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GRADUATE COLLEGE

THE REGIONAL IMPACTS OF A PROPOSED INCOME MAINTENANCE PROGRAM

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

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degree of

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BY

HSIUNG HUANG

Norman, Oklahoma

1978

THE REGIONAL IMPACTS OF A PROPOSED

INCOME MAINTENANCE PROGRAM

APPROVED BY

DISSERTATION COMMITTEE

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THE REGIONAL IMPACTS OF A PROPOSED INCOME MAINTENANCE PROGRAM

BY: HSIUNG HUANG

MAJOR PROFESSOR: THOMAS J. WILBANKS, Ph.D.

The principal objective of this study is to estimate: (1) the regional patterns of benefits of the proposed Family Assistance Plan in the United States; and (2) the impact of the Family Assistance Plan on inter-state and intra-state income inequalities in the United States. Secondary objectives of this study include a review of the impacts of various income maintenance programs, including the Family Assistance Plan, and an investigation of additional dimensions of these impacts on regional labor supply, regional consumption, regional migration, regional demographic characteristics, and regional economic growth in the United States.

The results indicate that at the first glance the plan would benefit those more populous states than it would for other states. On a per capita basis, however, the higher levels of benefit would go to Southern and border states. The political support for the plan both in the House of Representatives and the Senate indicates a very significant inverse relationship between states' per capita program benefits and their political support for the plan in Congress.

The analysis of income inequalities in the United States reveals that the present welfare system has caused a slight increase in inequalities between states. At the intra-state level, it has the effect of slightly reducing inequalities in some states while slightly increasing or making no difference in other states. The proposed Family Assistance Plan and a version of it adjusted for cost-of-living differences between states would mildly reduce inequalities both at the inter-state and intra-state levels. Their effectiveness in reducing within-state inequalities varies among states, with a strong inverse relationship between the Family Assistance Plan's effectiveness in reducing inequalities and the degree of affluence of individual states. The inclusion of geographical location, urban-rural character, and economic structure variables in the analysis of intra-state income inequalities indicates important relationships between the effectiveness of the Family Assistance Plan in reducing inequalities and these variables.

Current empirical research on income maintenance programs suggests that these programs would have effects, ranging from mild to insignificant, on regional labor supply, regional consumption, regional migration, and regional demographic characteristics. These effects might have different spatial repercussions with poor regions being affected at a much greater magnitude. Based on theoretical inferences, in the long-run income maintenance programs would stimulate economic growth in the poor regions not necessarily at the expense of the rich regions.

CHAPTER I

INTRODUCTION

Objectives of the Study

The principal objective of this study is to estimate: (1) the regional patterns of benefits of the proposed Family Assistance Plan in the United States; and (2) the impact of the Family Assistance Plan on inter-state and intra-state income inequalities in the United States.

Secondary objectives of this study include a review of the impacts of various income maintenance programs, including the Family Assistance Plan, and an investigation of additional dimensions of these impacts on regional labor supply, regional consumption, regional migration, regional demographic characteristics, and regional economic growth in the United States.

Justification of the Study

It has been noted that the regional impact of many public policies and programs, such as those of the federal government, has been varied and unequal with respect to the affected areas (Vaughan, 1977). Even though they were designed in such a way that regional discrepancies in program benefits, or effects, could be avoided or minimized, the nature and magnitude of such variations, was not clear or fully understood by many elected representatives at the times those programs were under consideration. Owing to this misunderstanding or misinterpretation by the elected representatives, many sound public programs failed

to obtain enough support for enactment and implementation, while many other less effective ones were enacted and implemented. This fact suggests that geographic distribution of program benefits (or potential benefits) does not necessarily match the geographic distribution of political support for the programs (Wilbanks and Huang, 1975).

Still, much of the effect of the federal government on regional development is inadvertent. Schultz (1972: 1) points out that overriding interests dictate the timing and direction of change in public policy which often have substantial regional repercussions. Many federal policies or programs were found to have irreversible effects on the regional or local economic growth or development. A good example of this nature is provided by the federal interstate highway construction program. This project has increased and improved the accessibility of many lagging or slow-growing regions in the United States. A consequence of this improvement in accessibility is the opening-up of these regions to the outside industries, businesses, and people at the expense of those more developed and congested regions. A steady out-migration of industries, businesses, and people from the Northeast and Midwest to the South and West has stimulated and promoted considerable economic growth in the South and West at the expense of the Northeast and Midwest.

The improved highway systems, the increased use of private automobiles, and the availability of truck transportation have significantly altered the urban structure, land use, and urban growth patterns in favor of the suburban areas and at the expense of the central cities. These effects are not reversible, because highways

cannot easily be torn up. Consequently, other federal programs had to be initiated to assist those regions or areas that have suffered from the inadvertent effects of the interstate highway program. Many of these assistance programs, such as the urban renewal programs, are proven to be of little help to those adversely affected regions or areas.

There are other federal policies or programs with effects that can be reversed with varying degrees of success and ease. It is in this area that much of the research in the regional impacts, direct or indirect, of federal policies and programs has been concentrated. These studies have covered different effects of various types of federal policies and programs, such as the economic and political impact of general revenue sharing (Juster, 1976), the distributional impact of the State and Local Fiscal Assistance Act of 1972 (Neenan, 1976), economic effects of tax-transfer policy (Haveman, 1976), AFDC tax rates and state reactions (Hutchens, 1976), and the urban and regional impacts of federal policies (Vaughan, 1977). Studies of this type attempt to identify the potential impacts of federal policies or programs on regions or areas so that the "degree of freedom" available to the federal government can be determined and utilized in the design and development of various federal regional, urban, and rural policies or programs (Vaughan, 1977: ix).

Thus, the regional consequences of major federal policies and programs should be appraised by those who are engaged in the planning and coordination of development policies for different regions of a national entity. An important piece of pending legislation of this nature is the federal Family Assistance Plan (FAP).

The Family Assistance Plan is essentially an income maintenance program proposed to replace some of the present welfare programs which are considered ill-designed. There has been a general belief that the present welfare system in the United States has failed to perform those functions it is supposed to do. But, there is hardly any consensus on what should replace it. DaVanzo and Greenberg (1974) believe that this lack of agreement is probably caused by the uncertainty over the ultimate cost of proposed alternatives to the present welfare system and the extent to which these alternatives might alter existing behavioral patterns of those who participate. At the subnational level, the range of uncertainty is even greater. These alternatives would involve various proposals for state and local welfare budgets, the effects of these proposals on the geographic allocation of federal transfer payments to the poor, and the proposals' differential regional impacts on various dimensions of human behavior.

The debate and study of various income maintenance programs went back only to the early 1960's in the United States (Congressional Quarterly, 1967). Since then, many studies have been conducted to examine the potential impacts of those income maintenance programs. Among them, however, empirical attempts to estimate the nature and magnitude of effects associated with income maintenance programs are still at a rather preliminary stage with respect to producing reliable information to policy-makers, and most of those efforts have focused mainly on national effects (DaVanzo and Greenberg, 1974: 24).

The present study is, therefore, intended to identify and analyze some of the potential impacts of an income maintenance program, the Family Assistance Plan, at the subnational level. A better

understanding of the potential impacts and effectiveness of the Family Assistance Plan would provide policy-makers with some useful information for their future actions on welfare reform measures in this country.

A study of this nature apparently involves many disciplines, such as economics, sociology, political science, psychology, demography, and many others. Then, a question arises concerning the justification of doing something like this by a geographer. As a geographer, we shall be concerned with any existing (or potential) spatial incongruities, as suggested by Abler, Adams, and Gould (1971), and with means to help rectify such spatial incongruities (Wohlenberg, 1976a; and Johnston, 1977). The variations in regional impacts of any federal, or national, legislation provide an example of such spatial incongruities. The potential spatial incongruities caused by any federal program can have a profound influence on the existing spatial incongruities caused by other processes (such as economic development). The spatial variations in the program effects of the Family Assistance Plan will determine its effectiveness in reducing existing spatial inequalities (as measured by differences in per capita personal income) in the United States.

As an economic geographer, we shall be concerned with any program-induced impacts on regional economic growth or development. Although the Family Assistance Plan is an income maintenance program designed to reduce the inequality in welfare payments among the general populace, it may very well have some direct and indirect effects on the economic growth or development process. The causal relationship between economic development and spatial inequality is, however, still an uncertain and much debated one. The classical hypothesis

advanced by Simon Kuznets (1955) assumes that the secular behavior of inequality follows an inverted U-shaped pattern with inequality first increasing and then decreasing with economic development. This hypothesis has considered economic development as a causal factor in changes in spatial inequality.

Other economists, such as Albin (1970), Seers (1970), Chiswick (1971), and Higgins (1973), have adopted a more realistic view of the relationship between inequality and economic development. They believe that there are interactions between the two variables and that they are mutually reinforcing. The present study is examining such relationship along this line of thinking and believes that inequality will have some direct and indirect effects on the rate of regional economic growth or development.

The current literature on the relationship between inequality and economic development is contributed mainly by economists. Few geographers have paid much attention to this type of problem which has profound spatial implications. Semple and Griffin (1971), Semple and Gauthier (1972), Schwind (1971), Lankford (1972), and Hodge and Lee (1976) are among the few geographers who have worked directly or indirectly on this problem. Logically, after the recognition and identification of various types of spatial inequalities, one would seek means to rectify these inequalities and increase the level of welfare among the general populace. Unfortunately, geographers are lagging behind scholars and practitioners in other disciplines in this area. In the study of poverty and welfare reforms, only a handful of geographers have contributed their expertise and efforts, among them Morrill and Wohlenberg (1971),

Smith (1973), Wohlenberg (1976a, 1976b, and 1976c), and Johnston (1977). The lack of attention from geographers on these important spatial issues provides another important incentive and justification for the present study of the Family Assistance Plan.

Recently, a major study of the economic impacts of the proposed Family Assistance Plan and a negative income tax (NIT) plan was attempted by Golladay and Haveman (1977). In their study, an empirical simulation model was designed to estimate the program benefits and taxation requirements of the two plans and their effects on the entire U.S. economy. This study yielded detailed estimates of the direct and indirect effects of the two income maintenance programs on consumption spending, outputs, employment, and income redistribution, both geographically and sectorally. However, their study only dealt with the economic aspect of the potential impacts of these income maintenance programs. Excluded in the model were many important issues, such as the recipients' behavioral responses to the income maintenance programs in their decisions to work, to migrate, or to alter family structure. And, due to the short-run, current-account, and non-recursive nature of the model, investment behavior induced by the income maintenance programs was not included in the model, nor was the second, third, and nth adjustments in the economy induced by these programs. The present study differs from the Golladay and Haveman (1977) study not only in objectives, but also in scope. Those important issues ignored by Golladay and Haveman (1977) will be dealt with directly or indirectly in the present study.

Scope of the Study

The present study is mainly concerned with the impacts of the Family Assistance Plan, as was proposed by the Nixon Administration and passed by the House of Representatives, and its slightly modified version which adjusts payments to state living-cost index. Two other alternative plans, namely the Senate Finance Committee's version of the Family Assistance Plan and that of the Senator Abraham Ribicoff, are not included in the present study. The former is known as the "workfare" plan which makes it mandatory that welfare recipients able to work must do so or lose all of their Family benefits. The latter would set a guaranteed annual income of $2,600 ($2,400 in the House version) for a family of four with no outside income.

Their exclusion by the present study does not suggest their irrelevance and insignificance, but rather indicates serious data problems. The lack of data on the number of potential recipients of the Family Assistance Plan who would be physically and mentally fit to work causes formidable problems for its inclusion in the present study. The Ribicoff plan is almost identical to the House version, except for a $200 difference in payments for a family of four without outside income. This minor difference would not cause significant variations in program impacts between the two plans. Thus, only the House version of the Family Assistance Plan and its living-cost-adjusted version will be dealt with in the present study.

The Family Assistance payments will be estimated for each county in the United States as of 1970 according to the program specifications and the number and average size of poor families within that county in 1970. The state Family Assistance payments are sums of Family

Assistance payments received by all counties within that state in question. In order to compare the differences in program benefits between states, per capita Family Assistance payments will be calculated for each state. The same tasks will be performed for the modified version of the Family Assistance Plan. Since geographic distribution of program benefits does not necessarily coincide with geographic distribution of political support for the program, a comparison will be made between per capita Family Assistance payments for the 50 states and their support in Congress for the plan.

The impact of the Family Assistance Plan and its modified version on inter-state and intra-state income inequalities is measured as the degree of reduction in inequalities caused by the Family Assistance payments. Due to the limitations and incompleteness of the county data for the most recent years, only 1970 census data will be used to estimate the Family Assistance payments for each county. Thus, the study of impact of the plans on inter-state and intra-state income inequalities in the United States has to be based on 1970 population and income data.

Also owing to the limited resources available to this study, a broad and comprehensive investigation of the impacts of the Family Assistance Plan on the entire economic and social life in the United States is unfeasible. The present study will only deal with the plan's possible impacts on regional labor supply, changes in regional consumption patterns, present and future patterns of regional migration of people, changes in present and future demographic characteristics between regions, and regional economic growth in the United States. The treatment of the plan's impacts

on these issues in this study will be in the form of synthetic review of current research along these lines and a theoretical analysis of the additional dimensions of the plan's impacts on these issues. This study will be carried out in a sequence as outlined by a general procedural scheme (Figure 1).

Chapter II discusses the origin and evolution of the concept of income maintenance. Various income maintenance programs, especially that of the United States, are briefly discussed here. Also included is a description of the major drawbacks of various existing income maintenance programs in the United States. The Family Assistance Plan is treated very generally in terms of its program specifications, legal backgrounds, and legislative status.

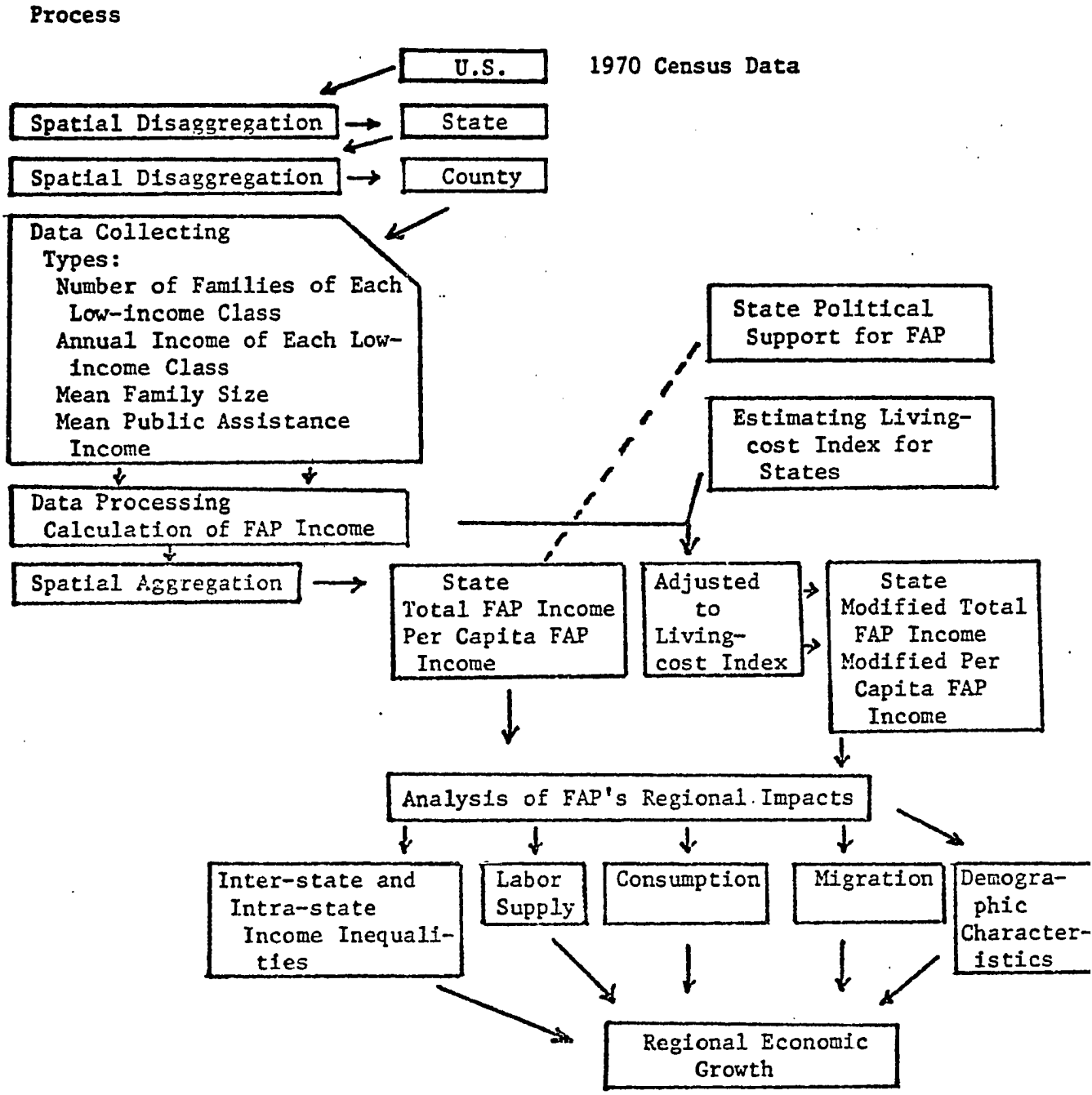
Chapter III discusses impacts of various income maintenance programs, including the Family Assistance Plan, on regional patterns of labor supply, consumption, and demographic characteristics in the United States.

Chapter IV describes the various methodologies used in this study. These methodologies are divided into two groups. The first group consists of techniques used to estimate the benefits of the Family Assistance Plan and the methods for estimating living-cost index for each of the 50 states in the United States. The other group consists of three measures of income inequality, namely a Williamson coefficient of variation, an information statistic, and Gini index.

Chapter V discusses the chief findings and analysis of this study. These include: (1) the regional patterns of benefits of the Family Assistance Plan; (2) the regional patterns of political

FIGURE 1

THE GENERAL RESEARCH PROCEDURE



support for the Family Assistance Plan; (3) the impact of the Family Assistance Plan on inter-state income inequalities in the United States; and (4) the impact of the Family Assistance Plan on intra-state income inequalities in the United States.

Chapter VI discusses effects of various income maintenance programs, including the Family Assistance Plan, on regional migration and regional economic growth in the United States. These effects would have some significant implications for regional economic development in the United States.

Chapter VII concludes this study with summary and suggestions of directions for the study of welfare system or future welfare reforms in the United States.

CHAPTER II

THEORIES AND PRACTICE OF INCOME MAINTENANCE PROGRAMS

Origin and Evolution of the Concept of Income Maintenance

Income maintenance programs are one type of social security measure designed to provide alternative income to persons whose normal private incomes have temporarily or permanently disappeared or to remove from individuals and families the burden of some very generally experienced charges on income (Burns, 1956: 4; and Heclo, 1974: 13).

Thus, by definition, income maintenance programs can be divided into two categories. The first includes programs such as public assistance or relief, compulsory social insurance, statutory payments and awards to certain categories of persons (such as veterans), income-conditioned pensions, and work relief programs. The second category, aimed at raising standards of living, intends to socialize the costs of some items which are part of the normal consumption patterns, but are surely experienced differently by different families.[1] Therefore, many governments have attempted to protect individuals, even though they enjoy normal incomes, from a reduction in their standard of living due to the costs of, for example, medical care by instituting health insurance systems or by providing medical care as a public service similar to public education. Also, most highly developed countries, except the United States, make payments to all families with children

---

[1] Subsidized housing and rent control are other examples of this type of income maintenance.

regardless of income levels in the belief that the standard of living of the family declines as the number of its members increases (Burns, 1956: 4; and Kahn, 1969: 219).

These income maintenance programs have typically taken two forms: cash payments and benefits in kind. In most countries, the former are more important today. The traditional social security system, the poor law, provided the poor only assistance in kind, or supported them in an institution. Since the turn of the century, outdoor relief (or assistance given in the home) has come to replace institutional relief, at least for able-bodied persons, while assistance in cash has generally taken the place of payments in kind. The policy of giving economic assistance in kind was adopted mainly for two reasons: (1) it was believed to be unpopular with the beneficiaries and would thus discourage recourse to publicly assured income; and (2) it was thought to be a means for meeting the basic needs of the economically insecure with minimum cost to the taxpayers, especially at a time when there was a general belief that those who sought public aid were usually persons incapable of efficiently managing their own economic affairs (Burns, 1956: 5). The in-kind assistance may also reflect the lobbying strengths of various interest groups (such as the farmers) for their desire to increase the government's purchase of certain goods, for example, food (Barth, Carcagno, and Palmer, 1974: 36).

Over the years, many began to recognize the "undesirable effects on human personality of this removal from the individual of all freedom in the running of his economic life and of the fact that this system is often administratively costly, especially for large numbers" (Burns, 1956: 5). Also, in the western culture or economy, it is believed that

a fully participating member should have control of a certain minimum of funds to negotiate in the market for the things he has to buy (Kahn, 1969: 219). It was considerations like these, reinforced by widespread resentment among the recipients, especially during the depression years when millions of normally independent workers were forced to seek public assistance, that induced both the virtual abandonment of many of these forms of assistance and the search for new ways to assure the unemployed of their income security through cash payments.

