings $4,780 to $8,000, or 29 percentage points less

[36] Of course, it is possible to make the demogrant and Federal income tax calculations one transaction, so that demogrants are received net of income taxes or taxes are paid net of demogrant credits. This type of transfer program often is called a credit income tax.
[37] The tax rates could have been 33⅓ percent in the NIT and 50 percent in the demogrant programs, with the same labels being affixed to the respective programs. Lower tax rates are usually but not necessarily associated with demogrants.

Table 14.—*Earnings, taxes, and transfers for a family of 4 under a demogrant program.*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Earnings	Work-related expenses a	Negative income tax benefit b	Net income₁ c	Cumulative marginal tax rate₁ $\left(1-\frac{\Delta D}{\Delta A}\right)$ (percent)	Medical insurance subsidy d	Net income₂ (D+F)	Cumulative marginal tax rate₂ $\left(1-\frac{\Delta G}{\Delta A}\right)$ (percent)	Housing subsidy e	Net income₃ (D+F+I)	Cumulative marginal tax rate₃ $\left(1-\frac{\Delta J}{\Delta A}\right)$ (percent)	Day care subsidy f	Net income₄ (D+F+I+L)	Cumulative marginal tax rate₄ $\left(1-\frac{\Delta M}{\Delta A}\right)$ (percent)
$0	$0	$3,600	$3,600		$463	$4,063		$490	$4,553		$2,052	$6,605	
				> 35			> 41			> 48			> 48
2,800	280	3,600	5,421		281	5,702		308	6,010		2,052	8,062	
				> 36			> 42			> 48			> 50
4,780	478	3,600	6,691		167	6,858		181	7,039		2,009	9,048	
				> 37			> 43			> 48			> 62
8,000	800	3,600	8,708		0	8,708		0	8,708		1,569	10,277	
				> 37			> 37			> 37			> 57
9,800	980	3,600	9,834		0	9,834		0	9,834		1,208	11,042	
				> 37			> 37			> 37			> 57
9,900	990	3,600	9,897		0	9,897		0	9,897		1,188	11,085	

a See table 12, footnote a.
b The demogrant benefit does not vary with income.
c See table 12, footnote c, but substitute the following method of computing the Federal income tax payment for that supplied in table 12: Federal income taxes equal ⅓ of earnings net of work-related expenses.

d See table 12, footnote d.
e See table 12, footnote e.
f See table 7, footnote b.

than CTR_1 in table 12. Over the same range of earnings, the respective CTR_4's differ by only 24 percentage points, 5 points less. As one adds identical in-kind programs to two cash transfer programs with different implicit tax rates, one narrows the gap in cumulative tax rates in the two systems.[38] The tax rate of the first NIT plan is 50 percent and in the demogrant plan, it is 33 percent. To make the point about convergence clear, we can ignore social security taxes and all but one other program and we can simplify from what is presented in the tables. If recipients of both types of cash transfers receive a housing subsidy, in which the tax rate is specified as being 25 percent of income inclusive of cash transfers, then the difference between cumulative marginal tax rates will be less than 17 percentage points; i.e., less than 50 percent minus 33 percent. When his earnings increase by $1, an NIT recipient loses 50 cents from his benefit. The housing authorities then reduce his subsidy by 25 percent of his change in net income, which is 50 cents; and 25 percent of 50 cents is 12 cents. For having earned an additional dollar, the NIT recipient lost 62 cents in cash and housing benefits. The demogrant recipient initially loses 33 cents when his earnings rise by $1. If the housing program reduces his subsidy by 25 percent of the change in his net income, 67 cents, he loses another 17 cents. Thus the cumulative tax rate facing the NIT recipient is 62 percent, while that facing the demogrant recipient is 50. This is a difference of 12 percentage points, or 5 percentage points less than the difference after the first program. This is how the convergence of tax rates observed in tables 12 and 14 is explained. And this means that the advantage of having a cash transfer program with a low tax rate is destroyed in part when additional programs are added to it, even if they use changes in net income and not changes in gross earnings as the tax base.

