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THE RURAL INCOME MAINTENANCE EXPERIMENT, WELFARE REFORM, AND PROGRAMS FOR SMALLER FARMS

William E. Saupe

UNIVERSITY OF WISCONSIN - MADISON

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William E. Saupe is a professor of Agricultural Economics, University of Wisconsin-Extension and University of Wisconsin-Madison, and a staff member in the Institute for Research on Poverty, University of Wisconsin-Madison. This paper was prepared for discussion at the Small Farms Conference conducted by the National Rural Center, October 16-18, 1977.

The Rural Income Maintenance Experiment, Welfare Reform, and Programs for Smaller Farms

The purpose of the Rural Income Maintenance Experiment (RIME) was to develop information that would help predict how low income rural persons would respond to a universal guaranteed income and negative income tax form of welfare. This is the direction that the federal approach to welfare reform has taken in recent years. The Family Assistance Plan (FAP) that was introduced and supported by the Republican administration between 1969 and 1972 was a broadly based negative income tax proposal for families with children, but it was not enacted. Since that time, both the Aid to Families with Dependent Children (AFDC) and Supplemental Security Income (SSI) programs have broadened the eligibility for coverage and moved toward greater equity in their benefit schedules (Plotnick and Skidmore 1975). The Food Stamp (FS) program in 1977 had the effect of a guaranteed income ($1,990 for a family of four) which is more or less "taxed" away at the rate of 30 cents for each dollar earned.

A welfare reform proposal was introduced to the Congress by the Carter Administration in August 1977 called the "Program for Better Jobs and Income" (PBJI).[1] It is a universal guaranteed income with a reduction in benefits determined by the amount of nontransfer income earned. It would replace and build on the existing AFDC, SSI and FS programs.

While the final form of any welfare reform proposals that will become law is not known, the movement toward a federal guaranteed income is clear. It becomes relevant and timely to consider how a universal guaranteed income-negative income tax system of welfare in the USA would

affect low income rural families. Specifically, how would it affect low income families with smaller farm businesses? Will their low-income problems be resolved? What are the implications for the development of educational and other programs for smaller farms?

The findings of the Rural Income Maintenance Experiment and other experiences may suggest answers to these questions. To develop a framework for this interpretation it will be useful to first consider (a) the general characteristics of guaranteed income-negative income tax proposals, and (b) what is known of the provisions of the Carter Administration's welfare proposals as they bear on smaller, low-income farms.

1. GUARANTEED INCOME-NEGATIVE INCOME TAX

There are some common characteristics of all welfare programs or proposals, including the guaranteed income-negative income tax proposals. The first is the particular eligibility criteria for the program. For example, general welfare is usually limited to residents of a specified geographic area. In many states, only female-headed households are eligible for AFDC. Only the elderly or disabled are eligible for SSI benefits, and so on. A guaranteed income proposal must define what units are eligible to receive benefits and who, if anyone, is not.

Other common characteristics are illustrated in Figure 1. To facilitate the comments that follow, it is assumed that an example family with four members (head, spouse and two children) is being considered.

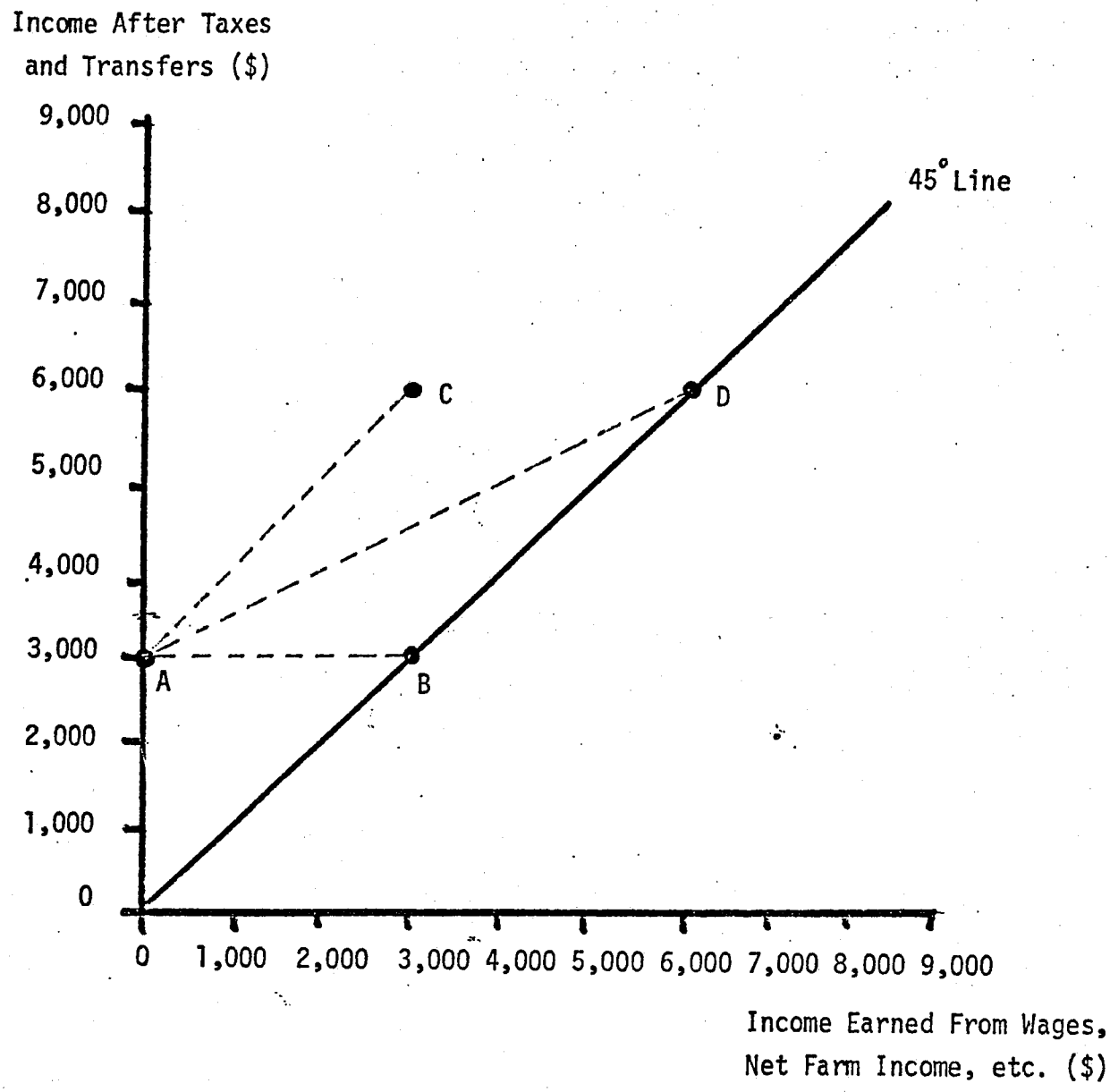

Figure 1. The relation between earned income, guaranteed income, implicit taxes and post-transfer income.