A broad comparison indicates a great deal of cross-national similarity in income maintenance programs (Heidenheimer, Heclo, and Adams, 1975: 188). Most developed countries have used the same basic program components: compensation for work injuries; social insurance for the aged, disabled and widowed; assistance in paying medical bills; benefits for the unemployed; and aid to parents of large families. Compensation for injuries at work has usually been among the first income maintenance programs. Pensions for the aged, widows, and invalids along with early forms of sickness and maternity benefits came next. National programs for the unemployed were to follow later in most nations, and cash payments to families with children--family allowances--have been fairly recent supplements. Table 1 shows the year when the first program in each category was initiated in a number of countries.

Income Maintenance Programs in the United States

Present income maintenance programs in the United States originated in the Depression of the 1930s (Ozawa, 1977: 123), as millions of workers were unemployed. The design of these programs

TABLE 1

DATES OF FIRST STATUTORY PROGRAMS BY COUNTRY

Country	Program				
	Occupational Hazards	Invalidism, Old Age, and Survivors	Sickness or Maternity	Unemployment	Family Allowance
Denmark	1898	1891	1892	1907	1952
France	1898	1905	1928	1905	1932
Germany	1884	1889	1883	1927	1954
Greece	1914	1922	1926	1945	1958
Italy	1898	1923	1910	1919	1936
Netherlands	1901	1913	1913	1916	1939
Sweden	1901	1913	1910	1934	1947
United Kingdom	1897	1908	1911	1911	1945
United States	1908	1935	1965	1935	----

Source: Heidenheimer, Heclo, and Adams, 1975: 189.

was based on the notion that in the society employable people should obtain their income through employment. When enough jobs (full employment) were available, adequate education would insure young people a place in the labor force when they left school. Families and individuals would need assistance only when there were drastic changes in the unemployment rate, and when there were crippling losses of income if the breadwinner retired, died, or became disabled. Public assistance would only serve as a "residual program" to help those considered unable to enter the labor force (President's Commission on Income Maintenance Programs, 1969).

This very notion led to the creation of the Social Security system, which provided partial income replacement to workers and their families in the event of retirement or death. In more recent years it has extended the provision of income to disabled workers and health insurance for the aged. State unemployment insurance programs were also created to keep those who were temporarily unemployed from becoming pauperized. The welfare system was built as an optional state program, jointly financed by all levels of government, to provide aid for particular categories of the needy: the blind, the aged, the disabled, and dependent children. Able-bodied male workers were generally excluded from assistance under any of the welfare programs (President's Commission on Income Maintenance Programs, 1969).

Today, there are more than 100 income maintenance programs in the United States (Lurie, 1975: 5). The social insurance programs account for the greatest share of both expenditures (Table 2) and recipients. These programs including Old Age, Survivors, Disability, and Health Insurance (OASDHI) and Unemployment Insurance (UI) are aimed at

TABLE 2

SOCIAL WELFARE EXPENDITURES, FISCAL YEAR 1973 ($ BILLIONS)

Category	Total Expenditures	Expenditures from Federal Funds[a]	Expenditures from State and Local Funds[b]
Social Insurance	$ 85.9	$ 72.2	$ 13.7
Public Aid	28.3	17.8	10.5
Health and Medical	14.6	7.2	7.4
Veterans' Programs	13.0	12.9	0.1
Education	65.2	6.9	58.3
Housing and Other Social Welfare	8.2	5.2	3.0
Total	215.2	122.3	92.9

[a] Includes federal grants to state and local governments.

[b] Excludes federal grants to state and local governments.

Source: Browning, 1975: 15.

preventing individuals' or families' incomes from falling following events that are accompanied by a decrease in earning power. These risks include retirement, death of the breadwinner, injury or illness, and unemployment; and their coverage depends on prior attachment to the labor force. The other large category of programs includes those designed to raise the incomes of the poor, such as Aid to Families with Dependent Children (AFDC) and the Supplemental Security Income (SSI) program, Medicaid, public housing, and Food Stamps (FS). Benefits under these programs are based on current need, not on prior attachment to the labor force. The social insurance programs, with the exception of Medicare, provide assistance in the form of cash payments. Some of the need-based programs such as AFDC and SSI provide cash but many give in-kind benefits in the form of food, medical care, or housing (Lurie, 1975: 5).

Although each program has its own specific objective and rules concerning eligibility, benefit schedules, and administrative procedures, the objectives of many of these programs are quite similar, especially those providing cash payments to raise the incomes of the poor. Thus, many believe that such a high degree of similarity between these programs would warrant a consolidation of them or a replacement by a single program. Substituting one new program for several existing programs with similar objectives would considerably reduce the administrative complexity and the administrative cost of the welfare system. Also, a properly designed comprehensive program or a set of programs could reduce or eliminate many of the other undesirable features of the income maintenance. These features include the adverse effects on behavioral incentives, such as the incentives to work, save,

migrate, form families, and have children; the gaps and overlaps in coverage; the wide variation in benefits given to families with the same need; and other inequities and inefficiencies associated with various income maintenance programs (Lurie, 1975: 6).

How do these complex and overlapping programs affect the present welfare system? Is it true that the system as a whole would overcome the defects of individual programs? Browning (1975) argues that the combined effects of these various programs are often quite different from what would appear from an examination of the separate programs. And it is the defects, not the strengths, in the programs that are magnified by the interactions among them. Some examples of contradiction and anomalies of the present welfare system were provided by Browning (1975: 60-61):

> (1) Job-training programs are supposed to augment the earning capacity of workers with limited skills. But it is quite possible that all the training provided by government does not offset the decline in on-the-job training produced as a result of the minimum wage law. Not only do those who are unemployed as a consequence of the law lose valuable experience and training, but also those who remain employed receive less training because it is not profitable for a firm to train unskilled workers if it cannot partially cover the costs by paying workers lower wages during the training period.
> (2) Programs often interact to frustrate policy changes designed to help the poor. One might assume that an across-the-board increase in social security benefits would help the elderly poor. But for the elderly poor who are receiving SSI as well as social security, an increase in social security benefits is, in most cases, of no benefits at all. Higher social security payments reduce SSI payments, dollar for dollar, so a $100 increase under the former reduces benefits by $100 under the latter. Moreover, an elderly person receiving medicaid benefits may find that an increase in social security benefits makes him ineligible for medicaid altogether.
> (3) Agricultural price supports (until recently), along with tariffs and quotas on agricultural products, work to increase the prices paid for food at the same time that food stamps (and the other food programs for the poor) are used to reduce food costs. For many families

the benefits of food stamps are more than offset by the added costs imposed by these other programs.
(4) Restrictive labor-union practices (sanctioned by law), provisions of the Davis-Bacon Act, and minimum wage laws increase housing costs while another group of programs attempts to reduce them. A great many poor families, especially those not covered by present housing subsidies, are worse off because of this combination of policies.
(5) In attempting to offset the work-disincentive effects of high marginal tax rates in AFDC, the government requires work registration of some mothers. Work requirements are notoriously ineffective in the best of circumstances, but an unexpected reason for this ineffectiveness is afforded by the following example. Suppose the penalty for refusal to work is a reduction in the AFDC monthly payment from $168 to $119, or by $49. The reduction in AFDC benefits, however, reduces the price the family must pay for food stamps and public housing, so the net cost of work refusal (due to the increased subsidies under the other programs) falls from $49 to $24. If there are any expenses associated with work, it is easy to see why this work requirement would be totally ineffective.

Recent Welfare Reform Movement in the United States

Because of the serious drawbacks of the present welfare system, those concerned began to search for new alternatives to the present system (Worthington and Lynn, 1977). Many believe that a nationally administered program of guaranteed income would provide the best solution to the present welfare dilemma (Orr, 1976: 359). Three different proposals, namely full cash payment, negative income tax, and family allowance, have drawn most attention and debate.

The full cash payment program advocated by Robert Theobald (1965) has been considered by most observers as the most radical of all the income maintenance programs. He sees the way to eliminate poverty is to supply money rather than moral uplift, cultural refinements, extended education, retraining programs or makework jobs. He argues that a program of guaranteed income is needed because automation

ultimately will reduce the availability of conventional jobs and make necessary a substitute system of providing income unrelated to work. Such a program, which he calls Basic Economic Security (BES), would establish an income floor for each individual. BES would provide each American with an income "sufficient to live with dignity" and would eventually replace all existing income maintenance plans such as welfare, minimum wage, Social Security and unemployment compensation (Congressional Quarterly, 1967).

According to BES, a $1,050-guarantee would be initially proposed for every adult and $650 for each child or a total of $3,400 for a family of four. There would be annual recalculations of these amounts. And, the recipients would not be required to work. Under this plan, a family of four without income would receive a full government allowance of $3,400. If it had an income of $2,000, it would get $1,400 in government payments and another $200 as a 10-percent premium for having earned $2,000 on its own. When a family's incomes exceed $3,400, it would not be eligible for any government payments (Congressional Quarterly, 1967).

The negative income tax program was proposed by Milton Friedman (1962). He proposed it as a substitute for present welfare programs, as a device for accomplishing the objectives of those programs more efficiently, at lower cost to the taxpayers and with a sharp reduction in bureaucracy. The Friedman plan differs from the Theobald plan or other versions of the guaranteed income in that it encourages those with low incomes to work. As explained by Friedman (1962: 192):

> We now have an exemption of $600 per person under the federal income tax (plus a minimum 10 percent flat deduction). If an individual receives $100 taxable income, i.e., an income of $100 in excess of the exemption and deductions, he pays a

> tax. Under the proposal, if his taxable income minus $100, i.e., $100 less than the exemption plus deductions, he would pay a negative tax, i.e., receive a subsidy. If the rate of subsidy were, say, 50 per cent, he would receive $50. If he had no income at all, and, for simplicity, no deductions, and the rate were constant, he would receive $300. He might receive more than this if he had deductions, for example, for medical expenses, so that his income less deductions, was negative even before subtracting the exemption. The rates of subsidy could, of course, be graduated just as the rates of tax above the exemption are. In this way, it would be possible to set a floor below which no man's net income (defined now to include the subsidy) could fall--in the simple example $300 per person. The precise floor set would depend on what the community could afford.

Friedman (1962) set up 50 per cent as the highest possible rate of subsidy. Any rate above 50 percent would reduce or eliminate (as in the case of 100 percent rate favored by Theobald) recipients' incentives to earn any income.

A more generous version of the Friedman negative tax scheme was proposed by James Tobin. Under the Tobin plan, the ceiling level at which all government supplements would stop could be as high as $7,500 with an absolute guaranteed floor of $2,500. This plan could cost between $14 and $25 billion a year compared to Friedman's $7 to $9 billion program (Congressional Quarterly, 1967).

Another major guaranteed income program is the so called 'Family Allowance' advanced mostly by Alvin Schorr and Daniel P. Moynihan. Under Schorr plan, a monthly payment of $50 would be paid for each child under six years old and $10 a month for each older child, in rich and poor families alike. Present income tax exemptions for children would be eliminated and the allowance itself would be taxed. Schorr argued that such a plan would be simpler to administer, more equitable and had the added benefit of being essentially an income-by-right program. He claimed that such a program would take three

out of four children out of poverty without interfering with work incentives for the family and without having effects on its birth rate. He estimated the cost of the program would be at about $12 billion annually and would be financed by general revenue. Moynihan's version of family allowance program would cost less, about $9 billion annually (Congressional Quarterly, 1967).

The controversial concept of a government-guaranteed minimum income for all Americans drew more interest in 1967 when President Johnson decided to appoint a commission to study the issue. President Johnson said "Their advocates include some of the sturdiest defenders of free enterprise. These plans may or may not prove to be practicable at any time. But we must examine any plan, however unconventional, which could produce a major advance." (Congressional Quarterly, 1967). The Commission on Income Maintenance was finally appointed in January 1968. After 22 months' intensive study of the problem, the Commission had recommended an income maintenance program similar to that of Friedman. The Commission proposed that the program be initiated at a level providing a base income of $2,400 to a family of four. The basic payment would be reduced by 50 cents for each dollar of income from other sources. Families of four with outside income up to $4,800 thus would receive some supplementation. The Commission argued that the 50 percent tax rate would encourage recipients to continue working or to seek employment and would not discourage continued development of private savings and insurance, and social insurance systems. The cost of the program was estimated at $6 billion annually; and a total of 10 million households would benefit from the program. The Commission strongly recommended that the benefit levels be raised as quickly as

is practical and possible in the future. If the payment levels were set at the poverty line (1967's), the program would cost about $27 billion a year and provide cash benefits to a total of 24 million households. The new universal income maintenance program was proposed to be adopted along with specific changes in existing programs. The Commission on Income Maintenance Programs also made some specific recommendations concerning reform of the existing welfare system (President's Commission on Income Maintenance Programs, 1969).

The Family Assistance Plan

On August 8, 1969, President Richard M. Nixon announced a major welfare reform proposal called the Family Assistance Plan.[1] This plan would guarantee an annual federal payment of $1,600 to a family of four with no income. Families would be eligible for payments on a decreasing scale until their incomes reached $3,920 a year (Nixon, 1969). This Family Assistance Plan is apparently a negative income tax program (Peterson, 1973: 324). It is believed that Mr. Nixon's Family Assistance Plan is based on and draws heavily upon the recommendations proposed in the final report of the President's Commission on Income Maintenance Programs (Moynihan, 1973: 133).

In his televised address, Mr. Nixon indicated that the proposed Family Assistance Plan would revamp the much-criticized present system. Under the present system (as of 1969), benefit levels are grossly unequal. For a mother with three children, benefits range from an average of $263 a month in one state down to an average of $39 in another state. One result of this inequality is to create

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[1] A preliminary analysis and evaluation of the Family Assistance Plan (1970 version) has been attempted by Bawden, Cain, and Hausman (1971).

unbalanced interregional migration of the poor. Many of these people move into already overcrowded inner cities, thus aggravating existing social and economic problems in these areas (Nixon, 1969).

The present system also creates increases in the incidence of desertion. In most states a family is not eligible for welfare if a father is present, even though he is unable to support his family or to find a job. In order to make the children eligible for welfare, he has to leave home and the children are denied the authority, the discipline and the love that come from a father being present in the home (Nixon, 1969).

Mr. Nixon also pointed out that the present system often makes it possible to receive more money on welfare than on a low-paying job, thus reducing a person's incentive to work. It is therefore unfair to the working poor. All of these inequalities were considered wrong and indefensible by the President. His Family Assistance Plan would benefit the working poor, as well as the non-working; families with dependent children headed by a father, as well as those headed by a mother; and a uniform basic federal minimum income in every state (Nixon, 1969).

Nixon's formula for the Family Assistance Plan states that "For a family of four now on welfare, with no outside income, the basic federal payment would be $1,600 a year. States could add to that amount and most states would add to it. In no case would anyone's present level of benefits be lowered. At the same time--outside earnings would be encouraged, not discouraged. The new worker could keep the first $60 a month of outside earnings with no reduction in his benefits; then beyond that, his benefits would be reduced by only fifty cents for

each dollar earned. By the same token, a family head already employed at low wages could get a family assistance supplement; those who work would no longer be discriminated against. For example, a family of five in which the father earns $2,000 a year--which is the hard fact of life for many families in America today--would get family assistance payments of $1,260, so that they would have a total income of $3,260. A family of seven earning $3,000 a year would have its income raised to $4,360." (Nixon, 1969).

The Administration introduced the Family Assistance Bill (HR14173) in October 1969. The House Ways and Means Committee held hearings on the bill and drafted a new bill (HR 16311) which was passed by the House with a 243-155 roll-call vote on April 16, 1970. However, HR 16311 was opposed in the Senate Finance Committee where liberals complained that the bill's benefit payments were too low and conservatives argued that the bill was too costly (Congressional Quarterly, 1971a: 1199). On November 20, 1970, the Senate Finance Committee voted on the Family Assistance Plan and rejected it by a 10-6 vote (Congressional Quarterly, 1970: 2852).

In January 1971, President Nixon repeated, in his State of the Union Message, his strong support for the Family Assistance Plan and listed it as one of his six great goals for action by the 92nd Congress. The House Ways and Means Committee began meeting in executive session in late January 1971 and reintroduced the Family Assistance Plan with other welfare, Social Security, Medicare and Medicaid programs to the 92nd Congress as House bill HR 1. This time the basic benefit level was set at $2,400 for a family of four and the marginal rate of taxation at 67 percent (Table 3). HR 1 also proposed that families

TABLE 3

FAMILY ASSISTANCE PAYMENT EXAMPLES[1]

Earnings	Family assistance payment[2]	Total income
A. Family of 2:		
None	$1,600	$1,600
Earnings of--		
$720	1,600	2,320
$1,200	1,280	2,480
$1,800	880	2,680
$2,400	480	2,880
$2,940	120*	3,060
B. Family of 4:		
None	2,400	2,400
Earnings of--		
$720	2,400	3,120
$1,800	1,680	3,480
$2,400	1,280	3,680
$3,000	880	3,880
$3,600	480	4,080
$4,140	120*	4,260
C. Family of 8:		
None	3,600	3,600
Earnings of--		
$720	3,600	4,320
$1,800	2,880	4,680
$3,000	2,080	5,080
$4,200	1,280	5,480
$5,400	480	5,880
$5,940	120*	6,060

[1] Annual amounts used for clarity--actual computations would be quarterly.

[2] Computation: Reduce total earnings by $720 annual "disregard"; then apply two-thirds of the remainder to reduce assistance payment.

* Least amount payable is $10 per month or $120 per year.

Source: House Ways and Means Committee Report No. 92-231, U.S. Congress, 1971.

and adults eligible for benefits under the Family Assistance Plan programs be excluded from participation in the current Food Stamp program (Congressional Quarterly, 1971a: 1201, 1203, and 1205).

On June 22, 1971, the House again voted on the Family Assistance Plan. It was passed by a 288-132 roll-call vote, a larger margin showing more support for the plan than was the case a year ago (Congressional Quarterly, 1971b: 1367). However, on April 28, 1972, the Senate Finance Committee again rejected the Family Assistance Plan and decided, by a 10-4 vote, that welfare recipients able to work must do so or lose all of their family benefits (Congressional Quarterly, 1972a: 1016). This new version of the Family Assistance Plan is known as the "workfare" plan.

A third plan was also proposed by Senator Abraham A. Ribicoff of Connecticut, a former Secretary of Health, Education and Welfare in the Kennedy Administration. It would set a guaranteed annual income of $2,600 for a family of four with no outside income, with future raises tied to increases in the cost of living (Congressional Quarterly, 1972b: 2628-2629).

All three proposals were rejected by the Senate on October 4, 1972. Instead, the Senate, by a 46-40 vote, approved a plan to test these three rival welfare reform proposals. This plan came from an amendment sponsored by Senators William V. Roth, Jr. (R. Del.) and Harry F. Byrd, Jr. (Ind. Va.). The period during which the tests would be conducted would extend from two to four years, and $400-million a year would be authorized to carry them out. The Administration and the General Accounting Office would have to set up and supervise the testing program and report to Congress on results

every six months after the program began. When the tests were completed, data collected would be utilized by Congress to authorize and formulate permanent welfare reforms (Congressional Quarterly, 1972b: 2629).

Since then, these experiments have been conducted and their preliminary results are now in. These, with the results of other similar experiments, conducted by the U.S. Department of Health, Education and Welfare and the Office of Economic Opportunity since 1968, indicate that even with a guaranteed income, poor people worked nearly as hard as ever. Husbands reduced their work effort by only a few percentage points, as did women heading one-parent families. Wives in two-parent families showed a greater reduction, from 10 to 30 percent, in their labor supply. The overall conclusion of these experiments suggests that poor people want to work, and they will continue to do so even with a guaranteed income. Thus, a guaranteed income will not significantly increase welfare dependency (Cherlin, 1977: 14).

Although the experiments set up to test all three versions of the Family Assistance Plan (FAP) have been conducted and the results collected, Congress has so far failed to act or make decisions on the fate of the plan. Many believe that the FAP is dead. But hopes for the FAP have recently been rekindled by President Carter's welfare reform plan (HR 9030), proposed on August 6, 1977, because of the striking similarities between the two plans.[1] According to Mr. Carter, this proposal would scrap the existing melange of welfare programs and replace them with a better single plan. This plan would provide jobs

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[1] Both are proposals for a so-called negative income tax (Schorr, 1978: 49).

for those who need work, provide fairer and more uniform cash benefits, promote family stability, and improve the self-respect of recipients (Gest, 1977a: 1699).

It would accomplish these goals by spending $30.7 billion to create 1.4 million public service jobs, provide a basic cash benefit to the needy, relieve the financial burden on every state by at least 10 percent the first year of the plan in fiscal 1981 and include benefits for the working poor. About 32 million persons would receive benefits under the new system which would replace the existing Aid to Families with Dependent Children, Supplemental Security Income for the aged, blind and disabled, and food stamp programs with the flat cash payments. About 30 million persons receive aid under the above existing programs at the present time. The initial annual cost of the Carter plan, $30.7 billion in 1978 dollars, is about $2.8 billion more than the cost of existing programs (Gest, 1977a: 1699-1701).

The major difference between the two plans is that while Nixon's FAP encouraged recipients to work, it did not provide any jobs (Gest, 1977a: 1701; and Schorr, 1978: 49). The Carter plan would provide 1.4 million public service jobs while trying to hold the unemployment rate at 5.6 percent. According to the Carter plan, recipients would be divided into two tiers--those who were required to work and those who were not. The upper one was for those not expected to work or for whom no job was available--the aged, blind and disabled, single parents with children under 7, single parents with children between 7 and 13 if a job and day care were not available and two-parent families with children if one parent was incapacitated. The lower tier was for those expected to work--two-parent families with children,

single parents with their youngest child over 13, and single persons and childless couples unable to find full-time work (Gest, 1977a: 1702-1703).