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[38] This can be demonstrated in the following manner:

Let $\quad T_{11} = t_{11} Y_{11}$
$\qquad T_{21} = t_{11} Y_{11} + t_{21} Y_{21}$
$\qquad T_{12} = t_{12} Y_{12}$
$\qquad T_{22} = t_{12} Y_{12} + t_{22} Y_2$
$\qquad Y_{21} = Y_{11} - t_{11} Y_{11} = (1 - t_{11}) Y_{11}$
$\qquad Y_{22} = Y_{12} - t_{12} Y_{12} = (1 - t_{12}) Y_{12}$
then $\quad T_{21} = [t_{11} + t_{21}(1 - t_{11})] Y_{11}$
$\qquad T_{22} = [t_{12} + t_{22}(1 - t_{12})] Y_{12}$

where the capital T's represent the total taxes paid (or, actually, benefit reductions) after each of two transfer *programs* as a result of applying particular tax rates, represented by lower case t's, to identical amounts of income, Y_{11} and Y_{12}; and the first subscripts refer to the first and second of two linked programs within given transfer *systems*, which are represented by the second subscripts. The point is that if $t_{11} > t_{12}$ and $t_{21} = t_{22}$, then $t_{11} - t_{12} > [t_{11} + t_{21}(1 - t_{11})] - [t_{12} + t_{22}(1 - t_{12})]$, where the expressions in brackets are the cumulative tax rates in the first and second systems, respectively, after benefits have been adjusted in the second program of each system. Although the stated tax rate in the second program of each of the two transfer systems is the same, they differ in effect when they are part of a system of transfer programs and when they are both measured against the original income base. Against the original income base, the tax rate in the second program of the first system is $t_{21}(1 - t_{11})$ and the tax rate in the second program of the second system is $t_{22}(1 - t_{12})$. Since $t_{11} > t_{12}$, the latter product is larger than the former. More is added to the tax bill by the *same* second program in the second system than in the first. The advantage of the lower tax rate in the cash transfer (or first) program of the second system over that in the first system is reduced as identical programs are combined with each other in this particular manner.

TABLE 15.—*Earnings, taxes, and transfers for a family of 4 under the Senate Finance Committee plan*

(A) Gross earnings	(B) Work bonus[a]	(C) Work related expenses[b]	(D) State supplement[c]	(E) Net income[d]	(F) Cumulative marginal tax rate₁ $\left(1-\frac{\Delta E}{\Delta A}\right)$ (percent)	(G) Medical benefit[e]	(H) Net income² (E+G)	(I) Cumulative marginal tax rate₂ $\left(1-\frac{\Delta H}{\Delta A}\right)$ (percent)	(J) Housing subsidy[f]	(K) Net income₃ (E+G+J)	(L) Cumulative marginal tax rate₃ $\left(1-\frac{\Delta K}{\Delta A}\right)$ (percent)	(M) Day care subsidy[g]	(N) Net income₄ (E+G+J+M)	(O) Cumulative marginal tax rate₄ $\left(1-\frac{\Delta N}{\Delta A}\right)$ (percent)
0	0	0	$984	$984	> −5	$750	$1,734	> 7	$500	$2,234	> 7	$2,052	$4,286	> 7
$2,400	$240	$240	984	3,499	> −5	473	3,972	> 5	500	4,472	> 16	2,052	6,524	> 16
4,000	400	400	984	5,176	> 93	313	5,489	> 94	332	5,821	> 95	2,052	7,873	> 101
4,800	200	480	504	5,231	> 105	307	5,538	> 105	327	5,865	> 104	2,004	7,869	> 114
5,600	0	560	24	5,190	> 82	311	5,501	> 82	331	5,832	> 85	1,924	7,756	> 95
5,640	0	564	0	5,197	> 22	311	5,508	> 30	330	5,838	> 38	1,920	7,758	> 55
9,800	0	980	0	8,429	> 22	0	8,429	> 22	7	8,436	> 29	1,208	9,644	> 49
9,900	0	990	0	8,507		0	8,507		0	8,507		1,188	9,695	

[a] The work bonus is equal to 10 percent of gross earnings up to $4,000. The work bonus of $400 at $4,000 is reduced at a 25-percent rate for earnings above $4,000 per year. (See U.S. Senate, Committee on Finance, "Guaranteed Job Opportunity: Welfare Reform, Explanation of Committee Decisions," Washington, D.C., Apr. 28, 1972, pp. 5, 6.)

[b] See table 12, footnote a.