The horizontal axis in Figure 1 measures income earned from wages, salaries, net farm income, etc. The vertical axis measures such earned income, plus (a) any transfers received, and (b) minus any income taxes paid. The diagonal 45° line indicates all of the points at which income earned (horizontal axis) and income after taxes and transfers (vertical axis) are equal. It is for reference, only.

Point A represents a family that earned no income (is at zero on the horizontal axis) and received a transfer of $3,000. It illustrates a second characteristic--the guaranteed income level, or level of benefits received if there are no earnings in this family.

Point B represents the same family if they earned $3,000 (from wages, for example), received no transfers and paid no taxes. Compared with their situation at point A, the line AB represents an implicit tax rate of 100 percent; that is, if the family at point A earns any income, their transfer is reduced one dollar for every dollar earned. This is an implicit tax of 100 percent on the earnings.[2] High implicit tax rates, such as reflected in line AB, reduce the incentive to earn income. The family gains no disposable income by moving from A to B, i.e., they receive no reward for their efforts to earn income from wages, farming, etc. This implicit tax rate is the third common characteristic of welfare programs and proposals.

Point C represents the example family if they had earned $3,000 income and also received the $3,000 transfer, for a total of $6,000. Considering their situation at point A, line AC represents an implicit tax rate of zero percent. Along the line AC the family gets to keep the guaranteed income of $3,000 plus any income that it earns. There is little work disincentive in such a proposal but a zero implicit tax rate

is feasible (in terms of program cost) only for a limited range in income. The implicit tax must be increased as the family approaches the level of earned income at which it must begin paying federal income tax.

Point D represents the family if they earned $6,000, received no transfer, and paid no personal income tax. Their income after taxes and transfers is the same as the income they earned from wages, etc. Considering their situation at point A, line AD represents an implicit tax rate of 50 percent. The $3,000 transfer is reduced by 50 cents for each dollar of earned income. Point D becomes the break-even income, the level of earned income at which the transfer drops to zero. This is the fourth common characteristic of welfare programs or proposals. The higher the break-even income of a given program, the more families that will receive some transfer and the larger the payment received per family. This provides greater program coverage, but also results in greater total program cost to the taxpayer.

Note that the level of break-even income is caused by the level of the guaranteed income and the implicit tax rate in the following manner:

$$\frac{\text{Guaranteed Income Level}}{\text{Implicit Tax Rate}} = \text{Break-even Income}$$

If guaranteed income is $3,000 and the implicit tax rate is .50 (i.e., 50 percent) then

$$\frac{\$3,000}{.50} = \$6,000$$

as shown by line AD in Figure 1.

This mathematical relationship among guaranteed income, implicit tax rate and break-even income creates a dilemma for policy makers. It may be desired that the program include, for a destitute family, a

guaranteed income that is high enough to provide the minimum level of living that our society says is acceptable for its poorest members. But the higher the guaranteed income (for any implicit tax rate) the higher the break-even income and the higher the total program cost. On the other hand, break-even income (and total cost) can be reduced by increasing the implicit tax rate, but a high implicit tax rate is associated with reduced work effort. Thus for any welfare proposal the policy maker must consider an "adequate" level of guaranteed income, an implicit tax rate low enough to retain the incentive to work and a total cost low enough to make passage and implementation feasible.

The final characteristic of all welfare programs and proposals is the specification of countable income. If benefits (transfers) are reduced because of income, then what is counted as "income"? For example, should labor income earned as wages or from self-employment be counted differently from resource earnings, such as dividends, rents or interest? Should transfers such as retirement income, Social Security benefits or welfare program transfers be counted as "income"? Should some earnings level be imputed to net assets and if so, should all classes of assets be treated in the same manner? Should some fraction of assets be assumed available for consumption and thus counted as income?

With these issues in mind--eligibility criteria, guaranteed income level, implicit tax rate, break-even income and countable earned income--we can turn to the Program for Better Jobs and Income proposal of the Carter Administration and consider what is known of its characteristics.

2. PROGRAM FOR BETTER JOBS AND INCOME

The Carter Administration welfare reform proposal, titled "Program for Better Jobs and Income" (PBJI), was announced on August 6, 1977.[3] If passed by Congress, it would go into effect in October 1980. This welfare reform should be viewed as part of a comprehensive set of planned changes in the personal income tax, social security, in the low-wage labor market, in public support of health care, as well as in welfare programs.

An over-view may be obtained from selected parts of the announcement of the proposal (U.S. Department of Health, Education, and Welfare 1977), as follows:

> . . . The Administration's welfare reform plan combines the largest jobs program since the Great Depression with a program of cash assistance for the poor that is fairer and simpler than the hodge-podge that exists now.
>
> Its central focus is on work.
>
> > The relationships established under the program between wages and welfare payments ensure that families in which someone works will always be better off financially than families of the same size and structure in which no one works.
> >
> > By creating up to 1.4 million subsidized public service jobs and job-training slots, the program will attempt to assure access to work or training to one adult in every family with children.
> >
> > It will, however, encourage work in regular private employment by making these public service jobs less attractive financially than regular employment and by providing aid in their job-search to those seeking work in the regular sector.
>
> A second major theme: Fairer and more uniform cash benefits.
>
> > The program will cover poor families with both parents present, who receive relatively little by way of cash benefits now. Single persons and childless couples who could not find work will also be covered.