Both Nixon and Carter welfare plans would require states' participation of varying degrees. Under the FAP, states were required to make up the difference between the basic federal payment and the states' existing benefit level. No state could contribute less than 50 percent of existing total gross costs but none was required to contribute more than 90 percent of the existing level. The Carter plan promised the states an immediate 10 percent reduction in their welfare costs with additional help over the first three years (Gest, 1977a: 1701).

The Carter welfare plan (HR 9030) is still being considered by the House of Representatives. A special House subcommittee concluded the first round of deliberations on HR 9030 but put off untill 1978 discussion of the sticky question of how to create jobs for the poor. Before the subcommittee adjourned on December 16, 1977, it endorsed most of the general concepts in the President Carter's plan. The subcommittee agreed to the Administration's proposed federal benefit--$4,200 for a family of four with no member expected to work and $2,300 for a four-person family with a member expected to work. Benefit levels would be adjusted annually to reflect changes in the cost of living (Gest, 1977b: 2658).

CHAPTER III

ECONOMIC AND SOCIAL IMPACTS OF THE FAMILY ASSISTANCE PLAN

The economic and social impacts of various income maintenance programs are profound and complex. As of today, no comprehensive and systematic study of these impacts has been attempted. This fact well illustrates the complexity and difficulties of carrying out studies of this nature. The problems associated with studies of this type are many besides the prohibitive costs involved with them. First, many of the present income maintenance programs have a very short program history (less than 15 years). Results from these programs are unsuitable for predicting their long-term effects. Some programs may be subject to the year-to-year discretion of Congress. The lack of permanency of these programs may prevent recipients from forming long-term changes or adjustments in their respective economic and social behavior.

Second, the problems of collecting and selecting adequate data are formidable. These problems are attributable to the complexity and overlap of the present income maintenance programs. Programs have been initiated by different governmental agencies and have had different criteria and rules. Recipients can be simultaneously on several programs of different nature and origin, and, thus, have their program benefits and requirements all being affected by one another. Therefore, it is extremely difficult to monitor recipients of multi-programs, let alone to collect data on the program effects. Third, studies of the economic and social impacts of income maintenance programs are of

interdisciplinary nature. Up to the present, no sound efforts have been attempted to organize and coordinate a comprehensive study of these impacts.

Thus, in this chapter, the analysis of the potential economic and social impacts of a proposed income maintenance program, the Family Assistance Plan, will be attempted by a synthesis of various theoretical and empirical studies of these impacts of the Family Assistance Plan and other relevant income maintenance programs; and by a theoretical inference of additional impacts that have received little or no attention. Impacts of a long-term nature, such as those affecting regional migration and regional economic growth in the long run, will be analyzed in a more theoretical and inferential framework in Chapter VI. The potential social and economic impacts of the Family Assistance Plan and that of some present income maintenance programs are summarized in Table 4.

Impact on Regional Labor Supply

To many opponents of the Family Assistance Plan, this guaranteed annual income poses a serious ethical problem. It has long been believed in America that everyone should work who possibly can do so--for his own mental health, his physical well-being, the good of the economy and the smooth functioning of society (Macarov, 1970: 86). These beliefs have guided American attitudes toward work for many generations. Wealthy individuals have continued to work, even though their wealth does not require them to do so. The Family Assistance Plan would guarantee a family of four with no outside income a minimum annual income of $2,400. The family can have an additional outside

TABLE 4

SUMMARY OF THE EFFECTS OF THE PRESENT WELFARE SYSTEM AND THE PROPOSED FAP

Program Type	Labor Supply				Consumption	Migration		Demographic Structure			Economic Growth	
	Female	Male	High-Skilled	Low-Skilled		Inter-state	Intra-state	Fertility	Family Formation	Family Dissolution	Short-term	Long-term
Present (AFDC+FS)	-	N	N	-	+	+	N	+	-	+	-	-
FAP	-	-	N	-	+	-	+	+	+	-	+, -	+

+ Positive effects
- Negative effects
N No, or insignificant effects

Source: Author.

income of up to $720 without the $2,400 being reduced. Many Americans believe that distributing non-earned income to the poor will inevitably reduce their incentive to work, which is an evil. Senator Herman Talmadge (D. Georgia), a leading opponent of the Family Assistance Plan, said "The Administration has sold this bill (FAP) to the American people as a work incentive. It isn't. It's a work dis-incentive. We should pay people to work instead of paying them not to work." (Moynihan, 1973: 378).

Income maintenance programs, such as the Family Assistance Plan, have two types of effect on labor supply, namely an income effect and a substitution effect. The income effect is associated with the cash transfer payments received by the recipients. Although this income can be used to purchase more market goods, part of it can also be used to purchase increased leisure, hence a reduction in labor supply by the recipients. The substitution effect is associated with the marginal tax rate on outside income earned by the recipients. The tax rate on outside income reduces the amount of market goods and services that can be obtained in return for an hour's work. Therefore, it encourages those who are taxed to reduce their work effort (Greenberg and Kosters, 1970a). The extent of income and substitution effects on labor supply varies with the minimum benefit level and marginal tax rate. Any empirical analysis of the impact on labor supply of alternative income maintenance programs requires estimates of the labor supply responses to the income and substitution effects.

Labor Supply of Male Family Heads

Greenberg and Kosters (1970a) have attempted to measure the effects of income maintenance programs, including the FAP, on the hours of work

of male family heads. Their study is based on the assumption that information on the systematic relation between work choices and differences in wage rates and income levels can be used to infer the response of a typical worker faced with changes in these variables similar to the differences observed. A national sample of approximately 6,000 households, headed by married males under 62 years old, was drawn from the 1967 Survey of Economic Opportunity file. The labor supply response parameters were estimated by regression techniques.

Three sets of supply parameters estimates were obtained for analyzing labor supply responses to alternative income maintenance programs (Table 5). The high and the low estimates represent the maximum and minimum responses that were estimated from the data. The intermediate set of estimates is considered as the most likely response. It suggests that a one percent decrease in a male family head's wage rate or a one percent increase in his marginal tax rate would cause him to reduce his hours of work by two-tenths of one percent through the substitution effect. A one dollar increase in income received by his family would induce him to reduce his work effort by one-tenth of an hour through the income effect. His labor earnings would be reduced by twenty cents for each additional dollar of income at a wage rate of two dollars per hour (Greenberg and Kosters, 1970a: 4).

These labor supply parameters were used in a simulation of the costs, the impact on incomes, and the changes in work patterns that might result from the extension to the working poor of income maintenance programs. Estimates of the labor supply response to changes in the family head's wage rate, net of taxes, and in family income were obtained by measuring the differences in annual hours of

TABLE 5

LABOR SUPPLY RESPONSES TO INCOME MAINTENANCE PROGRAMS

	Substitution Effect (Elasticity)	Income Effect (Slope Coefficient)
Low Estimate	.10	-.09
Intermediate Estimate	.20	-.10
High Estimate	.25	-.11

Source: Greenberg and Kosters, 1970a: 4.

labor supplied by workers with different wages and different levels of non-employment income. The impact of these programs on an average participating family is shown in Table 6. The aggregate impact of alternative income maintenance programs was also estimated using the intermediate labor response estimates (Table 7). The hours reductions and production losses associated with alternative income maintenance programs were then placed into economic perspective (Table 8). The findings in Table 8 indicate that male heads of families participating in both Family Assistance Plan and Food Stamp program (FAP+FSP) would reduce their labor supply by 18.7 percent. The total hours worked by all married male family heads under 62 years of age would be reduced by somewhat more than 1 percent. The output produced by all such persons would drop by about .6 percent. Hours worked by the entire labor force would be reduced by only one-half of one percent and labor's contribution to national output by about three-tenths of one percent.

A breakdown of these results for selected demographic groups reveals interesting patterns. Under the FAP+FSP program, the hours reduction of black married male family heads under 62 would be nearly 5 percent of total hours worked by both participants and non-participants in that group, compared to less than 1 percent for whites. The differential probably reflects the disproportionately low incomes of black families rather than that blacks are more responsive to work incentives than whites. Other demographic groups with large labor supply reductions are families who live in the South Census Region, families who live in rural areas, and families with six or more members (Greenberg and Kosters, 1970a: 10).

Table 6

SELECTED MEASURES OF THE IMPACT OF FAP+FSP[a] ON AN "AVERAGE" PARTICIPATING FAMILY USING THREE DIFFERENT SETS OF LABOR SUPPLY PARAMETERS[b]

	Low Estimates	Intermediate Estimates	High Estimates
Annual Pre-program Hrs. of Family Head	1950	1950	1950
Hrs. Reduction by Family Head	237	365	436
Annual Pre-program Family Income	3941	3941	3941
Annual Subsidy	1625	1760	1835
Net Increase in Family Income	1189	1094	1042

Notes:

[a]FAP+FSP participants receive both Family Assistance payments and food stamps. FAP provides a guarantee of $400 to a family with no other source of income plus $300 for each family member. Earnings in excess of $720 are taxed at 50 percent. FSP provides a guarantee of $296 to each family plus $184 to each family member. It taxes family income -- including any subsidies received under FAP -- at an 18 percent rate.

[b]The three sets of estimates used are those reported in Table 5.

Source: Greenberg and Kosters, 1970a: 6.

Table 7

SELECTED MEASURES OF AGGREGATE IMPACT USING THE INTERMEDIATE LABOR RESPONSE ESTIMATES

	FAP+FSP[a]	High Tax Rate-High Guarantee Program[a]	Low Tax Rate-Low Guarantee Program[a]	President's Commission Plan[b]
Number of Participating Families (thousands)	2316	5412	7457	4004
Total Program Subsidy Cost ($ millions)	4077	13748	9336	4926
Total Pre-Program Income of Participating Families ($ millions)	9127	27715	41916	18310
Net change in income of participating families ($ millions)	2647	8601	4889	2675
Total Loss in Production (reduction in head's earings) ($ millions)	1430	5147	4447	2251

Notes:

[a] These programs all decompose into two components: (1) a Food Stamp Component and (2) a Family Assistance component. All participating families are covered by both components. The Food Stamp component is identical for all three programs and is described in the notes to Table 6. The Family Assistance component of the High Tax Rate program taxes earnings in excess of $720 at 75 percent, while the Low Tax Rate program taxes these earnings at 25 percent. The High Guarantee under the Family Assistance component is $500 per family plus $750 per family member. The Low Guarantee is $400 per family plus $300 per family member.

[b] This program is based on the proposals of the President's Commission on Income Maintenance Programs. The guarantee is $600 per family plus $450 per family member. Income is taxed at a 50 percent rate.

Source: Greenberg and Kosters, 1970a: 9.

Table 8

SELECTED MEASURES OF HOURS ADJUSTMENTS AND PRODUCTION LOSSES

	FAP+FSP[a]	High Tax Rate-High Guarantee Program[a]	Low Tax Rate-Low Guarantee Program[a]	Presidents's Commission Plan[a]
Total Program Subsidy Cost ($ millions)	4077	13748	9336	4926
Total reduction in hours as a % of pre-program hours worked by:				
married male heads[b] of participating families	18.7	24.0	12.5	14.8
married male heads of participating and non-participating families	1.2	3.7	2.7	1.6
total labor force	0.5	1.7	1.3	0.7
Total production loss as a % of pre-pre-program earnings of				
married male heads of participating families	17.7	21.2	12.1	14.7
married male heads of participating and non-participating families	0.6	2.1	1.8	0.9
total labor force	0.3	1.1	0.9	0.5

Notes:

[a]These programs are described in Tables 6 and 7.

[b]Family heads on which these results are based are less than 62 years of age.

Source: Greenberg and Kosters, 1970a: 11.

Greenberg and Kosters' estimates were based on an assumption that the states will not supplement federal payments to poor households headed by working males (1970a). Under the Family Assistance Plan, a state would be required to supplement the difference between the proposed federal payment level and the state's current level of payment for all those currently eligible for welfare. State supplementation is not required nor precluded for poor households headed by working males. Therefore, the state, or city, may decide to supplement the incomes of these households on its own.

The extension of state (or city) supplements to families headed by poor working males would considerably complicate the analysis of the impact on labor supply of various income maintenance programs. An example was provided by Greenberg's (1971) study of the impact of income guarantees (FAP+FSP and that of the President's Commission on Income Maintenance Programs) on labor supply in New York City. The results indicate that the addition of state supplements in New York City would have a dramatic impact. Total subsidy costs would increase by five-fold, from around $200 million to about one billion dollars, and the total loss in hours and in production by almost four-fold, from about 2.2 percent (of the total hours worked by all married male family heads in the city under 62 years of age) to over 8 percent, and from about 1.6 percent to over 6 percent respectively (Greenberg, 1971, pp. vii and viii). The immediate policy implication of these state (or city) supplements is that they will increase total program costs, perpetuate disparities in minimum benefit levels among states, and maintain much of the existing inequality of treatment based on family structure and work patterns.

Greenberg's (1971) findings (Table 9) indicate that the gross hours reduction of black married male family heads under 62, as a percent of total hours worked by both participants and non-participants in that group, would be nearly 5 percent under FAP+FSP and over 17 percent after FAP+FSP was supplemented with state welfare payments (state supplements, or SS). The comparable percentages for whites are .9 percent and 6.5 percent respectively. Other demographic groups with large reductions in work effort are families with six or more members and families with annual incomes of less than $4,000.

Labor Supply of Women

The effects of welfare reform, such as the FAP, would be greater on the female labor supply than that of male labor. DeTray (1972:14) points out that wives work less in the market than their husbands not simply because their wages are lower than their husbands' (most women are in low wage service occupations), but also because wives have higher productivity in household production, or non-market production. With the availability of Family Assistance incomes to women with dependent children and the high marginal tax rate on earnings, the supply of female labor would show some considerable decline.

A study was conducted by the President's Commission on Income Maintenance Programs to estimate the impact of Aid to Families with Dependent Children (AFDC) on the work effort of female heads of poor families. This study utilized 1967 data on AFDC recipients in the Southern states of Alabama, Kentucky and Mississippi. The results tend to support the hypothesis that AFDC will have some negative effect on the work incentive of female heads of poor families. The income effect of the guarantee level was negative; and the elasticity

THE ESTIMATED IMPACT OF FAP+FSP AND FAP-FSP-SS ON SELECTED DEMOGRAPHIC GROUPS USING THE LOWER BOUND PROCEDURE

	Hours Reduction as a Percentage of All Hours Worked by Demographic Group		Production Loss as a Percentage of Total Earnings of Demographic Group		Percentage Distribution of the Total Subsidy by Demographic Group	
	FAP+FSP[a]	FAP-FSP-SS[b]	FAP+FSP[a]	FAP-FSP-SS[b]	FAP+FSP[a]	FAP-FSP-SS[b]
Based on the High Substitution and Income Effect Estimates (ϵ^e = .30 and C^y = .16)						
Total	1.56	8.38	1.08	6.40	100.00	100.00
Race						
White	0.88	6.50	0.61	4.98	42.93	60.70
Black	4.73	17.34	4.03	15.72	57.04	39.30
Age						
14 to 25 years	0.25	3.21	0.18	2.74	1.52	3.36
25 to 55 years	2.02	9.89	1.39	7.62	96.14	89.53
55 to 62 years	0.20	4.42	0.12	2.67	2.34	7.16
Size of family						
5 persons or fewer	0.68	8.31	0.40	6.16	28.06	58.26
6 persons or more	10.27	26.96	9.37	25.61	71.94	41.74
Total family income						
$4000 or less	12.17	26.87	11.78	27.10	30.46	15.69
over $4000	1.09	7.56	0.80	5.86	69.54	84.30
Based on the Low Substitution and Income Effect Estimates (ϵ^e = .08 and C^y = -.08)						
Total	0.47	2.53	0.33	1.93	100.00	100.00
Race						
White	0.25	1.89	0.18	1.45	40.91	57.96
Black	1.49	5.59	1.27	5.06	59.05	42.04
Age						
14 to 25 years	0.08	0.99	0.06	0.86	1.62	3.45
25 to 55 years	0.61	3.01	0.42	2.31	95.88	89.66
55 to 62 years	0.06	1.23	0.04	0.75	2.50	6.93
Size of family						
5 persons or fewer	0.21	2.33	0.12	1.72	29.17	53.80
6 persons or more	3.08	9.23	2.81	8.82	70.83	46.21
Total family income						
$4000 or less	3.62	9.47	3.52	9.51	31.24	18.53
over $4000	0.33	2.23	0.24	1.73	68.76	81.47

[a]Refers to the FAP+FSP segment of the FAP-FSP package.

[b]Refers to the entire FAP-FSP-SS package.

Source: Greenberg, 1971: 80.

of labor force participation with respect to the guarantee level was about .4. It was estimated that in these three states a 50 percent increase in the benefit level (averaged $50 per month in the three states in 1967) would have produced about a 20 percent reduction in labor force participation of AFDC mothers, from about 30 percent. The net effect of the marginal tax rate on earnings was also negative; and the elasticity of labor force participation with respect to the tax rate varied between .3 and .4. Therefore, in these states, a 16 percent reduction in the mean tax rate, from 60 percent to 50 percent, would have caused a 7 percent increase in labor force participation among these AFDC mothers (Hausman and Kasper, 1971: 99-100).

Durbin (1968) and Gordon (1969) point out that the fast rising guarantee level in AFDC (faster than average or minimum wages) and its 100 percent marginal tax rate have induced more and more poor female family heads with dependent children to leave work and go on AFDC. Also, state and municipal supplements have complicated the situation. Durbin (1968) discovered that in New Yrok City welfare allowances rose by almost 40 percent between 1962 and 1966, compared to a 13 percent increase for average wages and a 30 percent increase for minimum wages over the same time period. Therefore, by 1966, a 2,000 hours per year minimum wage income was less than the welfare allowance for a family of four in that city. In the entire state of New York, average welfare grant levels also rose by about 45 percent between 1964 and 1968 (Gordon, 1969).

The AFDC program can, however, only be considered as a special case of more general negative income tax programs. The AFDC's 100 percent marginal tax rate seems to discourage AFDC mothers to take

outside jobs, whereas the much lower tax rates of the FAP and the plan recommended by the President's Commission on Income Maintenance Programs were chosen to encourage their participants to make outside earnings. Therefore, it is not unreasonable to expect the negative impact of the FAP and other income maintenance programs on the female labor supply to be smaller than the AFDC would suggest. These reductions in female labor supply under alternative income maintenance programs may be significant only over short-run periods. When much longer time periods are considered, the negative effects of welfare payments on the labor supply of women, especially that of married women, would be weak or negligible.

Schultz (1975) has attempted empirical estimates of long-run labor supply functions for currently married women for ten age and race groups from data drawn from the 1967 Survey of Economic Opportunity. The results indicate that the elasticity of labor supply with respect to the woman's own market wage rate is positive and large in every case, ranging systematically over the life cycle from .25 to 2.09, from a high at the youngest and oldest age groups to a low for women between the ages of 35 and 44, when child-rearing restricts participation among all race and education groups.

In contrast, the elasticity of labor supply with respect to their husbands' wage is negative, and of the same order of magnitude, ranging from -.38 to -1.65. This response parameter is found to be highest among women 25 to 34 and falling irregularly among older women. Only weak evidence is found for a negative nonemployment income effect on labor supply, and only among older white women. The wage elasticity estimates for black and white samples are fairly

similar with somewhat larger absolute value for whites than for blacks (Schultz, 1975).

Therefore, the findings of Schultz (1975) suggest that this growing component of the labor force may not alter their long-run market supply of labor under varying tax-subsidy schemes, if husband and wife experience the same marginal tax on market earnings. In contrast to past studies of the labor supply behavior of married women, Schultz's estimates show only weak or negligible income effects of nonemployment income and strong negative effects of husband's permanent market wage rate. If income supports for married women were increased and their market earnings heavily taxed, many would expect currently married women to reduce their market supply of labor. But, the estimates presented by Schultz suggest that a uniform tax on market earnings of husband and wife would only change slightly the age composition of the currently married female labor force, and not diminish its overall size (1975, pp. vi and vii).

Labor Supply of Married Couples

Greenberg and Hosek (1976) have examined the potential impacts of various negative income tax (NIT) programs on the work incentive of husbands and wives who are not aged and are in families where both are present. The income and substitution effects for these husbands and wives under a variety of NITs have been estimated through statistical analysis of cross-sectional data. Their estimates for husband and wife's own substitution and cross substitution effects also indicate that the husband's labor supply is apparently unresponsive to changes in the wife's price of time, but the wife's labor supply is usually sensitive to changes in the husband's wage rate.

A simulation methodology was then used to estimate regional and national labor supply responses to alternative NITS. The findings of their study show that under reasonable assumptions, even a very generous NIT would only cause a decrease in hours worked by the labor force of considerably less than 1 percent (Greenberg and Hosek, 1976, page v).

The geographical distribution of these reductions in labor supply has been estimated by Greenberg and Hosek (1976). The findings are presented in Table 10. Under a truly national NIT with identical standards throughout the United States, the reductions in labor supply are likely to be greater in the South due to the geographical concentration of potential NIT recipients. Currently, states in other regions have more generous welfare programs than do states in the South. If these differences in welfare payments could be maintained to some extent under an NIT, as suggested by Greenberg (1971), the reductions in labor supply induced by an NIT might be more evenly distributed between the major regions of the United States than would be the case with an NIT with uniform standards (Greenberg and Hosek, 1976, p. v).