[c] The State supplement is $984 at zero earnings, which is what it would be in Illinois if that State maintained benefits at current levels. The supplement is reduced at 66⅔-percent rate for earnings, net of incremental work-related expenses, in excess of $4,000.

[d] See table 12, footnote c.

[e] See table 12, footnote d.

[f] See table 12, footnote e.

[g] See table 12, footnote f.

Income maintenance plans whose essential characteristics can be expressed in the form of the equation presented at the outset of this section must choose between high tax rates with substantial work disincentives or low tax rates with costly extensive coverage. Negative income tax, credit income tax, demogrant, and OFP–FAP welfare reform plans all face this tradeoff, as well as the tax rate problems resulting from related in-kind transfer programs. Recognizing this conflict, some policymakers have rejected this universal approach to income maintenance and have proposed a categorical program under which "employables" and "unemployables" would be distinguished and subject to different plans.

The first of these categorical programs, represented in table 15, is the guaranteed job opportunity program (GJO) reported out of the Senate Finance Committee in the fall of 1972.[39] It offers traditional welfare assistance with high tax rates for women with children under age 6 and other "unemployables," and either subsidized regular jobs or specially created public jobs for "employables," who are ablebodied female and male heads of low-income families. Table 15 deals with a case where an ablebodied female or male head obtains a regular job at a wage of $3 per hour. The wage is specified as being above $1.60 per hour, because the plan subsidizes wage rates between $1.20 and $1.60 per hour at a rate of 75 percent of the difference between $1.60 and the actual wage, as well as family earnings up to $4,000 per year at a 10-percent rate. We chose to avoid complicating table 15 with the wage rate subsidy and concentrate on the earnings subsidy, which declines at a 25-percent rate (from $400) as earnings rise above $4,000. The earnings subsidy breakeven level is $5,600 for families of all sizes. Families with employable heads are denied welfare payments apart from State supplements. States must assume in determining these supplements that an employable family head earns at least $200 per month and must not reduce the supplement for earnings between $200 and $300 per month. The program is shown in table 15 with the same modifications of medical, housing, and day care benefits as were assumed in the NIT and demogrant examples.

The GJO would create confiscatory tax rates for persons receiving State supplements and earning between $4,000 and $5,600 per year. Up to $4,000 of annual earnings, the marginal tax under GJO would be negative and the cumulative tax rate would be minimal, even if the family received medical, housing, and day care subsidies. Following the committee's rules, a city like Chicago could provide a $984 supplement up to $4,000 of earnings, if it used tax rates like those in the current or OFP–FAP programs (see column H of table 7 and column G of table 2). Above $4,000, the earnings subsidy would decline at a 25 percent rate and the State supplement would decline at a 67 percent rate, less an adjustment for work-related expenses. With income and social security taxes, CTR_1 would exceed 95 percent up to $5,600 of earnings and CTR_4 would exceed 100 percent. Of course, CTR_1 would be much lower where State supplements are not provided to either female and male-headed families or both. Thus, GJO substantially increases

[39] U.S. Senate, Committee on Finance, "Guaranteed Job Opportunity: Welfare Reform," April 28, 1972.

financial incentives to work up to $4,000 and then reduces them to nil until $5,640. Beyond the latter point and up to $8,000, the plan again provides incentives superior to either of the NIT plans but roughly equivalent to those of the demogrant plan. Above $8,000 of earnings, CTR_4 is roughly the same for all the programs discussed here. Even if its own breakeven level is relatively low, GJO cannot overcome the effects on cumulative tax rates of related transfer programs, because of the convergence problem discussed above.

A more carefully structured version of the plan passed by the Senate Finance Committee has been proposed by Robert Haveman.[40] While the Haveman plan differs from the one just discussed in many details, a major distinguishing characteristic is that it contains only an earnings subsidy and no wage rate subsidy. The earnings subsidy is equal to 100 percent of earnings up to $1,500 per year, declining at a 50 percent rate above that point. Table 16 indicates that unless it eliminates State supplements and related in-kind transfer programs, the Haveman Plan will result in confiscatory tax rates over the same range of earnings in which they appear under GJO and is not superior to the demogrant plan in keeping CTR_4 well below 50 percent on earnings above $8,000. For workers at the very bottom of the earnings distribution, it provides extraordinary financial incentives to increase earnings by getting a higher paying job or by working more hours.