There will be increased emphasis on cash grants that supplement the earnings of poor persons who work.

Less damage will be done to the self-respect of welfare recipients.

The jobs and training programs will enable many to become self-supporting.

The stigma of food stamps will be eliminated with the Food Stamp program.

Simplification will bring many benefits.

Consolidation of three present programs (Aid to Families with Dependent Children, Supplemental Security Income and Food Stamps) will:

--drastically reduce the number and complexity of forms, thus saving time and lessening the frustration of both recipients and caseworkers.

--permit the use of advanced systems technology for better management.

--reduce error and fraud by creating the ability to check for multiple claims and other ineligibilities . . .

As long as the living unit meets the income and assets tests, virtually no civilian, noninstitutionalized member of the population would be excluded under the Carter Administration proposal. Those eligible include resident aliens, residents of USA territories, students, single persons, married couples, families, and individuals living together in group quarters.

In the proposal, family composition and size will affect the level of benefits received by a particular unit. To facilitate the comments that follow, an example family with four members is assumed, as an illustration.

In the Program for Better Jobs and Income there would be income support for those not expected to work. In general, one member of all families would be expected to work unless all the adults in the family were either

aged, blind, disabled or a single parent with small children. This would include most current AFDC and SSI recipients. For this group, the basic income support (i.e., the guaranteed income) would be $4,200 per year, with an implicit tax rate of 50 percent on any earnings. The break-even income would thus be $8,400.

Next, there would be public service job opportunities created for adult workers with children who cannot find jobs, either on their own or with Department of Labor assistance. One adult from each "expected to work" family would be eligible. They must be unemployed and search for work at least five weeks to be eligible, and must take an unsubsidized job if offered. A person employed in a public service job would generally be paid the minimum wage, and could thus earn a maximum of about $5,300 per year in the public service job.[4]

Such "expected to work" families with public service or with conventional jobs would also be protected by another major component, a cash income support system. This would in effect be a guaranteed annual income of $2,300 that would not be reduced for the first $3,800 of earnings (i.e., a zero implicit tax rate for the first $3,800 of earnings). Beyond that level, the implicit tax would be 50 percent and the break-even income would also be $8,400.

Finally, there would be an expansion of the earned income tax credit that has been in effect since 1975. This is a federal income tax credit only for low income families with children. Under the proposed welfare reform families (excluding those families with a special public service job) earning up to $15,620 would receive a benefit. This benefit would be either a cash transfer or a personal income tax credit, depending

on income level. The proposed Earned Income Tax Credit would be as follows:

10 percent credit for earned income of $0 to $4,000, plus a

5 percent credit for earned income of $4,001 to $9,080, and minus a

10 percent tax for earned income $9,081 to $15,620.

For example, an eligible family receiving a guaranteed income of (say) $2,300, would receive a bonus of 10 cents for each dollar earned, up to $4,000.[5]

Main Components of the Carter Administration Plan

The major components of the Carter Administration proposal can be illustrated by returning to an earned income-after transfer income diagram similar to the first figure. In Figure 2 income earned from wages, etc. is shown on the horizontal axis, income after taxes and transfers is on the vertical axis, and the 45° line represents the situation when the two are equal, as before. The illustration is for a family of four.

Consider a family that would not be expected to work, i.e., all adults were either aged, blind, disabled or a single parent with small children. The basic income support would be $4,200 per year (point A), the implicit tax rate would be 50 percent (line ABCD), and the break-even income would be $8,400 (point D). Below $8,400 of earned income, the family would receive a transfer, represented by the distance between the 45° line and line ABDC. The larger the earned income, the smaller the transfer.