Impact on Regional Consumption

One of the most important factors affecting consumer behavior is disposable income. An income maintenance program such as the FAP would increase the disposable incomes of the recipient families in an area and hence affecting their consumption behavior. Changes in consumer expenditures on different goods and services are the more direct effects of an income maintenance program. The nature and magnitude

Table 10

ESTIMATED REGIONAL CHARACTERISTICS OF
A LOW TAX/HIGH GUARANTEE NIT

	North East	North Central	South	West
1. Number of families participating (millions)	1.3	1.9	2.9	1.2
2. Net total program subsidy[a] ($ billions)	1.6	2.7	4.3	1.5
3. Increase in income of participating families ($ billions)	1.0	1.8	3.2	1.0
4. Decrease in earnings of participating families ($ billions)	0.6	0.8	1.1	0.6
5. Reduction in hours of work as percent of pre-program hours of pre-retirement husband and wife families	0.5	0.5	1.0	0.7
6. Percent of participants in poverty before NIT	13.1	16.9	21.4	18.5
7. Percent of those initially in poverty crossing the poverty line	64.7	80.1	77.4	61.9

[a]Lines 3 and 4 may not sum to line 2 because of rounding errors.

Source: Greenberg and Hosek, 1976, page xii.

of these changes, however, will depend on several important factors, namely the way the plan is financed, the parameters of the plan, the extent of poverty in the community, and the marginal propensity to consume different goods and services of the recipients as well as non-recipients in the community or region (Kottis, 1973).

If the government finances the income maintenance plan by increasing taxation (such as the FAP), the disposable incomes and the expenditures of taxpayers in the community (local, state, region, or nation) will decrease while the incomes and expenditures of the recipients will increase, and the net change in expenditures may be smaller than is conceived (Kottis, 1973). If the income maintenance plan is financed by other means, the incomes and expenditures of individuals other than the recipients will not be directly affected.

The changes in the expenditures on different goods and services in a given community will depend upon the way the recipients spend their increased incomes. Kottis (1973) noted that there is almost no empirical evidence concerning how low income people spend their income supplements. She assumes that low income people will spend supplements from a permanent income maintenance plan just as they do ordinary income. Thus, she suggested the use of existing surveys of consumer expenditures such as the 1960-1961 Survey of Consumer Expenditures conducted by the Bureau of Labor Statistics and the Department of Agriculture for estimating the potential consumer response to various levels of income maintenance (Kottis, 1973).

Moeller (1970) has used this set of data to formulate the marginal propensities to spend on different goods and services of different income and demographic groups to study household budget

responses to negative tax simulations. Based on these marginal propensities to spend and the estimated increase in income maintenance payments if FAP is enacted, Kottis (1973) made forecasts about changes in different types of expenditures for the country as a whole. She predicted that the largest part of the additional income would be spent on food, clothing, and shelter, but none of the national markets for different goods and services would expand more than eight-tenths of one percent. The situation, however, will vary in different communities.

In a more complex model, Golladay and Haveman (1977) estimated the nature of the adjustments in consumption expenditures, gross output, and employment induced by the FAP and a negative income tax (NIT). They found that both FAP and NIT gross transfers would generate approximately $3.7 billion of consumption expenditures. Induced consumption is 112 percent of gross transfers for FAP and about 109 percent for NIT. In percentage terms, the sectoral impact of the final demands is nearly identical for the two transfer programs. In both cases, the bulk of the demands (66-67 percent) is placed on the manufacturing sector; over two-thirds of these demands are concentrated in nondurable goods manufacturing. The service industries account for an additional 30 percent of the total demand from the two programs. A more detailed sectoral breakdown indicates that food and kindred products receive the largest impact (about 21 percent in both cases), followed by motor vehicles (about 9 percent), and medical and educational services (about 11 percent).

The increased consumption of services, especially publicly provided services such as publicly funded schools and subsidized

medical care, by the recipients is brought about by the increased tax rates on the time spent working (market time). The recipients will have more time due to a reduction in hours of work for the consumption of the highly time-intensive services both public and private (DaVanzo and Greenberg, 1974: 16-17).

The parameters of an income maintenance plan, such as the eligibility requirements, the minimum benefit levels, and the tax rates on the outside incomes, are important for they would determine the amount of total as well as disposable incomes each recipient family would receive, and hence its expenditures on various goods and services.

Since the poor are unevenly distributed over the country, regions or communities with higher concentration of the poor will receive greater amounts of income maintenance payments, hence greater increases in consumer expenditures. Small communities tend to have relatively more labor-intensive and low-wage industries and are likely to have a large concentration of low income people eligible to receive benefits under an income maintenance plan. Large communities usually have more capital-intensive, high-wage, and more diversified industries than do small communities. Therefore, the transfer payments may induce greater changes in consumer expenditures in small communities than in large communities. Similarly, rural communities and communities in the South may experience more intense changes in expenditures for goods and services than do urban communities in the North (Kottis, 1973).

Golladay and Haveman's (1977) study yielded very interesting findings which seem to support the view expressed above. For both FAP and NIT, the pattern of induced expenditures by region is similar

to the regional pattern of gross benefits of the programs. The only source of difference from the regional pattern of gross benefits is the varying regional average marginal propensities to consume. For FAP, this ratio ranges from 1.67 in New York to about 1.10 in several regions in the deep South. For NIT, the ratio is approximately 1.08-1.09 in all of the regions. In both simulations, the largest induced increase in consumer expenditures occurs in the South--46 percent for both FAP and NIT. The Northeast has the smallest induced increase for both FAP and NIT (11 percent and 15 percent, respectively).

If the income maintenance program is financed by the increased taxation, such as the FAP, the tax burden will not be borne out evenly throughout the country. The more affluent regions tend to pay more taxes and receive less program benefits while the less affluent ones due to their greater share of the poor will pay less taxes and receive more program benefits. How would these disparities between the regional pattern of program benefits and the regional pattern of program taxation affect the regional pattern of consumption? The effects of taxes on consumption would be negative, i.e., reduction in consumption expenditures. These effects may be greater in the rich regions than in the poor ones.

Golladay and Haveman's (1977) study offers strong supportive findings for the above hypothesis. The tax-induced reduction in consumption would differ slightly between the two programs ($2.07 billion for FAP and $2.13 billion for NIT), but the regional distributions of the changed expenditures would be identical. Rich states, such as California, New York, Ohio, Michigan, Pennsylvania, New Jersey, Texas, Indiana, and Illinois, would experience the greatest percentage

reductions in consumer expenditures.

The net effect of the tax-transfers on household consumer expenditures would be the sum of the positive effect of the gross transfers and the negative effect of the taxes required to finance the programs. The net effect would be positive due to the concentration of benefits among low-income households with high marginal consumption propensities and the concentration of tax burden on higher-income households with lower marginal consumption propensities.

Impact on Regional Demographic Characteristics

The potential impacts of income maintenance programs on the demographic characteristics of the recipients have been constantly a debate issue among those concerned about welfare reform. These impacts may or may not affect recipients' decisions to have more children, whether legitimate or illegitimate; and to form or dissolve families, including marriage, separation, desertion, divorce, and remarriage. Concern over these household composition effects of income maintenance programs has focused mainly on their hypothetical monetary incentives to alter composition that result from rules affecting eligibility and benefit structure (Mayo, 1976: 420).

Theoretically speaking, any reduction in the relative cost of children will induce some increase in desired family size on average if other important factors affecting fertility remain constant. Thus, an income maintenance program is expected to raise desired family size above the level that it would be without any government subsidies. The extent of the increase in desired family size will, however, depend on the value of total child subsidies from an income maintenance

program relative to total perceived child costs. If families have the actual family size already exceeded desired family size, child subsidies in the form of income maintenance are likely to have an insignificant effect on fertility. But, if family planning has been perfect, and desired and actual family sizes are identical, child subsidies will have a direct effect on actual fertility through an increase in desired family size. Also, income maintenance programs with high marginal tax rates on earned income would considerably reduce the opportunity costs of remaining outside the labor force due to child bearing or child rearing for low-income women, thus having some positive effect on fertility. Of course, child subsidies of a permanent nature would have a greater effect on fertility than those temporary ones (Lloyd, 1974).

Although comprehensive empirical research on the potential effects of welfare programs on fertility is almost nonexistent, we would expect a certain positive effect of welfare payments on fertility. But for those who have attempted some empirical study of the potential effects of welfare programs on fertility, their findings tend to suggest that there is a rather mild positive effect on fertility (Lloyd, 1972; Simon, 1972; Simon and Simon, 1972; and Cain, 1972). A contrasting viewpoint, however, was held by Baumol (1974) in summarizing the results of the New Jersey-Pennsylvania Income Maintenance Experiments. He found that there was no discernible effect of transfer payments on fertility of the participant families. But the program life of the New Jersey-Pennsylvania project may be too short to produce any reliable predictions, let alone the conflicting effects of a temporary program on the long-term commitment such as child-bearing.

The Family Assistance Plan would also have a positive effect on fertility. Under FAP, no family can receive guaranteed payments unless they have at least one child. This provision, according to De Tray (1972), would increase the demand for children. Since FAP would tax market time (time spent working) but not productive home time, household commodities (for example the enjoyment of children) that require large inputs of time from household members would become less expensive to the household compared to those that are goods-and-services-intensive. Consequently, FAP would make children more attractive to households because they would be less costly for the household to produce and maintain (De Tray, 1972: 19; Orr, 1971: 68; Sweet, 1971: 122; and Cain, 1971: 135-136). A simulation study by Cain (1972) has estimated the potential fertility effect of the FAP on the welfare population in the United States. Based on his own previously obtained estimates of the relationship between wives' earning potential and fertility, Cain predicted that the FAP would cause a very mild, 7.2 percent, increase in the birth rate among the poor.

Although income maintenance programs in general would have a very mild effect on fertility in the United States, this effect will not be felt evenly over the country. The South would be affected at a much greater magnitude due to its greater share of the poor in the country. Similarly, the rural and urban-ghetto areas of the more developed North and West regions would also have a considerable effect of income maintenance on their fertility rates.

Also, income maintenance programs, such as AFDC, are believed to have some positive effect on illegitimacy. One of the induced effects

of the AFDC program is for poor women not to marry or live with the father of their children. Since eligibility for AFDC depends on having children and benefits increase with additional children, incentives for poor women either to bear legitimate children and not live with the father or to bear illegitimate children and neither marry nor live with the father would exist beyond those that would exist without the AFDC program (Mayo, 1976: 409). Empirical studies that have tried to measure the impact of such hypothetical incentives have produced no significant evidence to substantiate the hypothesis (Cutright, 1973, and 1971; Fechter and Greenfield, 1973; and Bernstein and Meezan, 1975). From an examination of the findings of these studies, it can be suggested that the potential effects of welfare on illegitimacy are probably very small or nonexistent. And it would be more so for programs like FAP, since FAP would use a family as filing unit and would provide aids to families with dependent children even when both parents are present.

The influence of income maintenance programs on family dissolution is contingent on their eligibility criteria. If programs exclude families headed by employable able-bodied male from eligibility, such as the AFDC, there may be some positive effect on family dissolution (MacDonald and Sawhill, 1978). But the strength of such effect is probably small. Programs which do not discriminate against intact families, such as the FAP, their impact on family dissolution is little and probably negative.

Honig (1973) has estimated the impact of AFDC on family dissolution with a model based on cross-sectional data for 44 metropolitan areas in 1960 and 1970. Her model assumes an income-maximizing behavior by

potential welfare recipients and includes as explanatory variables AFDC benefits, female wage and unemployment rates, male earning opportunities, female unearned but nonwelfare income, and welfare program restrictions that exclude some female families from eligibility. Based on her findings, she concludes that "high welfare payment levels do help to cause family splitting and do influence women heading families to become welfare recipients." But her results also indicate that such influence has been relatively small and has not been constant over time (ranging from a 3 to 4 percent increase in the proportion of all adult women who were family heads for a 10 percent increase in AFDC benefit levels in 1960 to only a 0.5 to 2 percent increase in female-headship rates for the same amount of increase in AFDC benefit levels in 1970). This small effect can be explained by the fact that the proportion of all adult women who are household heads is small (only about 7 percent of female 14 years of age and older in 1970 were female heads of families).

Honig's (1973) findings have been confirmed by another empirical study by Ross and Sawhill (1975). Their study used data from census Employment Survey for low income areas of 41 of the largest U.S. cities and 7 rural counties in 1970 to explain variations in rates of female-headship of families. They also used data from a five-year panel survey conducted by the Survey Research Center of the University of Michigan (the Income Dynamics Survey) to study the determinants of marital dissolution and remarriage. Their model is similar to that of Honig (1973) and relates the proportion of women aged 16 to 54 years who head families with children to variables that characterize the welfare system (especially the benefit level), female earnings

possibilities, male labor force variables, and other variables such as region. They found that none of the welfare benefit variables was statistically significant for whites; but for nonwhites, a 10 percent differential in welfare benefit levels seemed to cause about a 2 percent change in the rate at which women head families with children.

Ross and Sawhill (1975) tried to explain rates of separation and divorce and remarriage to a large number of variables that characterize relative economic opportunities of wives, socioeconomic status, cultural norms, and demographic controls. Their findings indicated that both family dissolution and remarriage rates were significantly related to welfare benefit levels relative to other opportunities. But, they pointed out that such a responsiveness is only a small component of the overall dynamic that is responsible for changing female-headed family stocks and flows. For a more broadened program, such as the FAP, Ross and Sawhill (1975) estimated that there would be a modest net reduction in the number of female-headed families. Preliminary results of the New Jersey-Pennsylvania Income Maintenance Experiment also indicate a similar effect (Baumol, 1974: 264).

Other effects of income maintenance programs were also suggested by Sweet (1971). For example, income maintenance programs might change marriage rates among young adults. The rate of remarriage for women with dependent children after marital disruption might be increased. This would follow from the fact that an income maintenance program would reduce the costs of marrying a woman with dependent children.

CHAPTER IV

METHODOLOGY

The Pattern of Benefit

In order to evaluate the regional impact of the Family Assistance Plan, estimates were made of the total and per capita family assistance income to be received by each state. The state figures were sums of county estimates calculated by two equations:

$$T_j = \sum_{i=1}^{n} P_{ij} E_{ij} \qquad (1)$$

where T_j = estimated total family assistance payments to residents in county j,

P_{ij} = number of families in income class i in county j in 1969,

E_{ij} = average family assistance for income class i in county j, and

n = six income classes: \$0-999, 1000-1999, 2000-2999, 3000-3999, 4000-4999, and 5000-5999.

$$E_{ij} = A_j - .667\,[F_i - 720 - W_j] \qquad (2)$$

where A_j = family assistance payment for a family without outside income in county j (assuming that the family size is the integer closest to the average size of a family in the county),

.667 = marginal tax rate,

F_i = mid-value income for income class i,

720 = amount of income that can be earned by a family under the plan without a reduction in family assistance payments,and

W_j = mean public assistance per county in 1969.

The assistance formula was taken from a congressional committee report (U.S. House Ways and Means Committee, 1971). Family, income, and mean public assistance data were drawn from the 1970 census (U.S. Bureau of the Census, 1970).

The estimates derived from this formula are believed to be conservative in several respects. Family sizes in poorer income classes may be larger than in more affluent ones causing underestimation of A_j. Incomes in various classes may be downwardly skewed making F_i higher than the mean income in the class. Since the values of A_j are based on assistance levels in the 1971 plan, they should probably be adjusted upward for the current economic environment. Also, the subtraction of current public assistance payments (estimated by W_j) from current income may introduce an opposing bias (Wilbanks and Huang, 1975: 284).

In the analysis of the Family Assistance Plan's regional impact, the regional variation in family living costs is also important. The indexes of annual budgets at a lower level of living for a four-person family by state (as of Spring 1970) were calculated according to the formula shown below:

$$IS = \frac{(CM \times PM) + (CN \times PN)}{PM + PN} \qquad (3)$$

where IS = cost of living index for the state,

CM = cost of living index of state representative SMSA,

CN = cost of living index of regional nonmetropolitan areas (Northeast, North Central, South or West),

PM = percent of state population residing in the state representative SMSA, and

PN = percent of state population residing outside state SMSAs.

If a state has more than one representative SMSA, the formula shown below was used:

$$IS = \frac{(CM_1 \times PM_1) + (CM_2 \times PM_2) + \ldots + (CM_n \times PM_n) + (CN \times PN)}{(PM_1 + PM_2 + \ldots + PM_n + PN)} \quad (4)$$

where CM_1 = cost of living index of first state representative SMSA,

CM_n = cost of living index of nth state representative SMSA,

PM_1 = percent of state population residing in first state representative SMSA, and

PM_n = percent of state population residing in nth state representative SMSA.

If a state has no cost of living index for a representative SMSA, the average of the indexes (IS) of the surrounding states was used as the index of living costs for the SMSA areas of the state in question. The equation (5) was used in this instance.

$$IS = \left[\frac{(IS_1 + IS_2 + \ldots + IS_n)}{n} \times PA\right] + (CN \times PN) \quad (5)$$

where IS_1 = state cost of living index in the first surrounding state,

IS_n = state cost of living index in nth surrounding state,

n = number of surrounding states,

PA = percent of state population residing in all SMSAs in the state,

CN = cost of living index for regional nonmetropolitan areas, and

PN = percent of state population residing outside state SMSAs.

The data used in equations (3), (4), and (5) were drawn from a U.S. Bureau of Labor Statistics publication (1972), and that of U.S. Bureau of the Census (1971-1972).

In order to account for the inter-state variations in living costs in the United States, a modified version of the Family Assistance Plan was proposed (Wilbanks and Huang, 1975). Family assistance payments for residents in a county were adjusted to the living-cost index of the state in which the county in question is located.[1]

Measures of Income Inequality

In the present study, the analysis of income inequalities in the United States includes four definitions of personal income: personal income without public assistance payments, personal income with public assistance payments, personal income under the Family Assistance Plan (FAP), and personal income under the adjusted FAP (according to the living-cost index). Comparisons were made of the effectiveness of the present welfare programs (the Public Assistance programs) and a proposed (FAP) welfare program in reducing inter-and intra-state income inequalities in personal income without public assistance in the United States as of 1970.[2] The study of

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[1] A simple example of such a procedure would be to modify equation (2) so that A_j becomes:

$$A_j' = A_j v$$

where v = .01 (index of living costs).

[2] Due to the fact that the best available per capita income data for each county were for the year of 1969, the 1969 data were used to calculate that county's 1970 income, assuming little or no change in per capita income of that county in 1970.

inter-state inequalities included all 50 states for the analysis. At the intra-state level, due to the number of counties involved (over 3,000), a stratified random sample of fourteen states was selected: Idaho (ID), Louisiana (LA), Maryland (MD), Minnesota (MN), Mississippi (MS), Nebraska (NE), New Jersey (NJ), New Mexico (NM), Ohio (OH), Oklahoma (OK), Oregon (OR), Pennsylvania (PA), South Dakota (SD), and Wyoming (WY). States with less than 20 or more than 100 counties were excluded. The population was stratified by region and by income class (quintile). Statistics for population, personal per capita income, and public assistance payments for all 50 states and for all counties of the 14 chosen states were drawn from publication of the U.S. Bureau of the Census (1973).[1]

Three measures of income inequality were calculated for the total of four definitions of personal income in the United States. These measures include: 1) a weighted coefficient of variation (V_w); 2) a modified information statistic (Z); and 3) a Gini Index (L).

1) Williamson (1965) suggested this weighted coefficient of variation (V_w):

$$V_w = \frac{\sqrt{\sum_i (y_i - \bar{y})^2 \frac{f_i}{n}}}{\bar{y}} \qquad (6)$$

where f_i = population of the ith state (or county),

n = national (or state) population,

---

[1]The best available public assistance payments data for each county were for February 1972. Thus, the 1972 yearly public assistance payments (payments for February multiplied by 12) for all 50 states and for all counties of the 14 chosen states were converted to 1970 dollar value by deflating by .927, taken from the Wholesale Price Index, assuming little or no difference in public assistance payments for states and counties in 1970 and in 1972.

y_i = per capita income of the ith state (or county), and

$\bar{y}$ = national (or state) income per capita.

V_w ranges from 0 to 1. The smaller the coefficient, the less the degree of inequality.

2) An information statistic (Z), modified from the one used by Semple and Gauthier (1972), is listed below:

$$Z = \frac{I(Y)}{\log_2 N} \tag{7}$$

Z ranges from 0 to 1. The smaller the Z, the less the degree of inequality. Equation (7) is estimated by (8) and (9):

$$I(Y) = \log_2 N - H(Y) \tag{8}$$

where I(Y) = a measure of inequality,

N = number of states (or counties), and

H(Y) = the entropy, estimated by (9)

$$H(Y) = \sum_{i=1}^{N} Y_i \log_2 \frac{1}{Y_i} \tag{9}$$

where Y_i = proportion of national (or state) income in a given state (or county). Here, per capita income figures were used. The national total is estimated by multiplying the national income per capita by the number of states in the nation (50).

3) The Gini Index (L) is a measure of income concentration which ranges from 0 to 1. The smaller the index, the less the amount of concentration. The form used by Miller (1971) is:

$$L = \frac{\left(\sum_{i=1}^{n} f_i y_{i+1} - \sum_{i=1}^{n} f_{i+1} y_i\right)}{10000} \tag{10}$$

where n = number of states (or counties),

f_i = proportion of total national population (or state population) in a given state (or county),

f_{i+1} = cumulative proportion of total national population (or state population) in the states i and i+1 (or counties i and i+1),

y_i = proportion of total national income (or state income) in a given state (or county), and

y_{i+1} = cumulative proportion of total national income (or state income) in the states i and i+1 (or counties i and i+1).