[40] Robert Haveman, "Work-Conditioned Income Supplementation: An Analysis of the Long Bill and a Proposal," a paper presented to the Conference on Integrating Income Maintenance Programs, University of Wisconsin-Madison, July 1-8, 1972.

TABLE 16.—*Earnings, taxes, and transfers for a family of 4 under an earnings bonus plan*

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)
Gross earnings	Earnings bonus [a]	Work-related expenses [b]	State supplement [c]	Net income1 [d]	Cumulative marginal tax rate1 $\left(1-\dfrac{\Delta E}{\Delta A}\right)$ (percent)	Medical benefit [e]	Net income2 (E+G)	Cumulative marginal tax rate2 $\left(1-\dfrac{\Delta H}{\Delta A}\right)$ (percent)	Housing subsidy [f]	Net income3 (E+G+J)	Cumulative marginal tax rate3 $\left(1-\dfrac{\Delta K}{\Delta A}\right)$ (percent)	Day-care subsidy [g]	Net income4 (E+G+J+M)	Cumulative marginal tax rate4 $\left(1-\dfrac{\Delta N}{\Delta A}\right)$ (percent)
$0	$0	$0	$984	$984		$750	$1,734		$500	$2,234		$2,052	$4,286	
					> −90			> −74			> −71			> −71
1,500	1,500	150	984	3,906		435	4,341		459	4,800		2,052	6,852	
					> 55			> 59			> 64			> 64
3,000	750	300	984	4,578		371	4,949		392	5,341		2,052	7,393	
					> 55			> 60			> 64			> 64
4,000	250	400	984	5,026		326	5,353		347	5,699		2,052	7,751	
					> 118			> 116			> 114			> 117
4,500	0	450	684	4,937		337	5,274		356	5,630		2,034	7,664	
					> 77			> 79			> 82			> 92
5,640	0	564	0	5,197		311	5,508		330	5,838		1,920	7,758	
					> 22			> 30			> 38			> 55
9,800	0	980	0	8,429		0	8,429		7	8,436		1,208	9,644	
					> 22			> 22			> 29			> 49
9,900	0	990	0	8,507		0	8,507		0	8,507		1,188	9,695	

[a] The earnings subsidy rises dollar for dollar with earnings up to $1,500 per year. Thereafter, the subsidy is decreased at a 50-percent rate, falling to zero at $4,500 of annual earnings. (Source: Robert Haveman, "Work-Conditioned Income Supplementation: An Analysis of the Long Bill and A Proposal," a paper presented to the Conference on integrating Income Maintenance Programs, University of Wisconsin, Madison, July 1–8, 1972, p. 54.)

[b] See table 12, footnote a.
[c] See table 15, footnote b.
[d] See table 12, footnote c.
[e] See table 12, footnote d.
[f] See table 12, footnote e.
[g] See table 7, footnote b.

V. The Dilemmas of Income Maintenance Programs

The selection of a guarantee, a tax rate, and a break-even level of income are usually the first tasks of creating a new cash transfer scheme. Political pressures weigh heavily in specifying the first and third characteristics: segments of the electorate have strong notions of minimum incomes at which families can survive; and political leaders are anxious not to have to defend a program which allows people to still be on welfare at high levels of income. Given these pressures, it is difficult to keep the tax rate at low levels. Even if the objective of a low tax rate is met by the cash transfer program, however, keeping the cumulative tax rate at tolerably low levels is exceedingly difficult because other political pressures generate other income-conditioned transfers in-kind—in health, food, housing and, of late, day care and higher education. The existence of these other transfer programs, as well as income taxes, makes it especially difficult in any income maintenance system to maintain financial incentives to work.

There are alternative ways to relate in-kind transfers and positive income taxes to each other and to a cash transfer program to produce various cumulative tax rates. Thad Mirer has articulated these alternatives very well and they cannot all be explained here.[41] A discussion of two of the alternatives will suffice to show that the same basic problem of influencing the cumulative tax rate arises when a set of programs are linked to each other as when a tax rate is set in a cash transfer program. When designing a cash transfer program, policy-makers seek high guarantees, low tax rates, and low break-even income levels. But attaining any two of these objectives conflicts the third. Likewise, in integrating a group of transfer programs, reducing the cumulative tax rate while maintaining cumulative benefits must raise break-even levels of income for some of the programs in the group. Alternatively, reducing the cumulative tax rate while keeping the break-even income levels down necessitates lowering the cumulative level of benefits.