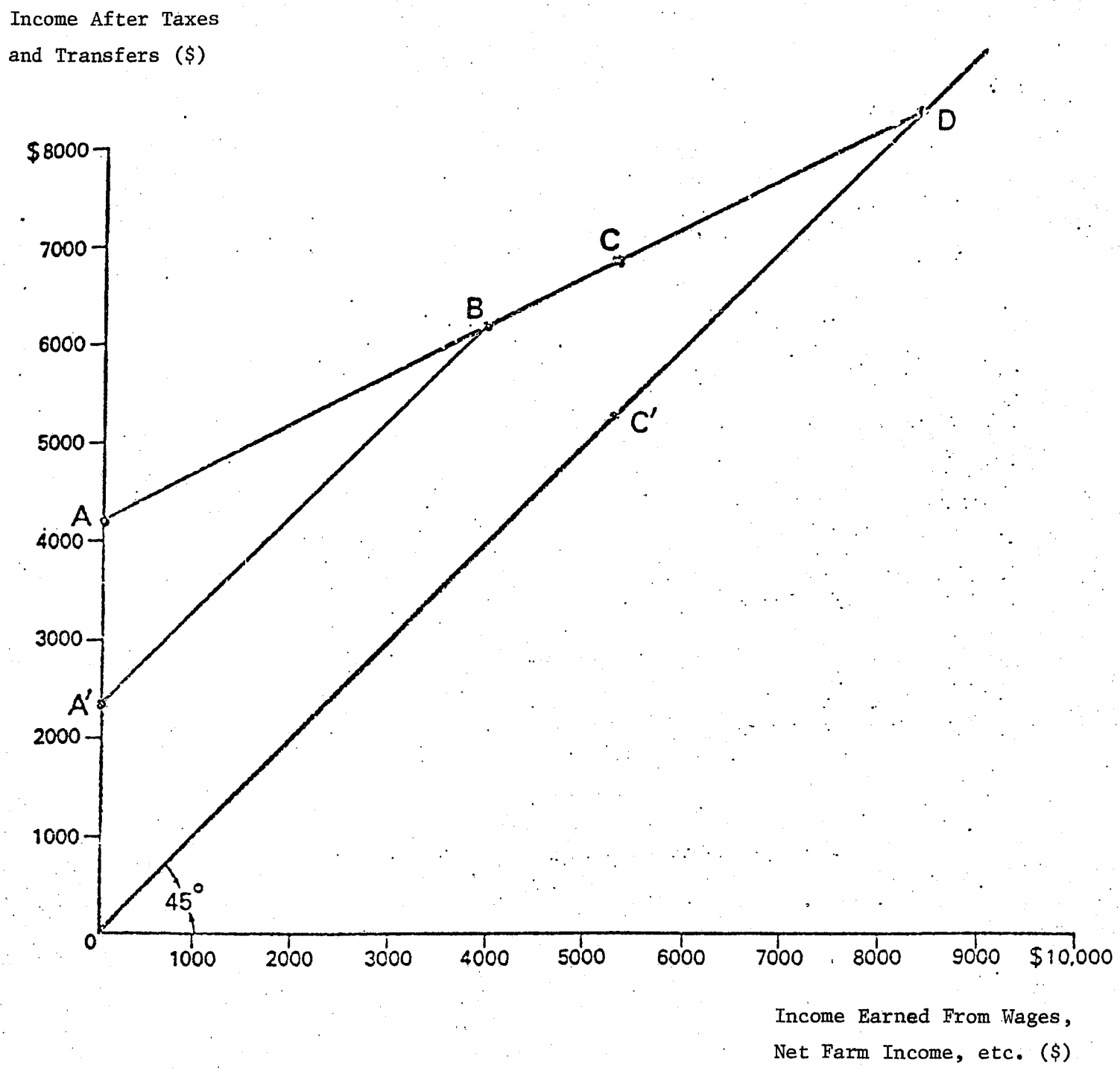

Figure 2. Selected components of program for better jobs and income.

Source: Danziger et al. 1977.

If the family was expected to work, the plan would be different. With no earnings, the guaranteed income would be $2,300 (point A'). That level of benefits would continue until earnings reached $3,800 (point B); the implicit tax rate would be zero percent over that range (line A'B). Beyond $3,800 of earnings, the implicit tax rate would be 50 percent (line BCD), and the break-even income would again be $8,400 (point D). Thus, the after-transfer income of a family expected to work would be represented by line A'BCD.

If the family was expected to work but could not find a job, they would then be eligible for a public service job opportunity. Assuming such full-time work at the minimum wage, their earnings would be about $5,300 (point C'). They would also be eligible for the cash income support and with that transfer they would have total income of $6,850 (point C). Point C falls on the same total income schedule for families expected to work who found jobs in the private sector and for those families who were not expected to work.

Other Components

The comparisons in Figure 2 do not include the effect on income after taxes and transfers of the Earned Income Tax Credit, Social Security payroll taxes or personal income taxes. The Carter Administration has also indicated that some changes in the latter two will be recommended. If they and the welfare proposals become law, then the determination of income after taxes and transfers follows the same system but becomes more complex.

An example of the complete proposed schedule of benefits and taxes for a family (that is expected to work) with four members is illustrated

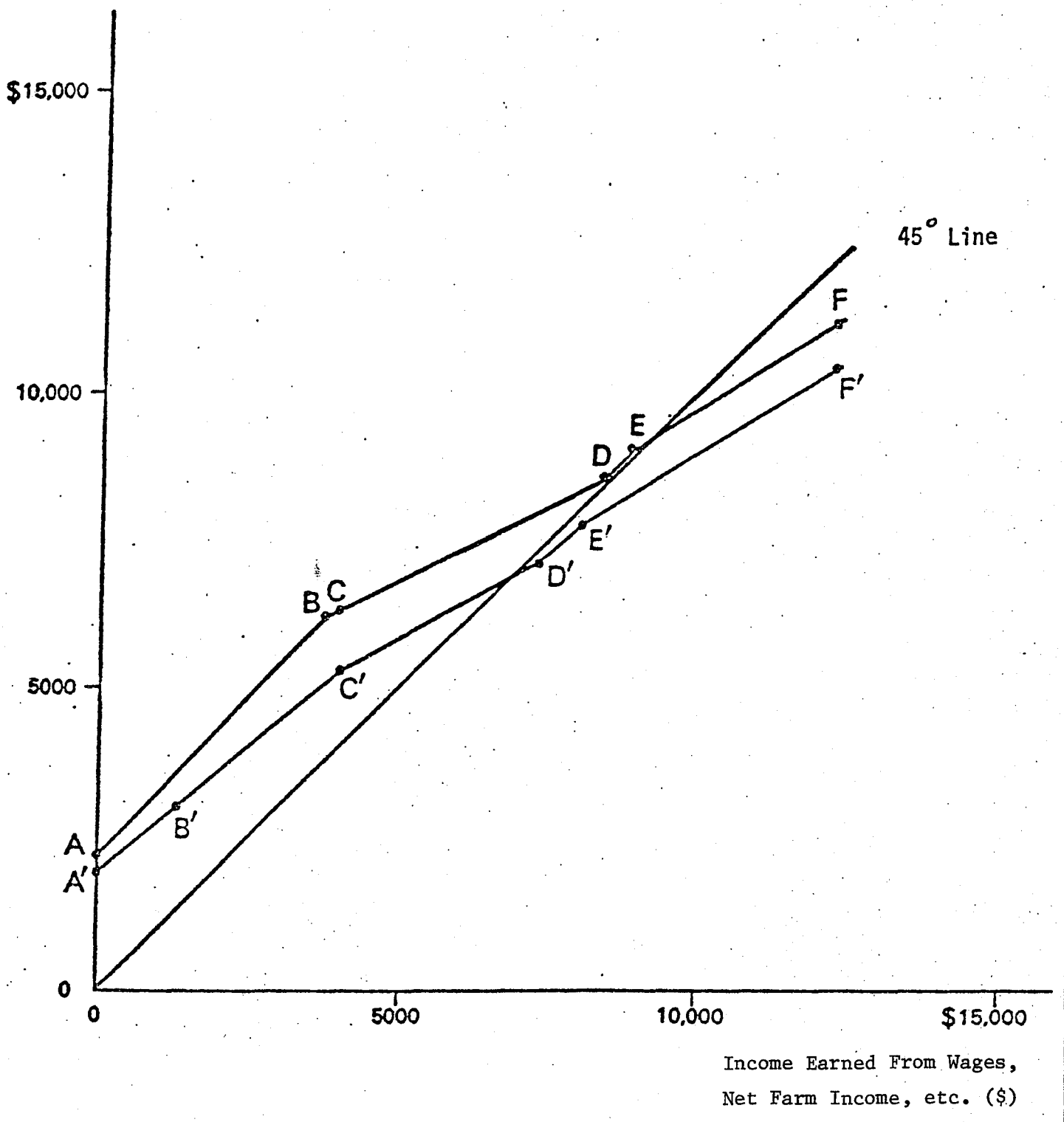

Figure 3. An example comparison of the proposed Program for Jobs and Income with the current system, intact family of four.