The use of more than one measure of income inequality for the study of the FAP and the present welfare system indicates the existence of some drawbacks associated with individual measures and the need for a more objective and comparative interpretation of the results. The Williamson coefficient of variation is particularly sensitive to the extreme cases, because of the squaring of the $(y_i - \bar{y})$. The use of the information statistic and the Gini Index measures is intended to overcome such problems. But the information statistic and the Gini Index measures are not themselves devoid of problems. Both seem to be sensitive to the size of the sample, i.e., the smaller the sample size, the lower tends to be the level of inequality. For the information statistic measure, this drawback is attributable to the fact that the smaller the sample size (number of states or counties), the greater is the H(Y), hence the smaller I(Y), the measure of inequality. For the Gini Index measure, the smaller the sample size, the smaller tends to be the value of the $(\sum_{i=1}^{n} f_i y_{i+1} - \sum_{i=1}^{n} f_{i+1} y_i)$, hence the smaller is L, the measure of concentration.

CHAPTER V

ANALYSIS AND FINDINGS

The Regional Patterns of Benefits of the Family Assistance Plan

In terms of the total projected FAP income of $16.2 billion (excluding Guam, Puerto Rico, the Virgin Islands, and Washington, D.C.), the five most populous states (New York, California, Texas, Pennsylvania, and Illinois) stand out as major recipients of the plan (Table 11). These states, constituting 35.5 percent of the U.S. population (as of 1970), would receive 33.5 percent of the total FAP payments. This figure indicates that a significant portion of total FAP recipients would be found in these most populous and economically advanced areas even though they would receive slightly less than their proportion of the total U.S. population might warrant. The Southern states, including Texas, would receive 41 percent of the total projected payments. Since the Southern states made up only 30.5 percent of the total U.S. population in 1970, they would receive a larger share of FAP revenues.

The geographical variations in per capita FAP income show that the entire South (except Maryland and Delaware), some North Central states (North and South Dakota), and some Mountain states (New Mexico and Arizona) represent the higher values. The highest value centers on Mississippi (Table 11 and Figure 2). These high values indicate that the poor families represent a large proportion of the total population in these relatively poor and underdeveloped areas of the country. Therefore, the Southern states, North and South Dakota,

TABLE 11

BENEFIT LEVELS OF THE FAMILY ASSISTANCE PLAN

State	Estimated Total Benefits	Estimated Per Capita Benefits	Index of Living Costs	Per Capita Benefits with Living Cost Adjustment
Alabama	$453792000	$131.75	88.55	$123.91
Alaska	17036928	56.71	155.00	69.97
Arizona	155249328	87.66	102.54	88.98
Arkansas	292754688	152.21	88.94	145.74
California	1404037888	70.36	106.86	71.71
Colorado	157993664	71.57	97.35	70.85
Connecticut	149352928	49.26	103.23	49.68
Delaware	33094304	60.37	95.91	59.89
Florida	610819328	89.96	88.99	85.83
Georgia	493388032	107.50	89.50	101.16
Hawaii	43890736	57.10	119.66	58.51
Idaho	58997968	82.79	100.51	83.00
Illinois	693595904	62.40	102.21	63.39
Indiana	264128880	50.85	99.69	50.79
Iowa	203975792	72.21	97.17	71.21
Kansas	174188176	77.53	97.58	76.55
Kentucky	418368768	129.98	88.81	124.26
Louisiana	495863040	136.17	88.60	127.27
Maine	82123056	82.78	96.93	81.93
Maryland	220086448	56.11	99.86	56.07
Massachusetts	316421632	55.61	103.60	56.16
Michigan	519546624	58.53	99.01	58.41
Minnesota	271090944	71.24	100.15	71.28
Mississippi	380350976	171.56	88.10	160.79
Missouri	398020864	85.11	98.84	84.62
Montana	53555728	77.12	99.69	77.03
Nebraska	112351744	75.73	97.51	74.98
Nevada	23833952	48.76	105.54	49.85
New Hampshire	40482912	54.87	96.77	54.06
New Jersey	434765568	60.65	100.17	60.69
New Mexico	126647840	124.65	97.82	123.18
New York	1429529856	78.38	101.71	78.70
North Carolina	556587776	109.52	88.51	104.24
North Dakota	63707408	103.12	97.21	101.97
Ohio	601233408	56.44	98.14	56.16
Oklahoma	290852096	113.64	90.31	109.50
Oregon	142364016	68.07	103.65	69.25
Pennsylvania	824487168	69.90	97.71	69.44
Rhode Island	63270624	66.83	102.28	67.45
South Carolina	299554560	115.63	88.40	109.94
South Dakota	74706736	112.25	97.25	111.00
Tennessee	475835648	121.27	88.64	116.54

(TABLE 11 continued.)

Texas	1090392576	97.38	91.32	93.28
Utah	66374832	62.66	101.41	62.93
Vermont	33552896	75.51	96.00	74.36
Virginia	407898112	87.74	93.40	85.23
Washington	211959376	62.17	105.51	63.99
West Virginia	221126512	126.77	90.38	122.17
Wisconsin	262909280	59.51	99.05	59.31
Wyoming	22358240	67.25	100.00	67.25

Source: Author's estimates.

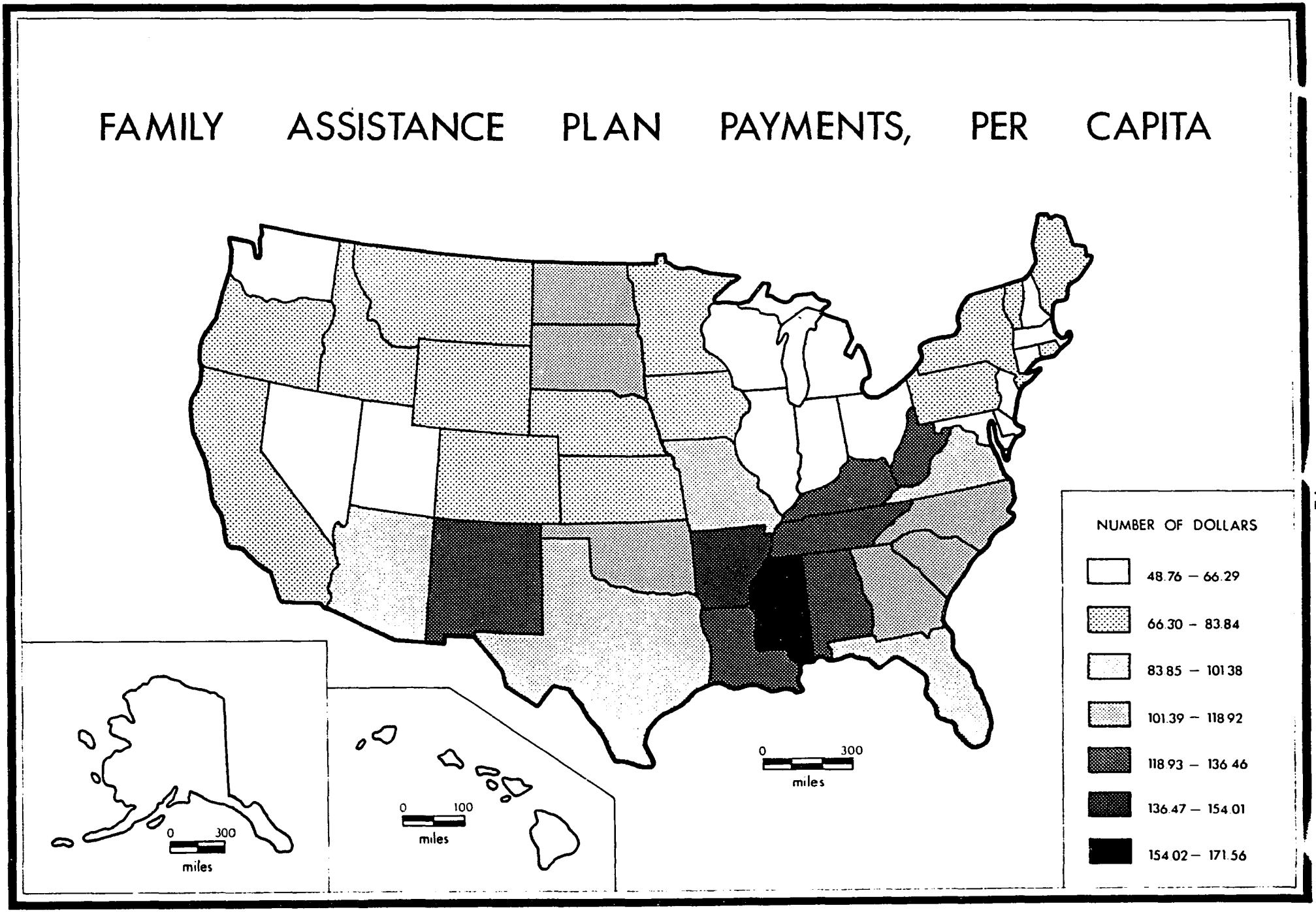
FAMILY ASSISTANCE PLAN PAYMENTS, PER CAPITA
NUMBER OF DOLLARS
48.76 – 66.29
66.30 – 83.84
83.85 – 101.38
101.39 – 118.92
118.93 – 136.46
136.47 – 154.01
154.02 – 171.56
0 300
miles
0 100
miles
0 300
miles

FIGURE 2

New Mexico and Arizona would benefit more from the Family Assistance Plan than the rest of the states. When regional differentiation in living costs[1] (Table 11) is considered, the South would benefit still more from the plan than would the remaining states. The FAP benefits of the Northeastern states (except for Maine, New Hampshire, Vermont, and Pennsylvania), Pacific states, some Mountain states (Nevada, Arizona, Utah, and Idaho), Hawaii, and Alaska would be adversely affected by the higher living costs in these areas.

Also, there is an inverse relationship ($r = -.55$) between the cost of living and the level of FAP payments per capita (Table 11). It is clear that not only do more expensive places receive less benefits, but also a payment dollar buys less there. This magnifies whatever effects are associated with the variations in payment levels (Wilbanks and Huang, 1975).

In order to eliminate or reduce regional variations in FAP benefits, the proposed Family Assistance payments should be adjusted to the cost of living in the various geographical locations. The consequence of such adjustment is a reduction in regional variations in payment levels per capita (Table 11) with the standard deviation of payment levels from the mean state value changing from 29.5 to 26.8. This reduction in regional variations in per capita FAP benefits might improve the prospects of the plan for approval by Congress (Wilbanks and Huang, 1975).

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[1] Estimates of average living costs were interpolated from cost of living data for multi-state regions and selected cities (see pp. 62-64.

The estimated regional gross and per capita FAP payments in the present study have been compared to that of a recent study of the Family Assistance Plan (Golladay and Haveman, 1977). Their study shows that for the year 1973 the gross FAP payments for all 50 states and Washington, D.C. would be about $3.33 billion. Although their figure is too conservative, its regional distribution is quite similar to that of the present study (Table 12). A correlation test indicates a correlation coefficient of .47 between the regional distribution of gross FAP payments of the two studies. When the regional distribution of the per family FAP payments of the Golladay and Haveman study is compared to that of the per capita FAP payments of the present study, the correlation increases to .81.

The Regional Patterns of Political Support for the Family Assistance Plan

It would be rational to assume that the political support for the Family Assistance Plan would coincide with the patterns of the plan's benefits, because the benefits, in the form of cash payments, would presumably improve the quality of life of local residents and stimulate the local economy (Bonner, 1971[a];and Kain and Schafer, 1971). The 1971 vote for the plan in the House of Representatives (Table 13) was mapped (Figure 3). The Senate vote (October 4, 1972) on the Stevenson Amendment (Table 14) to an alternative plan was also mapped (Figure 4). Votes against tabling the amendment were considered to be in support of the Family Assistance Plan. Thus, it is interesting to note that those states which would receive higher levels of per capita FAP payments turned out to be the major opponents of the plan,

TABLE 12

PATTERNS OF REGIONAL DISTRIBUTION OF THE FAP BENEFITS ESTIMATED BY TWO STUDIES

Region	Gross Benefits (in Millions) G & H*	Present	Per Family G & H*	Per Capita Present
1) CT,ME,MA,NH, RI, VT	125.1	684.0	$32.84	$57.76
2) NY	41.3	1430.0	6.94	78.38
3) PA,NJ	176.1	1259.0	28.05	66.40
4) OH,MI	111.0	1121.0	17.38	57.41
5) IN,IL	203.7	958.0	37.37	58.75
6) WI,MN	108.9	534.0	37.43	64.94
7) IA,MO	129.5	602.0	58.37	80.26
8) KS,NB,ND,SD	107.0	425.0	73.44	84.77
9) DE,DC,MD	53.6	253.0	30.16	56.59
10) VA,WV	101.5	629.0	59.18	98.39
11) NC	127.3	557.0	81.12	109.52
12) SC	91.1	300.0	106.61	115.63
13) GA	42.3	493.0	28.76	107.50
14) FL	129.1	611.0	55.76	89.96
15) KY,TN	163.1	894.0	74.96	125.17
16) AL	112.9	454.0	112.38	131.75
17) MS	225.2	380.0	276.53	171.56
18) AR,OK	83.4	584.0	66.05	130.28
19) LA	176.3	496.0	137.96	136.17
20) TX	248.4	1090.0	72.32	97.38
21) AZ,CO,ID,NM, AK,UT,NV,WY,MT	194.7	682.0	72.44	79.47
22) WA,OR,HI	90.9	398.0	42.66	63.49
23) CA	488.3	1404.0	68.76	70.36
U.S.	3330.4	16238.0		

Source: *Golladay and Haveman,1977, pp. 60-61, and the author's calculations.

TABLE 13

HOUSE VOTE ON PASSAGE OF H 1, INCLUDING THE FAMILY ASSISTANCE PLAN, 1971 (YES-VOTE AS PERCENTAGE OF TOTAL VOTE BY STATE)

State	% Yes-Vote	State	% Yes-Vote
Alabama	37.50	Montana	100.00
Alaska	100.00	Nebraska	66.65
Arizona	66.65	Nevada	0.0
Arkansas	100.00	New Hampshire	0.0
California	78.94	New Jersey	93.33
Colorado	75.00	New Mexico	0.0
Connecticut	100.00	New York	75.60
Delaware	100.00	North Carolina	18.18
Florida	25.00	North Dakota	100.00
Georgia	30.00	Ohio	66.65
Hawaii	100.00	Oklahoma	33.33
Idaho	50.00	Oregon	75.00
Illinois	91.66	Pennsylvania	76.92
Indiana	72.72	Rhode Island	100.00
Iowa	57.14	South Carolina	16.66
Kansas	80.00	South Dakota	50.00
Kentucky	71.42	Tennessee	55.55
Louisiana	12.50	Texas	39.13
Maine	100.00	Utah	100.00
Maryland	50.00	Vermont	100.00
Massachusetts	91.66	Virginia	30.00
Michigan	84.21	Washington	100.00
Minnesota	87.50	West Virginia	80.00
Mississippi	0.0	Wisconsin	100.00
Missouri	50.00	Wyoming	100.00

Source: Calculated from data drawn from Congressional Index, 1971-1972, p. 5284.

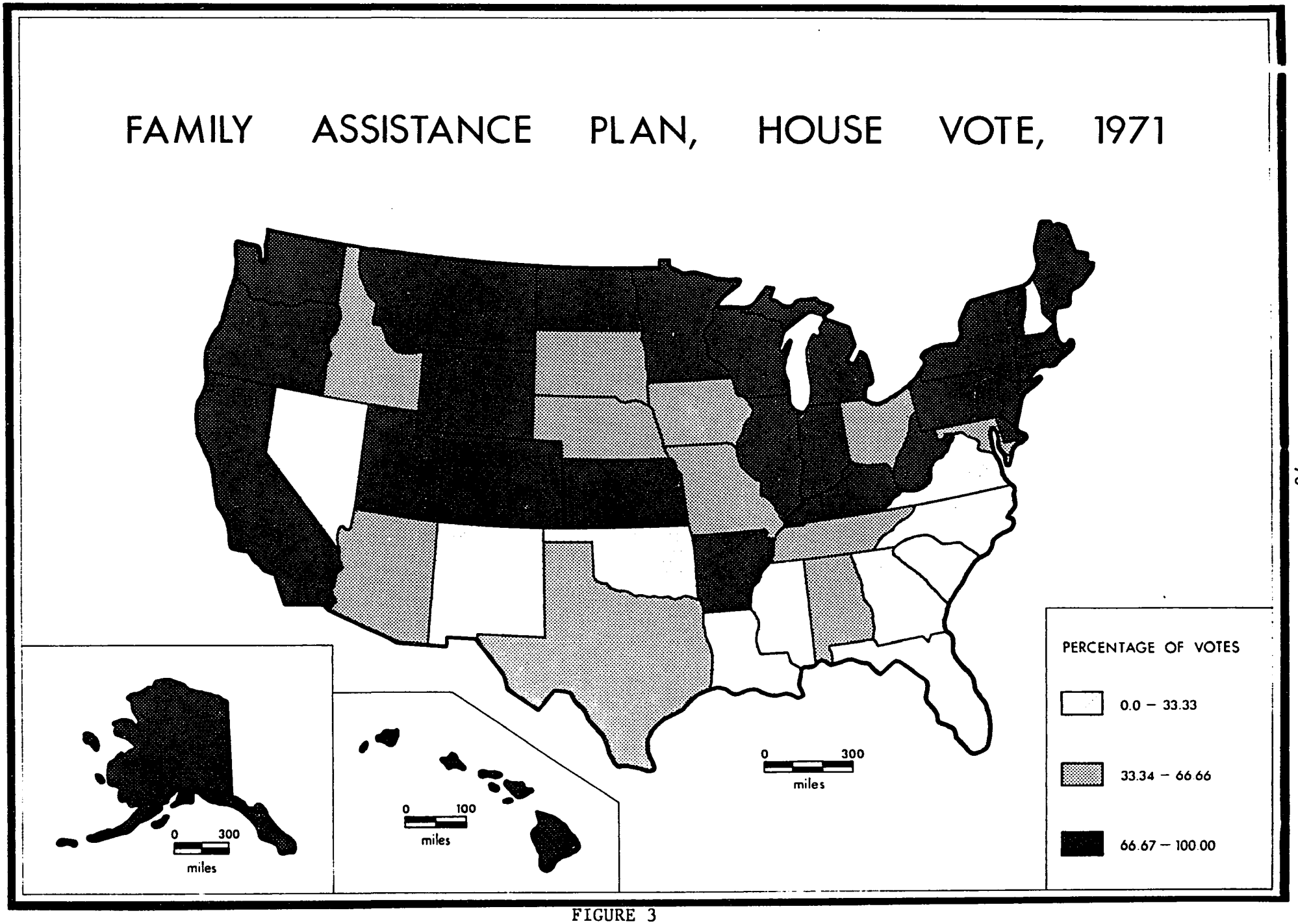
FAMILY ASSISTANCE PLAN, HOUSE VOTE, 1971
PERCENTAGE OF VOTES
0.0 – 33.33
33.34 – 66.66
66.67 – 100.00
0 300
miles
0 100
miles
0 300
miles

FIGURE 3

TABLE 14

FAMILY ASSISTANCE PLAN, SENATE VOTE AGAINST MODIFYING AMENDMENT, 1972 (YES-VOTE AS PERCENTAGE OF TOTAL VOTE BY STATE)

State	% Yes-Vote	State	% Yes-Vote
Alabama	0.0	Montana	0.0
Alaska	50.0	Nebraska	0.0
Arizona	0.0	Nevada	0.0
Arkansas	0.0	New Hampshire	0.0
California	100.0	New Jersey	100.0
Colorado	0.0	New Mexico	50.0
Connecticut	50.0	New York	50.0
Delaware	0.0	North Carolina	0.0
Florida	0.0	North Dakota	0.0
Georgia	0.0	Ohio	100.0
Hawaii	0.0	Oklahoma	0.0
Idaho	0.0	Oregon	0.0
Illinois	100.0	Pennsylvania	100.0
Indiana	100.0	Rhode Island	50.0
Iowa	50.0	South Carolina	0.0
Kansas	0.0	South Dakota	0.0
Kentucky	100.0	Tennessee	0.0
Louisiana	0.0	Texas	0.0
Maine	50.0	Utah	50.0
Maryland	100.0	Vermont	100.0
Massachusetts	50.0	Virginia	0.0
Michigan	100.0	Washington	50.0
Minnesota	100.0	West Virginia	0.0
Mississippi	0.0	Wisconsin	50.0
Missouri	100.0	Wyoming	0.0

Source: Calculated from data drawn from Congressional Index, 1971-1972, p. 5545.