The conflict among program objectives can be illustrated by comparing the techniques imposing a "tax ceiling" and using a "full benefit offset" with the simple addition of benefits and tax rates.[42] Consider a situation in which a family receives benefits from two programs, one of which has a cash guarantee of $2,400 and a tax rate of 67 percent and the other of which has a $1,000 guarantee in the form of food stamps and a 25 percent tax rate. If the cash and food stamp programs ignore each others' existence in determing their own payments, the total guarantee is $3,400 (=$2,400+$1,000); and the loss of cash and food stamp benefits, or cumulative tax rate, will equal 92 percent (=67 percent plus 25 percent) of any change in earnings. When earnings rise from zero to $1,000, the cash benefit is reduced by $667; and, since the food stamp program ignores the cash program, considering only the change in earnings ($1,000), not the change in net income ($333), it reduces the food benefit by $250 (or by 25 percent of $1,000). The break-even level of earnings is $3,600 for the cash transfer program and $4,000 for the food stamp program.

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[41] Thad W. Mirer, "Alternative Approaches to Integrating Income Transfer Programs," this volume, pp. 79–91.

[42] These illustrations are drawn from Mirer's paper.

One alternative to the simple addition of benefits and tax rates in relating two transfer programs to each other would be imposing a ceiling on the cumulative tax rate. For the two programs used above, the ceiling could be the 67 percent tax rate in the cash transfer program. In consequence the guarantee remains $3,400, but the break-even level of earnings for the food stamp program rises from $4,000 to $7,600. The break-even level for the cash transfer program remains constant. To avoid horizontal inequities raising the break-even level in the food stamp program to $7,600 means that all families of four with earnings between $4,000 and $7,600 now would have to be eligible for the food stamps; and families whose earnings were between zero and $4,000 would receive higher total benefits than under the simple addition technique. Thus, the price of keeping the tax rate to a maximum of 67 percent, while preserving the original guarantees, involves a costly extension of coverage.

A second alternative to simple benefits and tax rates addition is the full benefit offset technique, which would keep cumulative tax rates to a maximum of 67 percent, and maintain the same break-even earnings level for the cash transfer program while lowering it in the food stamp program. The unwished-for result paid would be a reduction of the guarantee and net benefits for all recipients, some of whom would not receive food stamps. The food stamp benefit could be calculated first on the base of gross earnings and then deducted from what the cash transfer benefit otherwise would be at that level of gross earnings.

For example, at zero earnings the food stamp benefit is $1,000 and is deducted from the $2,400 cash benefit that the family otherwise would receive at zero earnings. The family now gets a $1,400 cash transfer at zero earnings, thus taking a $1,000 cut in its guarantee. As earnings rise to $1,000 the food stamp benefit is reduced by $250 (=25 percent of $1,000). The cash benefit is what it would be at $1,000 of earnings were there no food program MINUS the food stamp benefit of $750; or $1,733−$750=$983. Note that the $250 (=$1,000 −$750) less in food benefits and $733 (=$1,400−$667) less in cash benefits associated with the $1,000 increase in earnings implies a 67-percent tax rate. The tax rate has been lowered as compared to what it was under the simple addition approach and kept the same as it was under the tax ceiling approach. However, the overall guarantee also is lower than it was under either of the first two approaches.

In sum, policymakers face the same hard choices in integrating transfer programs into an overall scheme that they face in designing a simple cash transfer program if they want to keep cumulative tax rates at acceptable levels: They can either raise break-even levels of earnings while preserving guarantee levels, or they lower combined guarantee levels while preserving break-even levels, or combine both. The tax ceiling technique accomplishes the former. The full benefit offset techniques achieves the latter. The sequencing technique, described in detail in section IV and illustrated in tables 12–16, does both. Which technique ultimately is used is a function of the political forces noted at the outset of this section. Clearly, though, no system of transfers can escape the oft-repeated dilemmas of income maintenance programs. The high cumulative tax rates under the various "reforms" discussed here should come as no surprise.

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(139)

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