Source: Danziger et al. 1977.

by the line ABCDEF in Figure 3. It is different from line A'BCD in the preceding diagram because of the effect of the Earned Income Tax Credit, the paying of Social Security payroll taxes, and the personal income tax. Line A'B'C'D'E'F' represents the current schedule of benefits for the same family, including benefits from Food Stamps, Earned Income Tax Credit, Social Security payroll taxes and personal income tax.

Eligibility and Benefits. If the proposal is enacted, more persons will find participation attractive. First, for any earned income level, the benefits under the new program would be higher (line ABCDEF is everywhere higher than line A'B'C'D'E'F' in figure 3).[6] Also, the basic guarantee in the proposal would be in cash, while it currently is tied to the bonus value of food stamps. Removing the need to participate in the Food Stamp program as a condition receive benefits would encourage participation.

Low income farmers who are not aged or disabled are ineligible for SSI benefits and very few qualify for AFDC benefits. There is evidence (from Wisconsin only) that the number of farmers in a county is negatively related to participation rates in the FS program (Lerman and MacDonald, 1977). Increased numbers of low income farmers, many without experience with any welfare program, would be eligible for benefits under the proposal. The rules and conditions for receiving benefits may appear complex (e.g., the "kinked" schedule reflected in line ABCDEF in Figure 3) and the procedures for application may seem formidable. An inequity may thus arise because former recipients of SSI, AFDC or FS will likely participate sooner in the new program (and the percentage of eligibles participating will be higher) than equally disadvantaged small farmers who have not participated before.

Reporting Assets. If two otherwise identical families have the same annual cash income but one family has no assets and the other family has a large net worth the economic well-being of the second family is greater than the first. This condition is recognized in many current welfare programs through an assets test. Under certain conditions the transfer may be reduced or the family become ineligible for any benefits because of their asset holdings. The Carter Administration proposal in its current form treats different classes of farm family assets in different ways, as follows:

(a) The value of the dwelling and the contiguous residential lot on which it is situated is excluded from the assets test.

(b) Also excluded are the value of all household goods and the first $3,000 of the value of one automobile.

(c) If the market value of stocks, nonfarm business (net) assets, cash, and savings accounts, is over $5,000, the family is ineligible for any benefits. If the value is less than $5,000, 15 percent of the value over $500 is imputed as income. Transfer benefits are reduced 80 cents for each dollar of the imputation.[7]

(d) Farm business (net) assets such as value of land, buildings, machinery, equipment, and livestock have no upper limit currently specified in the bill, but an upper limit will likely be specified by the Secretary of the U.S. Department of Health, Education and Welfare. It is expected to be no less than $20,000 of net farm

assets. If set at that level (for example) farm families with more than that limit would be ineligible for any benefits. If they held less than $20,000 in net assets, then 10 percent of the value would be imputed as income. The greater of (a) that imputation, or (b) the farm income actually earned would be used to determine benefit level, i.e., would be counted as earned income from farming.

Assets tests and small farmers. The key role that assets play in determining eligibility and benefit levels may be troublesome for small farmers. First, the possibility that the Secretary (of HEW) may place an upper limit on farm assets that may be held by participants may make PBJI more restrictive than the programs it replaces. A comparison of the assets tests in FS, AFDC and SSI with PBJI from the point of view of a low income farmer may be useful. The FS program is of most relevance because it is unlikely that many active farmers are currently eligible for AFDC, AFDC-UP or SSI.

In the FS program eligibility is limited to households with less than $1500 in net assets, but the following are excluded from being counted as net assets: home and lot, household goods and personal effects, one vehicle for household transportation, all vehicles necessary for employment, income producing property (understood to include farm property) and the cash value of life insurance policies (U.S. Department of Agriculture 1975, MacDonald 1977).

In the AFDC program the federal regulations impose a maximum of $2000 in net assets per family member, but the states are permitted to exclude the following assets: home, personal effects, automobile and income producing property (Lurie). Under SSI an aged or disabled couple

is limited to $2250 in assets, but may exclude the following: home and lot, the first $1500 of personal effects, the first $1200 of an automobile, the first $1500 of cash value of life insurance, the full value of an owner-occupied farm and the first $6000 of non-liquid assets (Moon).

The assets tests may also be troublesome because most farmers lack experience or criteria for developing a realistic (acceptable) estimate of the value of their farm real estate holdings. Professional appraisers commonly follow two approaches. First, they search the county real estate transfer records to determine the selling price of comparable property. Second, they compare such sales data with an estimate of the capitalized value of the future earnings stream of the farm property. The two estimates may be quite different and may vary considerably with apparently small changes in assumptions.

Estimating the value of the farm house and residential lot apart from the remainder of the farm will be particularly difficult. The value of the residence to a prospective buyer of an entire farm unit (land, buildings and residence) may be considerably more than its market price if sold as a rural residence. And there are areas where a market for rural nonfarm residences is not established. Yet reduced welfare benefits or ineligibility may result from errors in judgement or misinformation in the asset valuation process.

Third, the assets test may cause a problem because it is not clear that the imputation of 10 percent of the value of farm business assets as net income in the PBJI is an appropriate proxy for actual net income. Returns to assets in family farm businesses are difficult to determine. The owner provides labor, management, land and capital (in the form of

animals, machinery, fertilizer, seeds, etc.). This package of resources generates some level of return to all resources combined. Allocating the total returns among the factors can be accomplished by paying each factor the value of its marginal product only in the unusual case of constant returns to scale in the farm firm. In all other cases, the value of the total product will be over- or under-utilized by paying factors their marginal value products.