FAMILY ASSISTANCE PLAN, SENATE VOTE AGAINST MODIFYING AMENDMENT, 1972

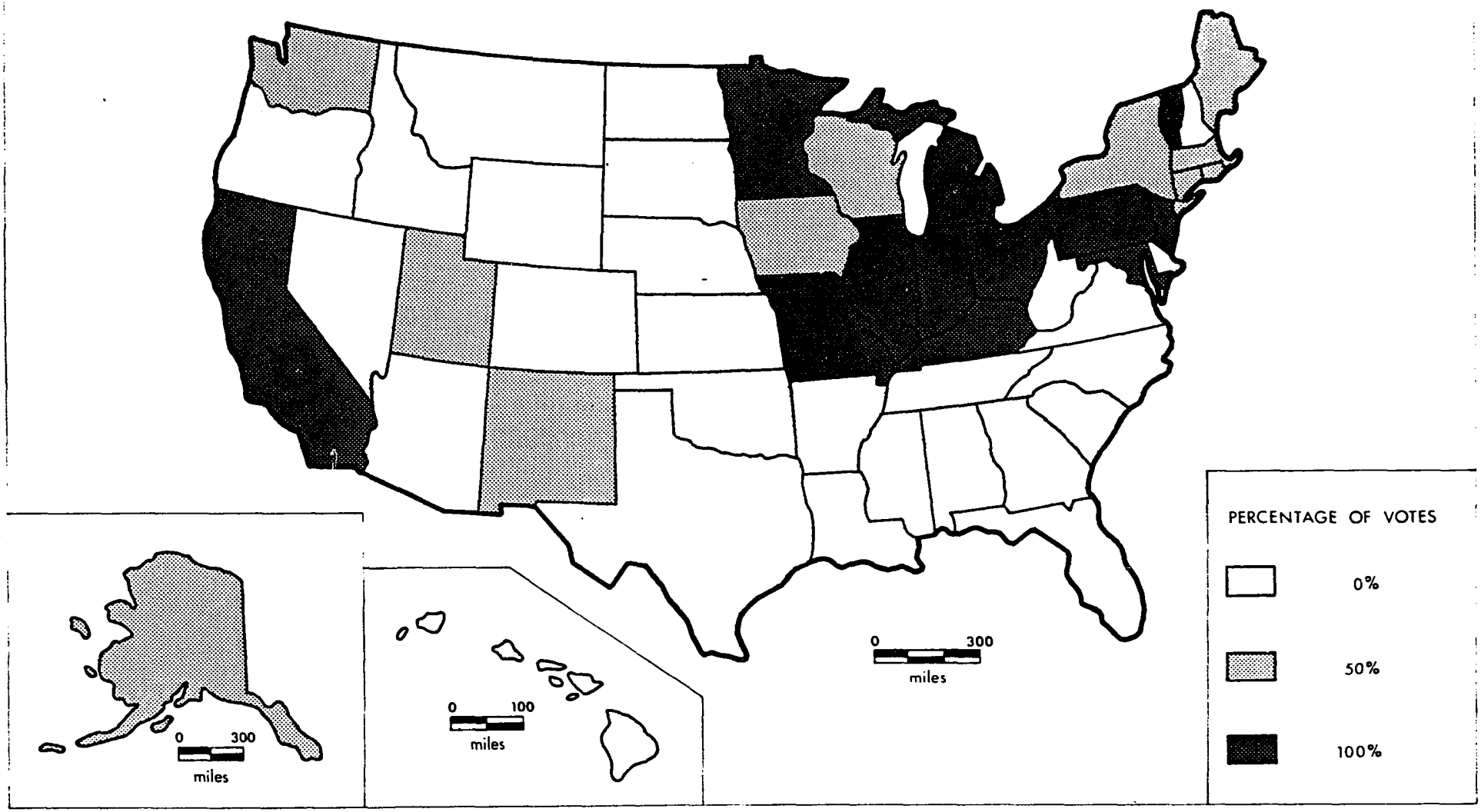

FIGURE 4

whereas states receiving less per capita FAP payments showed the strongest support for the plan (Figures 2, 3, and 4). Since the distinction between support for and opposition to the FAP was less clear in the Senate vote, only House vote (divided into two classes: states for the plan, and states against) was used to determine the relationship between the patterns of support (or opposition) for the plan and the patterns of FAP benefits. A Mann-Whitney U test indicated that they were inversely related and the relationship was significant at the level of .001 (Wilbanks and Huang, 1975).

The patterns of support for the plan seem to suggest regional differences in the prevailing attitude toward federal welfare activity, concerns in the South about the stability of political power and sensitivity in parts of the urban North about possible fiscal burdens from regional in-migration. But in view of the size of the potential boost to local economies in the South from externally-derived payments plus a multiplier, the Southern representatives may be relying on a lack of information among their constituents about the magnitude of economic benefits to keep them out of political trouble at home (Wilbanks and Huang, 1975).

Impact of the Family Assistance Plan on Inter-state Income Inequalities

The three measures of income inequality in the United States in 1970 reveal quite different pictures at the inter-state and intra-state levels. At the inter-state level, the present welfare system has caused a slight increase in income inequalities between states, ranging from 1.6 to 4.5 percent with different measures (Table 15 and 16). Since the present welfare system includes various federal,

TABLE 15

IMPACT OF WELFARE PROGRAMS ON INTER-STATE INCOME INEQUALITIES IN THE UNITED STATES, 1970.

Program	Williamson Coefficient	Information Statistic	Gini Index
Without Public Assistance	.1403	.0464	.0552
With Public Assistance	.1426	.0485	.0574
Under FAP	.1302	.0441	.0521
Under Adjusted FAP	.1311	.0443	.0525

Source: Author's computations.

TABLE 16

IMPACT OF WELFARE PROGRAMS ON INTER-STATE INCOME INEQUALITIES IN THE UNITED STATES, 1970 (PERCENT CHANGE FROM INEQUALITIES IN 1970 PERSONAL INCOME MINUS PUBLIC ASSISTANCE PAYMENTS).

Program	Williamson Coefficient	Information Statistic	Gini Index
With Public Assistance	+ 1.6 %	+ 4.5 %	+ 3.9 %
Under FAP	- 7.2	- 5.0	- 5.7
Under Adjusted FAP	- 6.6	- 4.6	- 4.9

Source: Author's computations.

+ Inequalities increase.

- Inequalities decrease.

state, and local welfare programs, the slight increase in between-state income inequalities under the present welfare system may be attributed to inter-state discrepancies in welfare policies, generosity, eligibility, and discrimination (Orr, 1976: 359; Barth, Carcagno, and Palmer, 1974: 31; and Wohlenberg, 1976). Wealthier states tend to be more generous, less restrictive, and more equitable in their welfare programs.

The proposed Family Assistance Plan would reduce the inter-state inequalities by 5 to 7.2 percent, depending on the measure of inequality (Table 16), but its effectiveness would be greater (about a 9 percent reduction in inequalities) if compared to the income inequalities under the present welfare system (Table 17). The adjusted Family Assistance Plan would be almost as effective in reducing inter-state inequalities as the Family Assistance Plan. The adjustment for inter-state variations in living costs would increase the plan's equity, but reduce its effectiveness very slightly (Tables 15, 16, and 17).

Impact of the Family Assistance Plan on Intra-state Income Inequalities

The effectiveness of the present welfare system in reducing income inequalities within individual states (the chosen fourteen states) varies noticeably. It reduces inequalities in some states (New Jersey, Oklahoma, New Mexico, South Dakota, Louisiana, and Mississippi), while it increases or makes no difference in other states (Wyoming, Maryland, Oregon, Idaho, Nebraska, Ohio, Minnesota, and Pennsylvania) (Table 18). The changes range from an 8 percent increase to a 6.5 percent decrease in inequality. The effectiveness of the present welfare system in reducing income

TABLE 17

IMPACT OF FAP AND ADJUSTED FAP ON INTER-STATE INCOME INEQUALITIES IN THE UNITED STATES, 1970 (PERCENT CHANGE FROM INEQUALITIES IN 1970 PERSONAL INCOME UNDER THE PRESENT PUBLIC ASSISTANCE SYSTEM).

	Williamson Coefficient	Information Statistic	Gini Index
Under FAP	- 8.7 %	- 9.1 %	- 9.3 %
Under Adjusted FAP	- 8.1	- 8.7	- 8.6

Source: Author's computations.

- Inequalities decrease.

TABLE 18

IMPACT OF WELFARE PROGRAMS ON INTRA-STATE INCOME INEQUALITIES IN THE UNITED STATES, 1970

	New Jersey (21 Counties)			Idaho (44 Counties)		
	V_w	Z	L	V_w	Z	L
Without P. A.	.1324	.0390	.0519	.1241	.0420	.0461
With P. A.	.1265	.0387	.0500	.1228	.0424	.0469
Under FAP	.1256	.0369	.0492	.1141	.0407	.0430
	Maryland (24 Counties)			New Mexico (32 Counties)		
Without P. A.	.2368	.1259	.0684	.2090	.0852	.0765
With P. A.	.2288	.1270	.0699	.2027	.0826	.0745
Under FAP	.2251	.1178	.0669	.1835	.0703	.0663
	Oregon (36 Counties)			South Dakota (67 Counties)		
Without P. A.	.1116	.0670	.0486	.1505	.0627	.0639
With P. A.	.1109	.0678	.0492	.1466	.0618	.0629
Under FAP	.1051	.0637	.0463	.1284	.0521	.0527
	Wyoming (23 Counties)			Louisiana (64 Counties)		
Without P. A.	.1022	.0109	.0171	.2128	.1474	.1064
With P. A.	.1019	.0113	.0177	.2024	.1395	.1016
Under FAP	.0956	.0105	.0164	.1818	.1249	.0916
	Oklahoma (77 Counties)			Mississippi (82 Counties)		
Without P. A.	.2145	.1312	.1072	.2227	.0979	.1111
With P. A.	.2025	.1240	.1007	.2100	.0916	.1039
Under FAP	.1882	.1148	.0930	.1776	.0777	.0880
	Nebraska (93 Counties)			Minnesota (87 Counties)		
Without P. A.	.1530	.1081	.0782	.2016	.1510	.1071
With P. A.	.1550	.1094	.0794	.2041	.1531	.1081
Under FAP	.1398	.0987	.0715	.1878	.1383	.0987
	Ohio (88 Counties)			Pennsylvania (67 Counties)		
Without P.A	.1240	.1129	.0617	.1647	.0928	.0461
With P. A.	.1257	.1144	.0633	.1594	.0964	.0498
Under FAP	.1187	.1069	.0600	.1546	.0894	.0449

(TABLE 18 continued.)

Source: Author's computations.

V_w = Williamson Coefficient, Z = Information Statistic,

L = Gini Index.

P. A. stands for Public Assistance.

inequalities seems to increase slightly at the intra-state level.

The proposed Family Assistance Plan would reduce within-state inequalities in all 14 states (Tables 19, 20, and 21). The magnitude of this reduction varies between states. There tends to be an inverse relationship between the FAP's effectiveness and the degree of affluence of the given states (Figures 5, 6, and 7). For example, the FAP would reduce inequalities by over 15 percent in the poorest state, Mississippi, while reduce only 1 to 4.7 percent, depending on the index, in the richest state, New Jersey.

The analysis of the FAP's effectiveness in reducing within-state income inequalities includes three comparisons, namely geographical location, urban-rural character, and economic structure. The inclusion of these components might contribute to our understanding of the effectiveness of the present and future welfare programs in reducing spatial variations in income inequality.

Geographical Location

All 50 states of the United States were divided, according to the classification scheme of the U.S. Bureau of the Census, into four broad geographical regions: Northeast, North Central, South, and West. The selected 14 states include 3 Northeastern states[1], 3 Southern states, 4 North Central states, and 4 Western states.

The regional variations in the effectiveness of using FAP to reduce intra-state income inequalities are apparent in the results from three measures of income inequality (Figures 8, 9, and 10).

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[1]Due to its adjacent location and close ties with Northeastern states, Maryland is considered a Northeastern state here rather than a Southern state as is in the Bureau of Census classification.

TABLE 19

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, WILLIAMSON COEFFICIENT.

State	NJ	MD	OH	OR	PA	MN	WY	NE	OK	ID	NM	SD	LA	MS
Per Capita Income	$3674	3512	3199	3148	3066	3038	2895	2797	2694	2644	2437	2387	2330	192
% Decline in Inequality	0.8	1.7	5.6	5.3	3.0	8.0	6.2	9.8	7.1	7.1	9.5	12.5	10.2	15.

Source: Author.

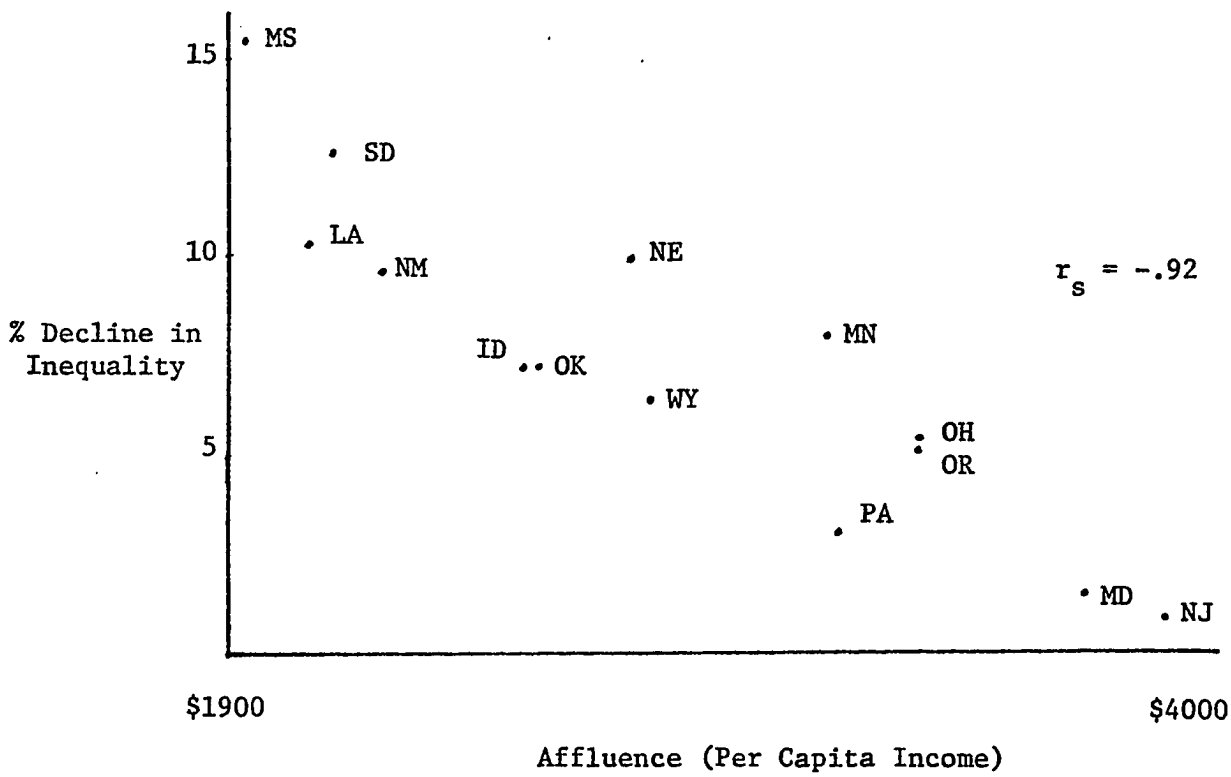


FIGURE 5

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, WILLIAMSON COEFFICIENT.

TABLE 20

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, INFORMATION STATISTIC.

State	NJ	MD	OH	OR	PA	MN	WY	NE	OK	ID	NM	SD	LA	MS
Per Capita Income	$3674	3512	3199	3148	3066	3038	2895	2797	2694	2644	2437	2387	2330	192
% Decline in Inequality	4.7	7.3	6.6	6.1	7.3	9.7	7.1	9.8	7.5	4.1	14.9	15.7	10.5	15.

Source: Author.

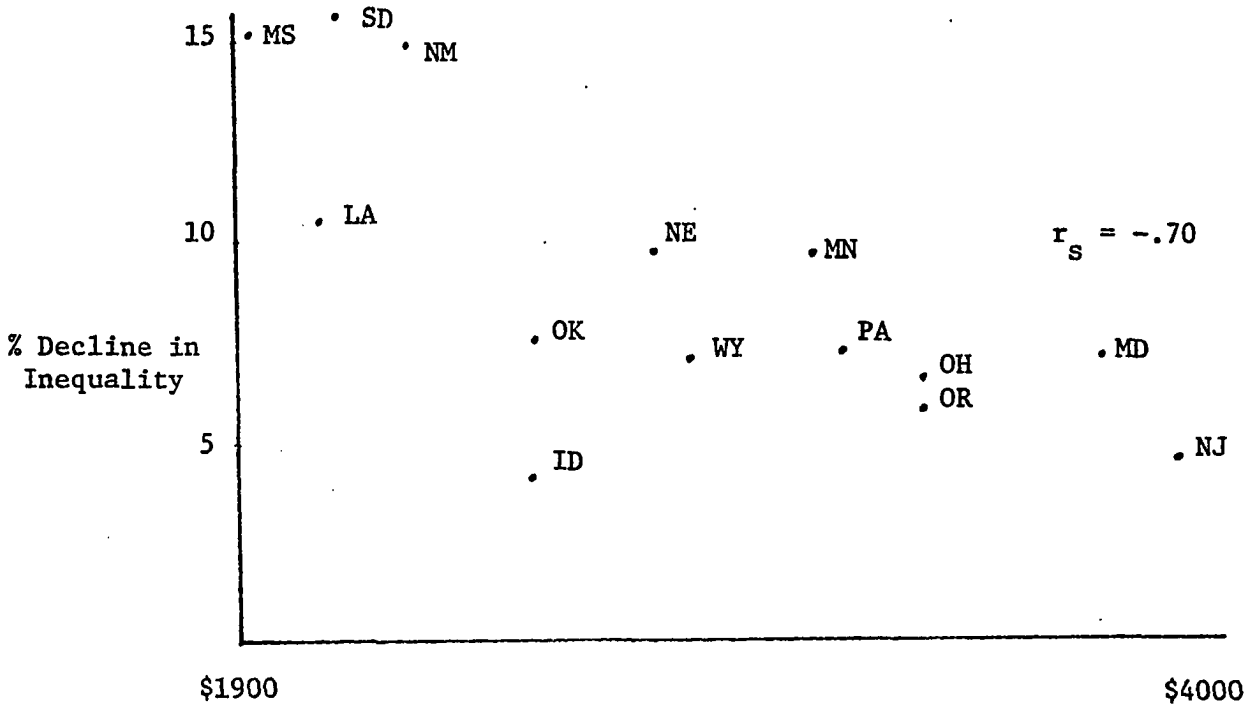


FIGURE 6

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, INFORMATION STATISTIC.

TABLE 21

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, GINI INDEX.

State	NJ	MD	OH	OR	PA	MN	WY	NE	OK	ID	NM	SD	LA	MS
Per Capita Income	$3674	3512	3199	3148	3066	3038	2895	2797	2694	2644	2437	2387	2330	192
% Decline in Inequality	1.6	4.3	5.2	5.9	9.8	8.7	7.4	9.9	7.7	8.4	11.1	16.3	9.9	15.

Source: Author.

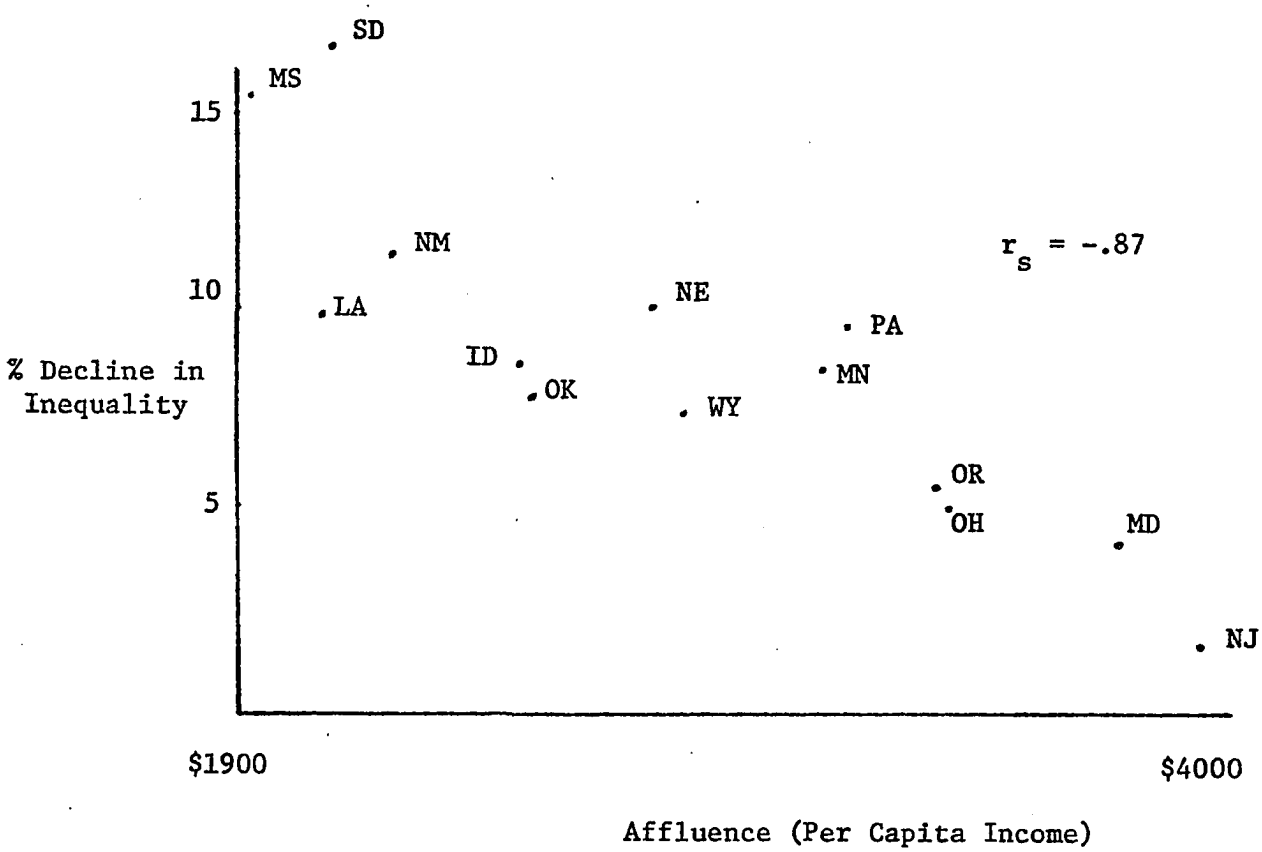


FIGURE 7

IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, GINI INDEX.