Economists have attempted to proceed with farm business analyses by paying all but one of the factors their opportunity costs or market rate of returns, and allocating the residual as the earnings of the remaining factor. There is no theoretical basis in this procedure for determining which factor is to be the claimant of the residual. In practice, the assumptions about appropriate market rates of returns to pay the other factors are subject to challenge. If this procedure is used with land as the residual claimant, the rate of return to land (or to all assets combined) can be seen to vary substantially among types of farms within a year, and among years for the same type of farm. That is, there is no single rate of return to farmland or farm assets that can be considered universally "normal" or "appropriate" for all farms in all years.

This imputed income from assets provision of PBJI implies that a farm family that is inefficient in their resource use or unlucky in the distribution of rainfall or adverse natural conditions is less deserving and should be penalized through reduced benefits compared with a farm family with fewer assets who through efficiency and good luck generates the same level of farm income.

Visibility of low income farmers. In 1975, about 5 percent of all families in poverty were farm families (U.S. Bureau of the Census, Current Population Reports 1977). The authors of the Carter Administration welfare

reform proposal are certainly concerned about horizontal and vertical equity in program benefits. However, the farm poor are a small subset of the total population of the poor, and their unique characteristics in relation to welfare programs may not be fully accounted for initially in planning the legislation.[8] Thus it will be appropriate for the advocates and spokesmen for small farmers to monitor the impact of the welfare reform if enacted. Is the proposal constructed so that farm families will receive the same level of welfare benefits (and equivalent levels of living) as their equally disadvantaged urban counterparts? Evaluation will be needed when the proposal is in operation.

We now turn to the Rural Income Maintenance Experiment for insights into how farm families may respond if the proposal is enacted.

3. THE RURAL INCOME MAINTENANCE EXPERIMENT

Several major social experiments have been conducted in the last decade, primarily to determine how much less, if any less, the poor would work under a universal income maintenance program. The Rural Income Maintenance Experiment was one of these. It was supported initially by a planning grant from the Ford Foundation and then by the Office of Economic Opportunity and the U.S. Department of Health, Education and Welfare. It was carried out through the Institute for Research on Poverty, University of Wisconsin-Madison.[9]

The Rural Experiment began in late 1969 and ended with a follow-up survey in early 1973. The primary purpose was to measure the effect of various levels of guaranteed income and implicit tax rates on the work

behavior of rural farm and nonfarm families. The Experiment staff was multi-disciplinary and other research objectives included the effect on children (health, school performance, attitudes and aspirations, delinquency rates, etc.), changes in consumer expenditures (saving versus consumption, medical care, housing, consumer credit), job search and mobility, farm production and financial management, family nutrition, family consolidation and divorce, psychological well-being and political involvement. About fifty researchers were involved in the analyses.

One midwest location (Pocahontas and Calhoun Counties, Iowa) was selected to reflect a relatively affluent area with a poor white minority and a southern location (Duplin County, North Carolina) was selected for a site with a high incidence of poverty. A sample of families was drawn from both areas and those eligible were randomly assigned to a control group or to one of five guaranteed income-implicit tax rate experimental groups.[10] There were 809 families selected, and of these 220 had farming as a significant economic activity. The households were interviewed quarterly and received benefit checks (if eligible) every two weeks. The control group families received a nominal fee for participating. To facilitate interpretation of the findings, selected characteristics of all farms included in the Experiment (i.e., the experimentals and controls) are reported in Table 1 as bench marks.

Work Behavior

Both the farm operators and their wives in the experimental plans reported more hours worked on the farm than did their counterparts in the control group. Off-farm wage work by members of families in the

Table 1

Selected Business Characteristics of Farms Included in the Rural Income Maintenance Experiment

	Iowa			North Carolina		
	1970	1971	1972	1970	1971	1972
Number of farms	109	109	109	111	111	111
Mean family size	4.6	4.5	4.5	4.1	3.9	3.8
Crop acres	245	245	248	32	38	44
Diverted acres	25	23	36	--	--	--
Tobacco sales	--	--	--	$5292	$5769	$6059
Total crop sales	$8591	$10,521	$12,064	$6351	$6988	$7879
Livestock sales	$9089	$8536	$11,283	$1271	$1273	$1501
Market hogs sold	96	114	122	15	16	14
Fed cattle sold	19	16	18	--	--	--
Fertilizer purchased	$1189	$1334	$1374	$625	$905	$904
Feed purchased	$4031	$4076	$4684	$503	$488	$392
Machinery purchased	$2637	$3632	$5565	$822	$920	$1087
Insurance purchased	$402	$497	$462	$137	$174	$173
Custom work done	$200	$284	$331	$66	$55	$56
Debt	$10,518	$11,913	$14,940	$2938	$3402	$4314
Debt/assets	.24	.24	.28	.19	.21	.29
Percent of cropland share rented	76%	72%	71%	45%	41%	41%

experimental plans declined relative to controls, particularly wage work of the wives; that is, the transfer payments allowed the farm families to reduce nonfarm work and spend more time on the farm (Kerachsky, forthcoming).

The extra time reported on the farm may not have been used productively, however. Total farm production, gross farm revenues minus operating costs, and technical efficiency decreased for the experimentals. Some of the increase in reported farm hours may have been used for previously neglected repairs and maintenance or information gathering. It may reflect reporting as "farm work" all the time spent on the farm. The decrease in nonfarm work by spouses, particularly in North Carolina, suggests more time available for the homemaker role by the spouse (Primus, forthcoming).

Farm Product Sales

The Experiment was found to have opposite and partially offsetting effects on levels of crop sales and on livestock sales. In Iowa, farmers responded by increased sales of crops, which were more than offset by decreased sales of livestock for a net decrease in farm product sales; that is, crops that would otherwise have been fed to livestock were instead sold. Major livestock enterprises in the Iowa counties in the Experiment were the farrowing or purchase of pigs and feeding them to market weights and purchasing feeder cattle (generally in the fall) and feeding them to slaughter weights and selling the following year. Being in the experimental plans was associated with a lower conditional probability of selling any market hogs. Among the farms selling market hogs, experimentals sold substantially fewer in all three years, when pre-experimental differences were controlled for.

In North Carolina, farmers decreased sales of tobacco and other crops and these decreases were not offset by the increased sales of livestock, also for a net decrease in farm product sales. Tobacco dominated other crops in gross sales per acre at well over $1,000 per acre, five times greater than for any other crop. Tobacco production was controlled by federal allotments, which could readily be transferred from farmer to farmer. Being in the experimental plans was associated with substantial reductions in tobacco sales and all crop sales in all three years. Livestock sales in North Carolina were not statistically different between controls and the experimentals in all three years. Hog production was the most common livestock enterprise among the farmers in the experiment and it appeared generally unaffected (Saupe, forthcoming).

There were about 600,000 farmers with total family income below 125 percent of the federal poverty level in 1975 (based on U.S. Bureau of the Census). The number eligible for a universal income-conditioned cash transfer program would depend on the provisions of that program, particularly in the treatment of farm assets. However, the aggregate farm production responses to any politically feasible program would probably not affect USA farm production levels or food prices. First, the smaller farmers in the United States account for a very small percentage of total farm product sales. Second, the reductions in farm production noted in the experiment tended to be small. In the case of tobacco, the allotments were merely shifted to nonexperimental farmers. In spite of a generally inelastic demand for food the aggregate effect should be minimal.

Farm Financial Management

The management of farm business and farm family finances are usually intertwined. Every expenditure for consumption, farm operating expenses and farm investment draws from the same pool of receipts. For example, a change in total farm family income caused by being in the Experiment may influence farm net worth by a change in farm assets or farm debts. But the income change may instead affect current consumption, purchase of consumer durables or investment in human capital, and leave farm assets and debts unchanged.

From summer 1969 until the spring of 1973 the number of Iowa controls owning land increased from 12 to 21 (value increased from $.55 million to $1.05 million); those in experimental plans increased from 8 to 14 (value increased from $.36 million to $.53 million). This dominated all analyses of debt-asset relationships in Iowa, i.e., experimentals increased net worth $4415 less than controls and they increased their debts relative to assets less than controls during the Experiment. But these were not viewed as responses to the Experiment. Land sales in northwest Iowa are usually in tracts of 80 acres or more and are infrequent in any local area. The most common reasons for land sales are to settle estates and for inter-generation transfers. The timing of land purchase is often determined by when land within geographic range of the buyer is offered for sale. Farmers were not expected to delay such a major, infrequent investment because of their participation in a short-term income support experiment.

In North Carolina, the net worth increase of the experimentals was not different from that of the controls. Both experimentals and

controls decreased their debts relative to assets between 1969 and 1973 and were not different in the rate of reduction.

Information about sources and purposes of farms business loans was asked for directly in the interviews. Among the various loan sources reported by the farmers, the loan company was probably the least desirable institutionalized source. Loan companies or collection agencies usually do not provide on-farm supervision or farm managment advice with their loans and are often associated with relatively disadvantageous interest rates and repayment schedules. In Iowa, experimentals reported substantial reductions in the amount borrowed from this source between 1970 and 1972.

In North Carolina there was a net increase of five experimentals reporting any farm loans from 1970 to 1972 while controls remained unchanged. Analyses controlling for between-group differences established that experimentals increased their farm business loans $1,145 more than controls from September 1970 to September 1972. The major difference between controls and experimentals in North Carolina regarding sources of farm business loans was that experimentals increased their use of the Farmers Home Administration and loan companies relative to controls.

Controls and experimentals were little different in their reasons for farm borrowing, i.e., in the purpose of farm loans. In both states, controls and experimentals both increased their borrowings for purchase of land, buildings, and machinery. In North Carolina, both groups increased borrowing for automobile purchase and repair, but the changes were more pronounced for experimentals.

While the aggregate effects on farm production are expected to be small, farmers in the Experiment did demonstrate a sensitivity and adaptability to changes in enterprise returns and total income. They modified their farm production patterns in response to these stimuli and did not hold to their "traditional" position. Associated with the higher and more certain income of the experimentals, there was a willingness on the part of the farmer and his agricultural lender to begin or increase use of agricultural credit. Avoiding suboptimal use of this new credit would increase the effectiveness of a universal transfer program in increasing the economic well-being of the farm families. The successful experiences of the Farmers Home Administration with intensive loan supervision and of extension and other on-farm educational programs in farm financial management for smaller farms suggest that such an opportunity would exist. This is supported by the farmers' demonstrated willingness to change their business in response to changed conditions.

Other Responses in the Experiment

The earned income plus transfers to families in the experimental plans resulted in higher total family income than for controls. How the experimental families used the extra income may be of interest in considering farm family response to welfare reform (Institute for Research on Poverty 1976).

Among North Carolina families, a study of nutritional adequacy showed experimental families to be in a superior position to controls in both quarters that nutrition was measured (O'Connor, Madden and Prindle).

The absence of an effect in Iowa may have been because of a higher initial level of nutrition. The cost-effectiveness of increasing nutritional intake through the cash transfers in the Experiment was about the same as for food stamps, where measured in a rural area.

In North Carolina, the probability that a rural nonfarm experimental family would buy a home was higher for experimentals than controls, with no effect noted for farmers. In both states, home purchase came at an earlier age for experimentals than controls (A.C. Johnson).

Little effect was found in the use of medical care or self-evaluated state of health by experimentals or controls (Kerachsky). Farm families in the experimental plans spent more for consumer durables than controls, but were not different in regard to amount of consumer debt or open accounts in stores (Bryant).

Little difference was noted in job change or job search (Tweeten). However, use of the Public Employment Service had a high payoff for those using it. The infrequency of its use indicated that rural people may have had inadequate access to this service.