FIGURE 8

GEOGRAPHICAL CHARACTERISTICS OF THE IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME INEQUALITIES WITHIN SELECTED STATES, 1970, WILLIAMSON COEFFICIENT.

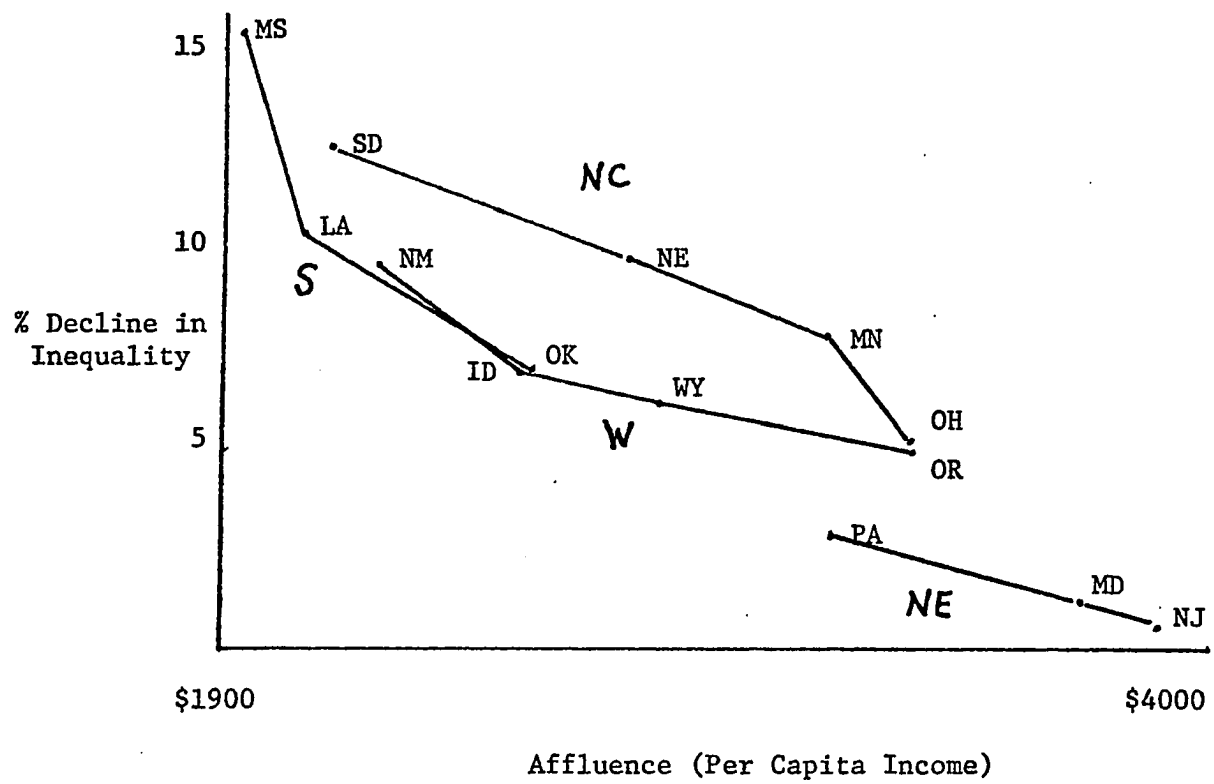


FIGURE 9

GEOGRAPHICAL CHARACTERISTICS OF THE
IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME
INEQUALITIES WITHIN SELECTED STATES, 1970,
INFORMATION STATISTIC.

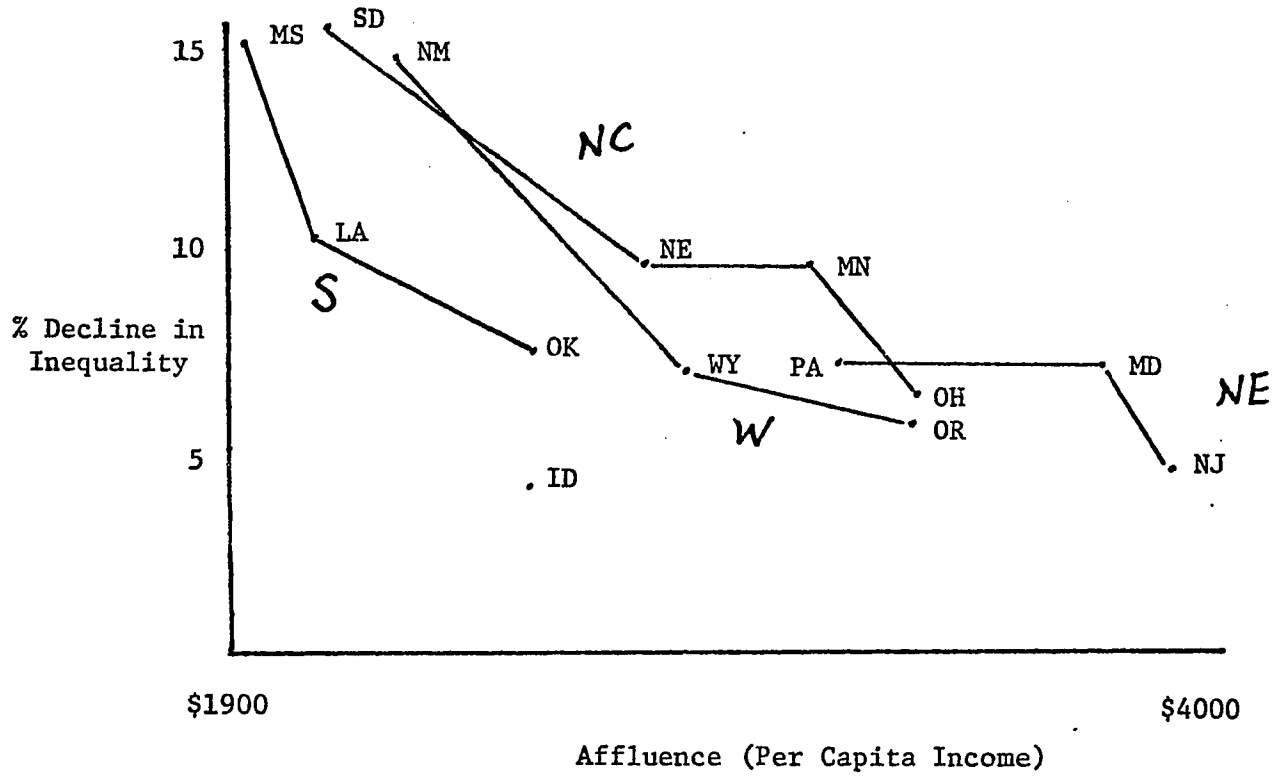
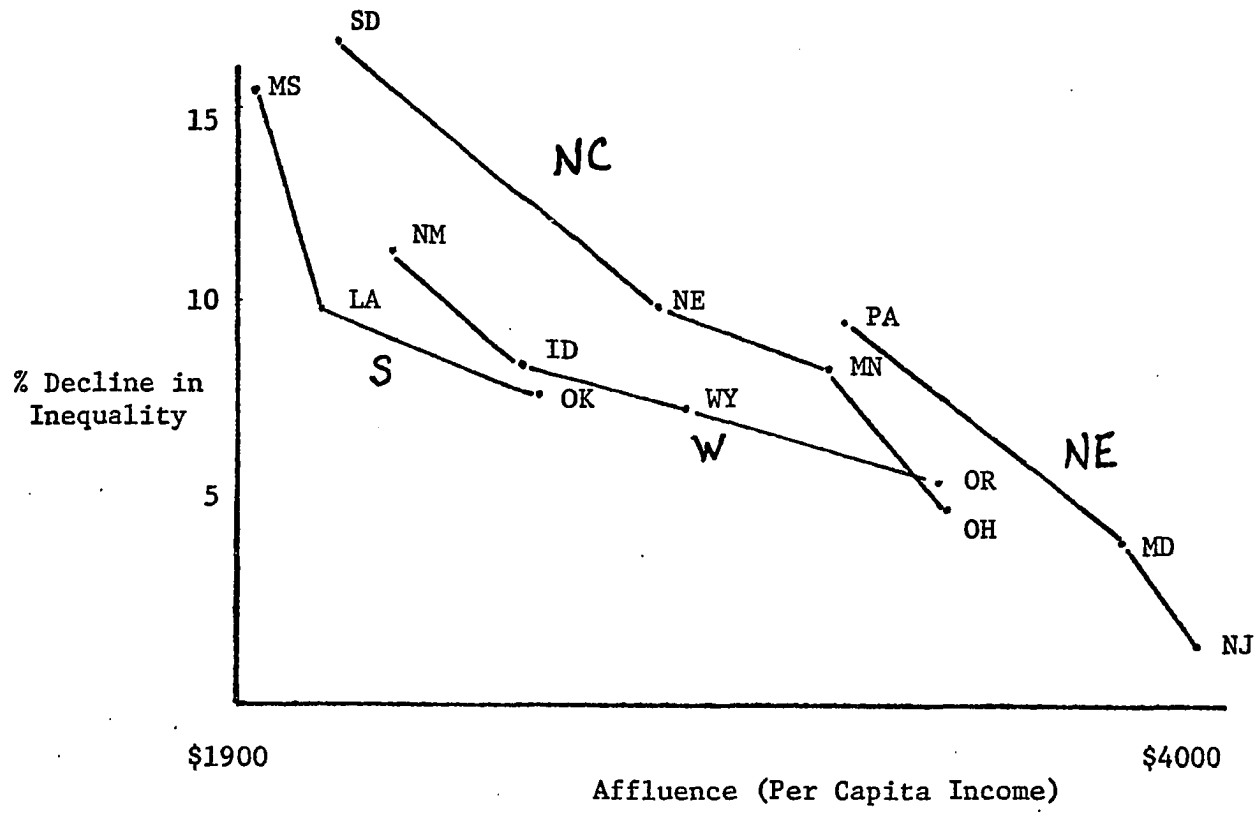


FIGURE 10

GEOGRAPHICAL CHARACTERISTICS OF THE
IMPACT OF THE FAMILY ASSISTANCE PLAN ON PRESENT INCOME
INEQUALITIES WITHIN SELECTED STATES, 1970,
GINI INDEX.



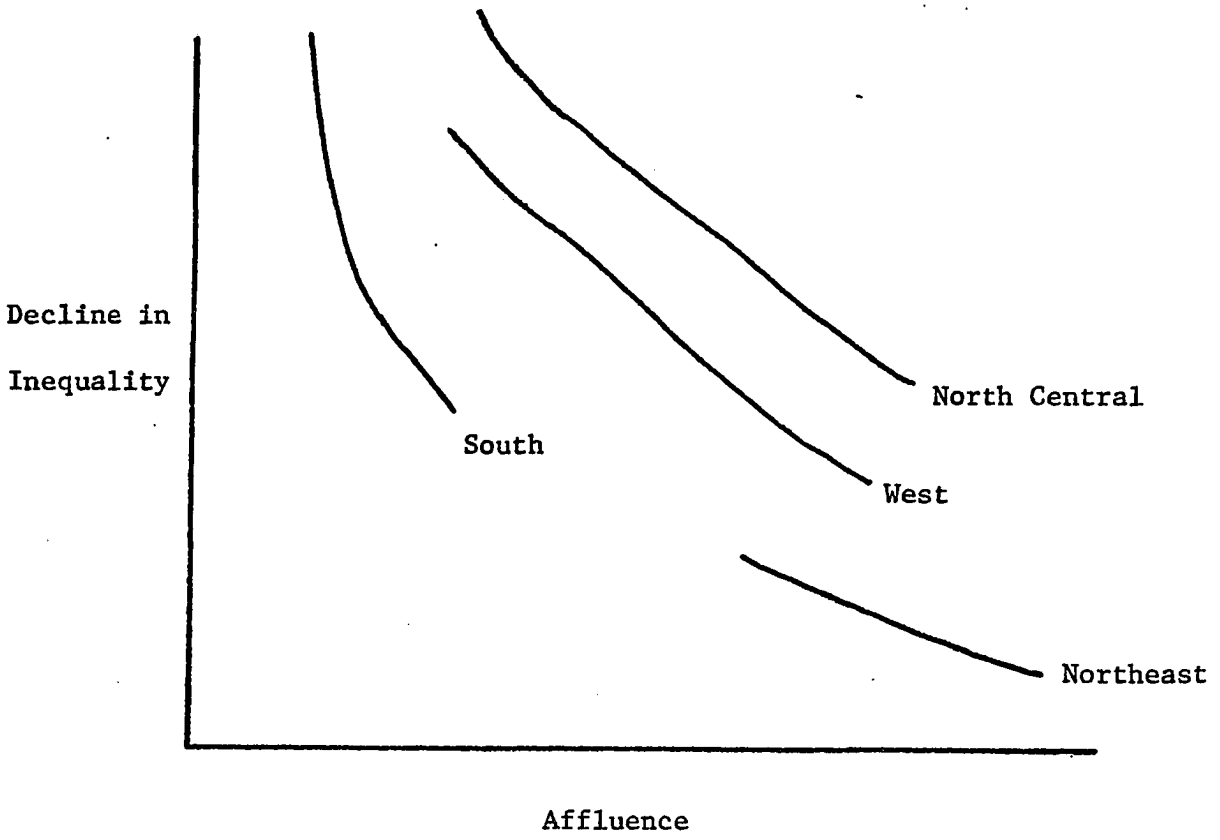
The FAP would be more effective in reducing intra-state inequalities in the South and North Central, while less effective in the West and Northeast. Since Northeast and West are relatively more developed regions, Williamson (1965) believes that in these regions there is likely a tendency toward convergence in personal incomes, hence a lower degree of income inequalities and the less effective of using an income maintenance program to reduce intra-state income inequalities.

The geographical variations in FAP's effectiveness, as represented by Figures 8, 9, and 10, can be better illustrated by a simplified graph (Figure 11). On this graph, the FAP is most effective in reducing intra-state inequalities in the South, followed by the North Central, the West, and the Northeast in descending order. The inverse relationship between the plan's effectiveness and the degree of affluence of individual states also varies between regions. The South has the steepest inverse relationship between the plan's effectiveness and state affluence, followed by the North Central and the West with a less steep inverse relationship, and the Northeast with the least steep inverse relationship.

An interesting finding is that the selected North Central states, except South Dakota, have higher per capita personal income (affluence) than most of the selected Western states, but the FAP is more effective in reducing inequality in the former than in the latter region. This inconsistency may be explained by the fact that the North Central has a higher degree of variance in its average per capita income due to much greater differences in personal income between its well industrialized urban areas and its relatively underdeveloped agricultural rural areas than is the case in the West (Williamson, 1965, Table 4a).

FIGURE 11

GEOGRAPHICAL VARIATIONS IN THE EFFECTIVENESS OF THE FAMILY ASSISTANCE PLAN IN REDUCING INTRA-STATE INCOME INEQUALITY, 1970.



Urban-rural Character

It is believed that the most severe problems of poverty and the greatest degree of income inequalities occur in the rural regions of a country. In these regions, the economic base is usually underdeveloped and less diverse. The underdevelopment and lack of diversification often lead to a large amount of underemployment and unemployment in the labor force. The consequence is a poverty-stricken region with regional average income much lower than the national average and an extremely high rate of unemployment. Also, in these regions, there is a high degree of concentration of personal as well as corporate wealth. Therefore, it can be argued that in these rural regions not only is an income maintenance program highly desirable, but also most effective.

Since there is no consensus concerning how to classify states into urban or rural groupings, this dichotomy will not be attempted in this study. In order to test the hypothesis that an income maintenance program would be more effective in reducing inequality in rural areas, the relationship between the percent of state population in urban areas for the fourteen chosen states and the decline in income inequality caused by FAP in these states has to be determined. The proportions of state population residing in the urban areas in 1970 for these fourteen states were drawn from U.S. Bureau of the Census (1971-1972). Figures 12, 13, and 14 show that there is an inverse relationship between the percent of state population residing in urban areas and the decline in income inequality caused by FAP. A Spearman's rank-order correlation test indicates the correlations between the percent of state population