Rural nonfarm families in the experimental plans were more likely to move to another location than controls. For them, the transfer payment helped cover the costs of moving and provided a cushion against the resulting short-run unemployment. Looking ahead under the Carter Administration proposal, a family of four (for example) that is expected to work would receive a guaranteed income of $2,300 per year, which would not be reduced for the first $3,800 of earnings. Persons interested in joining the urban to rural migration would thus have a cushion to

help support them in their attempt at self-sufficiency on an acreage or to begin farming on a small farm. Many urban to rural migrants correctly recognize their lack of rural skills and aggressively seek sources of information, placing heavy demands on agricultural extension workers. This could be expected to increase.

4. CONCLUSIONS AND INTERPRETATION

Welfare reform has for a decade move toward a guaranteed income or negative income tax concept. If the Carter Administration proposal is enacted, a universal federal guaranteed income program will be phased in the fall of 1980.

(a) In general, more persons will be eligible and the level of benefits will be higher under the Program for Better Jobs and Income (PBJI) than under the three existing programs it would replace, i.e. FS, AFDC and SSI.

(b) Low income farmers may not fare as well under the new proposal as with FS, however. Unlike FS, the Secretary of HEW is permitted to set an upper limit on farm assets that may be held by participants in PBJI. Low income farmers typically hold substantial assets relative to the nonfarm, nonaged poor. It is not clear that their unusual asset-income position will be accomodated in light of policy makers' concern that benefits not be paid to the wealthy.

(c) The results of the Rural Income Maintenance Experiment suggest that farm families that become eligible for

federal income support for the first time will reduce their nonfarm work and spend more time on the farm. Aggregate USA farm production or farm product mix will not be affected in a meaningful way even though individual farmers will alter the organization of their farms. Such families will increase their use of farm credit and will be better risks from the view of the lender.

(d) Urban to rural migration will be facilitated by the guaranteed income support of the PBJI. Such new rural residents often place heavy demands on agricultural education and rural extension service institutions for agriculture and rural living educational programs.

(e) Low income farm families without previous experience with welfare programs may need assistance regarding eligibility requirements, enrollment procedures and the trade offs between earned income and the program benefits to prevent horizontal inequities with experienced participators in FS, etc.

(f) Low income farmers in the Rural Income Maintenance Experiment responded with changes in both farm product mix and in farm financial management. This willingness to change their traditional mode of operation indicates that the opportunity exists to multiply the economic benefits derived by farm families from the transfers in the PBJI through educational programs in farming practices and financial management.

(g) The PBJI would create 1.4 million subsidized public service jobs to attempt to assure access to work for one adult in every family with children. Not all communities or areas can benefit uniformly from such job creation, but attention is particularly needed to avoid an urban orientation disproportionate to need.

NOTES

[1]The description of the Carter Administration welfare reform proposal is based on the cited report by Danziger et al. (1977). Appreciation is expressed for access to an early draft.

[2]Note that the federal personal income tax system permits substantial earned income before any tax is charged, and then begins by taking only 14 cents of each dollar earned. While the personal income tax is progressive in its tax rates, at no level of income does the marginal tax rate reach 100 percent, i.e., take a dollar of taxes for each dollar of earnings.

[3]The proposal is described in detail in news releases from the U.S. Department of Health, Education and Welfare and the Department of Labor (1977). A guide and critique was prepared for the Joint Economic Committee of the U.S. Congress by researchers at the University of Wisconsin (Danziger et al. 1977). A general discussion and analysis of welfare and welfare reform was released just prior to this by the Congressional Budget Office (Congress of the United States 1977).

[4]If the person worked 2,000 hours per year at the minimum wage of $2.65 per hour, the earnings would be $5,300.

[5]The family would also keep the entire $2,300 of guaranteed income, up to $3,800 of earnings. Note that the 10 percent credit for the first $4,000 income plus the 5 percent credit for the next $5,080 would just be exhausted by the 10 percent tax (for income over $9,081) when income reaches $15,620. The figure of $9,081 is the expected

level at which positive income tax would be paid (by an example family of four).

[6]Under some sets of circumstances affecting relatively few persons, benefits from the proposed federal welfare reform would be slightly less than under current federal programs.

[7]Note that this creates a "notch" in the benefit schedule. For example, a family of four, not expected to work, with just under $5,000 of such assets would receive a transfer of $3,260. If the family had just over $5,000 they would receive no benefits. Also, certain poverty-level cash crop farmers could temporarily exceed this amount of liquid assets after selling last year's crop and before incurring production expenses for the current crop. Thus, the time of year when assets are valued and the length of time the valuation determines eligibility becomes an issue.

[8]Low income farm families have several characteristics that may influence the effectiveness of welfare programs. These include the following:

- Farm and rural nonfarm poor are geographically dispersed. They are physically separated from sources of services, and services tend to be of lower quality in rural areas.
- Farm income is a return to all factors of production and historically farm resources on small farms have generated relatively low current earnings; that is, relatively large investments in land and capital are combined with full-time labor for relatively modest current returns.

- Farmers (and certain of the aged) are the only ones among the poor who consistently have enough assets to be of concern to welfare policy makers.
- If farm assets are consumed the earnings of that asset are lost and the labor earnings will also decrease. In contrast, a wage earner who consumes savings will lose the interest but the wage income is unaffected.
- Farm real estate cannot be sold in small units. It can be only consumed by continually borrowing against it.
- Job mobility from farming e.g., to a created public service job probably would involve migration and perhaps a change from a rural to urban culture, as well.

[9]Publications dealing with the Rural Income Maintenance Experiment are reported in the References. For a concise summary see the Institute for Research on Poverty newsletter Focus. A "Summary Report" was prepared by the U.S. Department of Health, Education and Welfare. The "Final Report" containing 6 volumes is available currently in mimeographed form from the Institute for Research on Poverty. The response of farmers to the Experiment will be reported in the December 1977 issue of the American Journal of Agricultural Economics in a set of four articles by Bawden, Kerachsky, Saupe and Primus. Articles outlining the theoretical expectations of farmers' response are cited in the latter set.

[10]The five experimental plans had the following guaranteed incomes and implicit tax rates (for an example family of four):

Guaranteed Income	Implicit Tax Rate	Break-Even Income
$1,741	50%	$3,482
$2,611	30%	$8,703
$2,611	50%	$5,222
$2,611	70%	$3,730
$3,482	50%	$6,964

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