FIGURE 12

WILLIAMSON COEFFICIENT

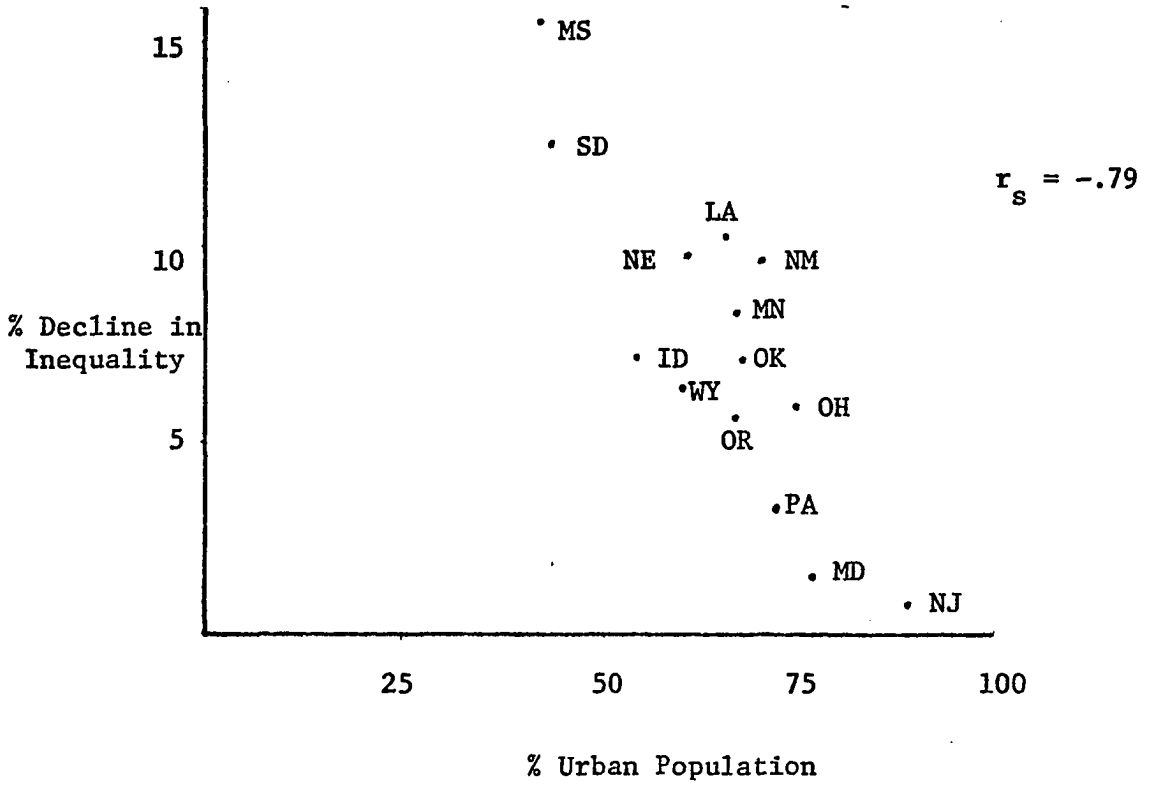


FIGURE 13

INFORMATION STATISTIC

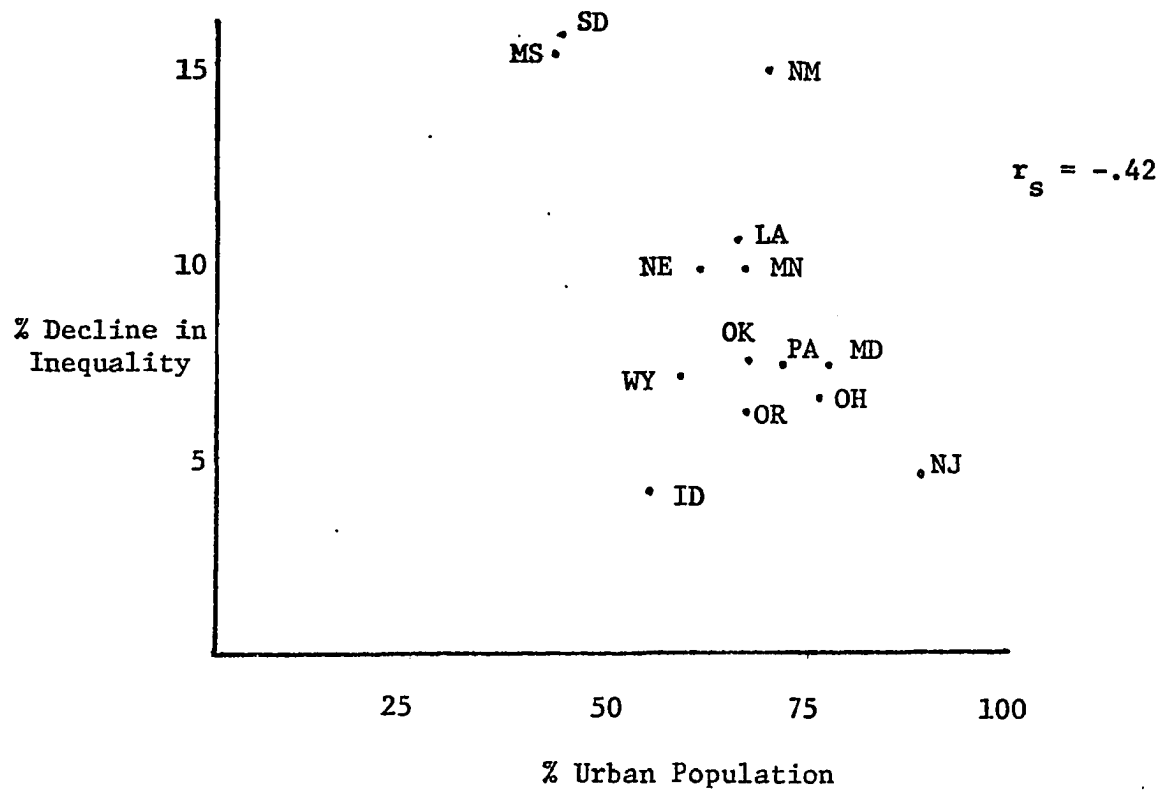
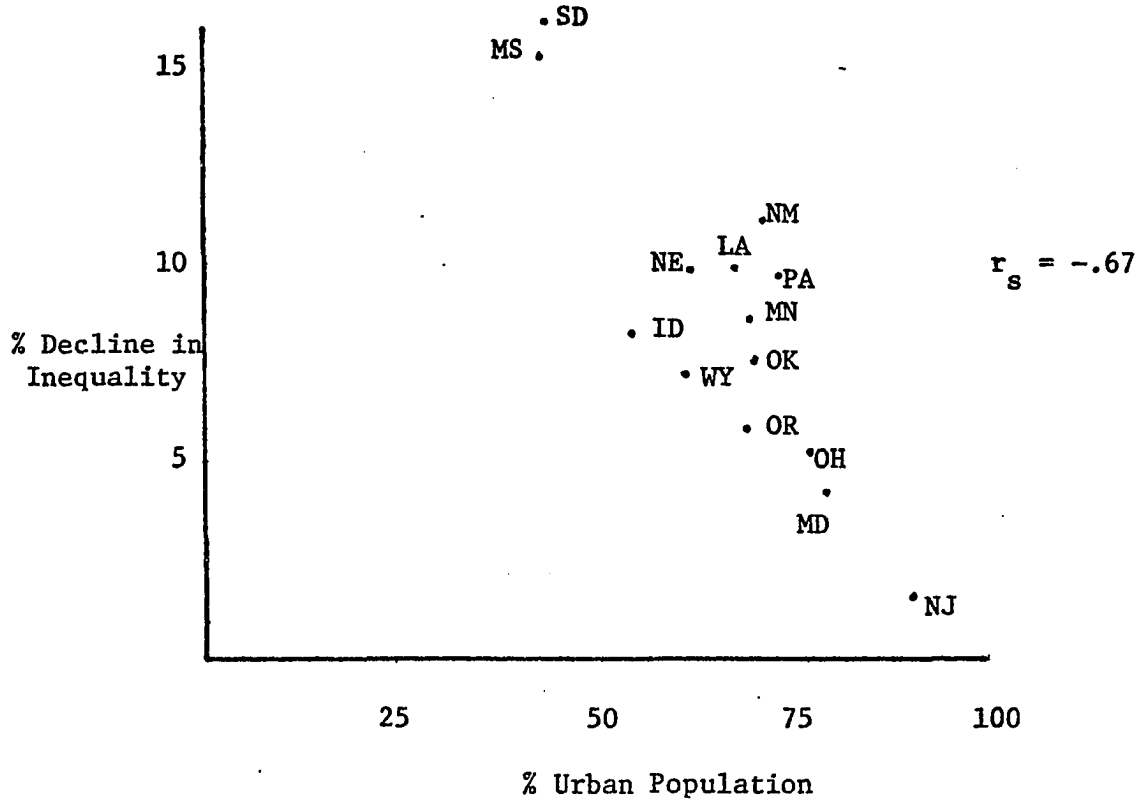


FIGURE 14

GINI INDEX



residing in urban areas and the percent of decline in inequality caused by the FAP are -.79, -.42, and -.67, depending on the measure. These results tend to suggest that an income maintenance program would be more effective in reducing income inequalities in the rural areas than in the urban areas.

Economic Structure

The economic structure of a region usually reflects the level of industrial development and degree of complexity of its economy. According to Williamson (1965), the more industrialized and complex its economy, the more affluent and equitable is the region. It can then be assumed that the higher the percent of state total income derived from agriculture, the more effective is an income maintenance program in reducing income inequalities. The percent of state total income derived from agriculture in 1971 for each of the fourteen states was drawn from publication of the U.S. Bureau of Economic Analysis (1974). An examination of the percent of state income derived from agriculture for the fourteen states and the decline in income inequalities caused by the FAP in these states indicates that there is a strong positive relationship between them (Figures 15, 16, and 17). A Spearman's rank-order correlation test shows that the correlations are .79, .48, and .67, for different measures. These correlations tend to suggest that an income maintenance program is likely to be more effective in reducing income inequalities in regions or states highly dominated by agriculture as their major economic base. Such regions or states usually have higher percent of their population living in the rural areas.

FIGURE 15

WILLIAMSON COEFFICIENT

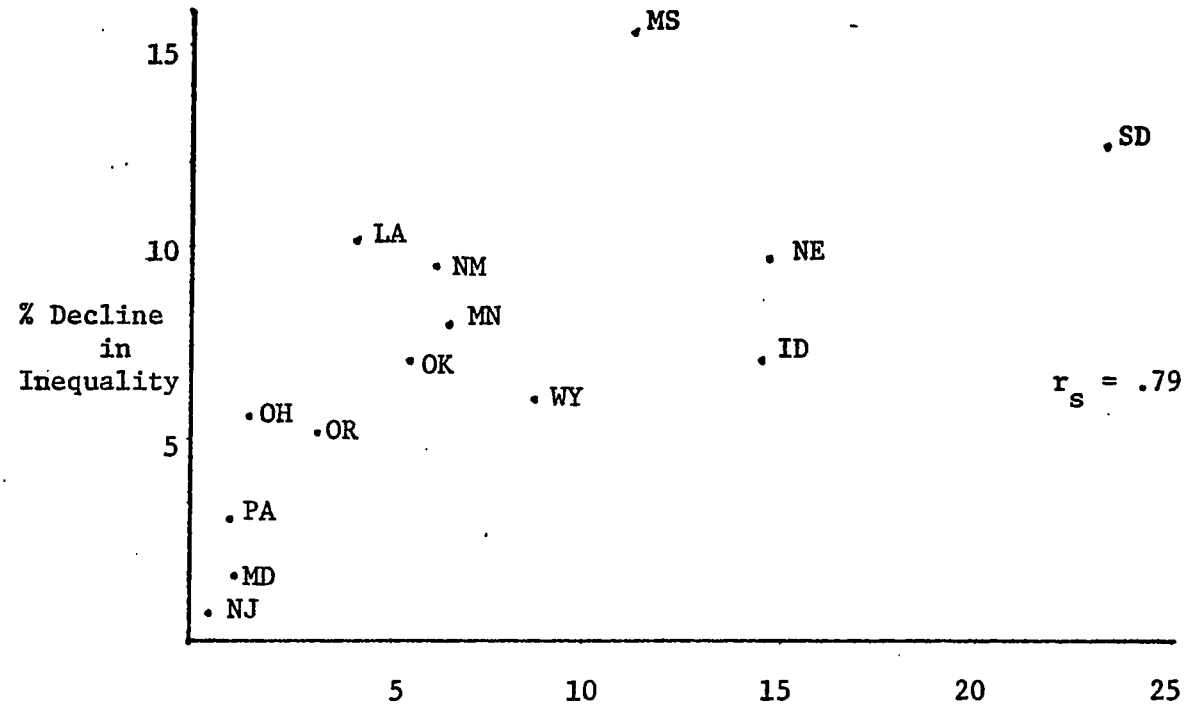


FIGURE 16

INFORMATION STATISTIC

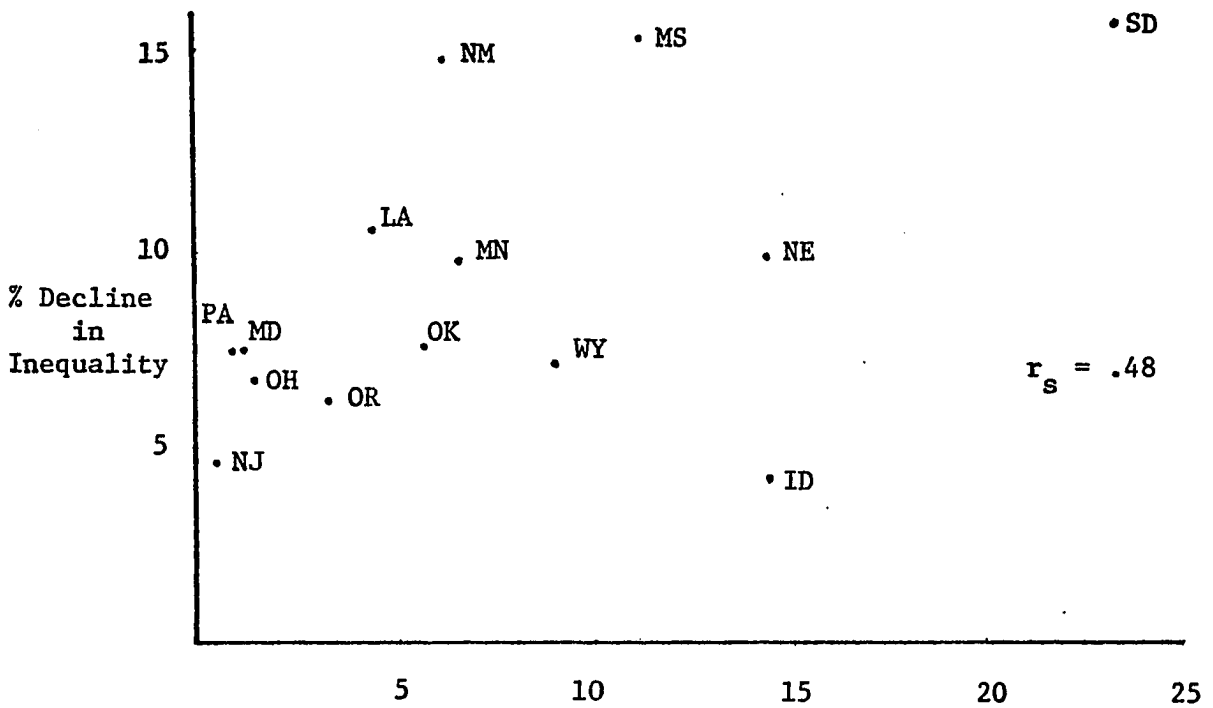
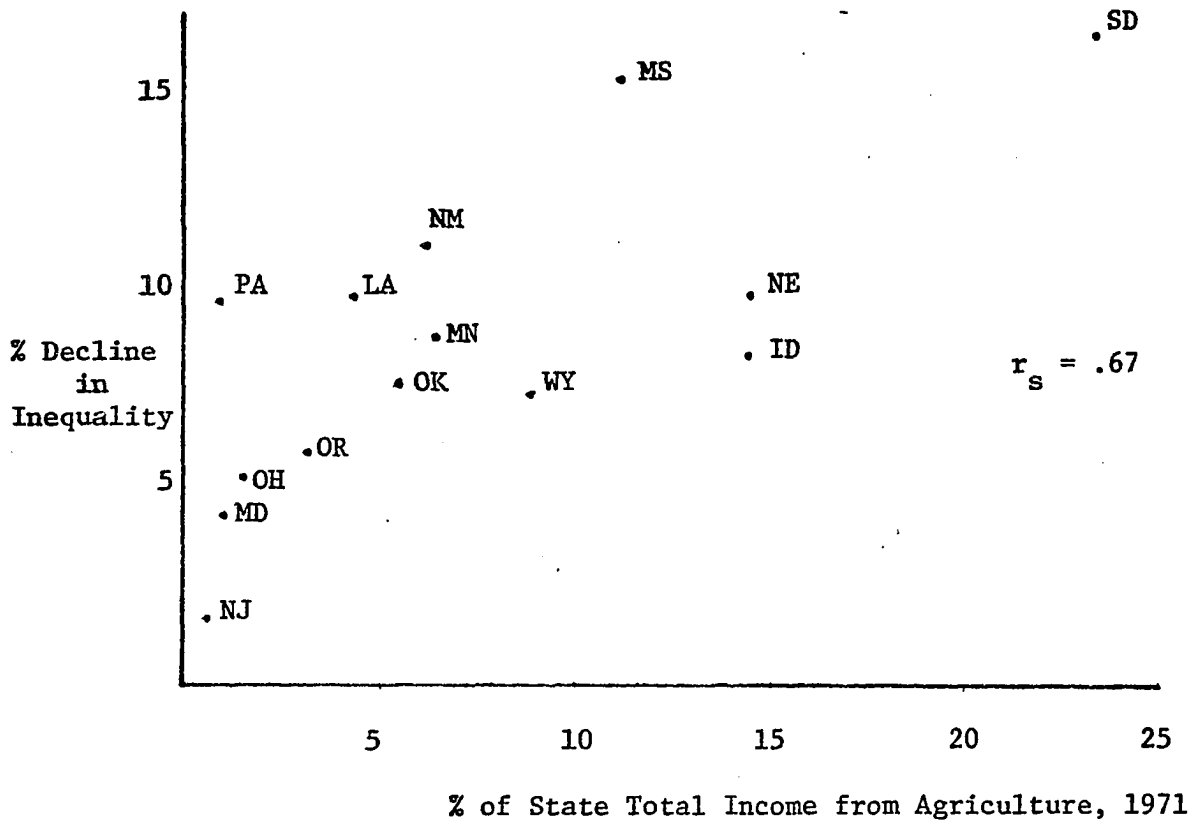


FIGURE 17

GINI INDEX



Comparison of Three Measures of Income Inequality

Among the three measures of income inequality, the Williamson coefficient and the Gini Index offered similar results whereas the information statistic produced results less similar to that of the other two measures. The similarity between results of the Williamson coefficient and Gini Index is illustrated in Figure 18 and the greater difference between results of the Williamson coefficient and information statistic in Figure 19. The more different results produced by the information statistic measure perhaps can be explained by the fact that total national (or state) income is estimated by multiplying the national (or state) income per capita by the number of states (or counties) in the nation (or state). The gross national (or state) and state (or county) income figures would fit the information statistic measure better than would the per capita income figures. Since the Williamson coefficient is a measure of per capita income inequality both between and within states and the Gini Index a measure of income inequality weighted by the population, the per capita income figures become the only adequate data for the information statistic measure, if the results of the three measures are to be compared with one another.

In terms of computational simplicity, the Williamson coefficient is the most desirable measure of income inequality. Although the Gini Index measure produced similar results to that of the Williamson measure, its computational complexity may offset some of its advantages. But the results of the Gini Index measure can be easily utilized for the Lorenz curve analysis which would illustrate the distribution of cumulative incomes between and within states (Alker, 1965: 36-42).

The comparisons between results of all three measures of income

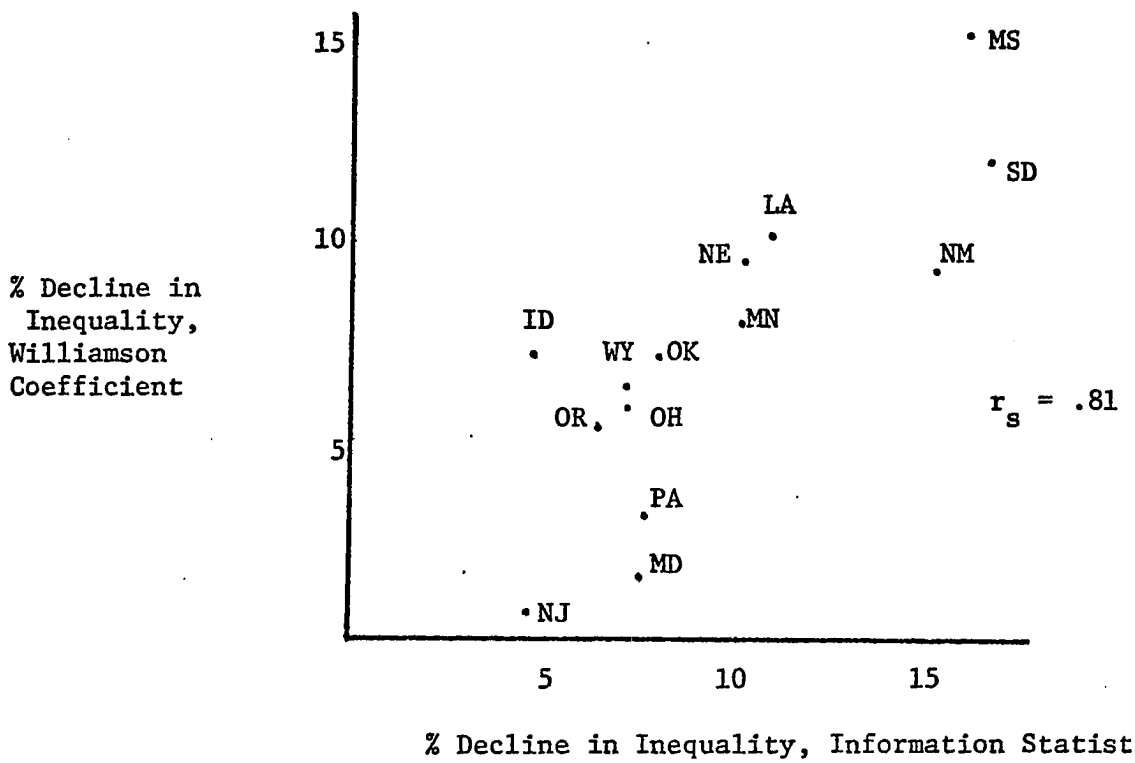
FIGURE 18

COMPARISON BETWEEN RESULTS OF THE WILLIAMSON COEFFICIENT MEASURE AND THE GINI INDEX MEASURE



FIGURE 19

COMPARISON BETWEEN RESULTS OF THE WILLIAMSON COEFFICIENT MEASURE AND THE INFORMATION STATISTIC MEASURE



inequality show anomalies, i.e., differences in the effectiveness of the FAP in reducing income inequalities in the same state if different measures were used. These states include Maryland, Pennsylvania, South Dakota, and, to a lesser extent, New Jersey and New Mexico. There are no readily clear explanations for these anomalies encountered in the analysis. These states include both rich and poor states, states with a large number of counties and with a small number of counties, and states of large population and of small population. These anomalies in the results of different measures may warrant future research in this area.

This comparison of the results of the three measures of inequality also reveals that the state of income inequality is much greater for the Williamson measure while that for the other two measures are considerably smaller and often quite similar to each other. This phenomenon perhaps can be explained by the reason suggested in Chapter IV, i.e., the squaring of the differences between the state (or county) and national (or state) per capita income figures. For the results of the other two measures, the levels of income inequality tend to be low for states with a small number of counties. Among the three measures of inequality, the information statistic measure is most sensitive to sample size.

Thus, any one attempting to identify and describe the levels of income inequality in a particular country or region at a given time should be aware of the inherent differences among various measures of income inequality. However, for the purpose of gauging the effects of the welfare reform plans on the changes in the levels of income inequality, the absolute levels of income inequality are less

important than the relative changes in the level of inequality both before and after the welfare reform plans came into effect.

CHAPTER VI

REGIONAL DEVELOPMENT IMPLICATIONS OF THE FAMILY ASSISTANCE PLAN

The impacts of various income maintenance programs, including the Family Assistance Plan, would have some direct and indirect implications for regional economic development. Some of the economic and social impacts of various income maintenance programs have been discussed in Chapter III, especially labor supply. The present chapter deals mainly with the effects of various income maintenance programs, including the Family Assistance Plan, on regional economic development. The development process in a regional context includes inter-and intra-regional migration as well as aspects of labor supply and structural economic relationships, which were discussed in Chapter III. These factors are drawn together in this chapter.

Impact on Regional Migration

Although an income maintenance program may not be designed to affect migration, the program may still inadvertently affect migration through its impact on the costs and benefits of geographical mobility. Since migration can be viewed as a productive investment in the migrant, such investment involves costs and yields returns over a time period. The costs of migration include direct costs, opportunity costs, information costs, decreases in the value of non-transferable assets (such as seniority in one's job), and psychic costs. The returns to migration are in the form of changes in earnings, in non-employment income (such as welfare payments), and in non-pecuniary benefits. The rate of

return on the migration investment is often determined by the net results of combining these costs and benefits. Thus, many economists believe that a person, or family, will invest in migration if the marginal rate of return exceeds the marginal cost of financing the investment (DaVanzo, 1972 and 1973).

In general, an income maintenance program would facilitate the financing of migration through its guaranteed income supplements. Such income supplements to the recipients regardless of their geographical location would also reduce considerably the opportunity costs associated with migration. Furthermore, the assured income supplements for the eligible potential migrant in the new location, his destination, will reduce the riskiness of investing in migration, for the expected loss from being unemployed after moving is now reduced. If other determinants of migration can be held constant, such program induced reductions in costs and uncertainties of migration may lead to an increased flow of migrants.

Income maintenance programs with high marginal tax rates on earnings, such as the FAP, will reduce potential net earnings (i.e., after tax) in all locations and thus decrease the earnings differential available by migrating. Such effect would reduce the incentive to search for and migrate for better employment opportunities (DaVanzo, 1973). This reduced economic incentive to migrate may alter present inter-and intra-regional migration in the United States to the extent that most of those poor potential migrants from the Southern and Midwestern states seeking better employment opportunities in other regions may be persuaded to remain in their home states. Also, a federally administered income maintenance program, such as the FAP,

is likely to reduce interstate welfare discrepancies and thus discourages persons migrating to areas with higher welfare benefits or more liberal eligibility requirements under the present welfare system.[1] The end result would be a reduced rate of out-migration from the South and Midwest and from the rural areas.

Kain and Schafer (1971) used a modification of the Bowles (1970) model of migration to evaluate the potential impact of various FAPs on U.S. interregional migration patterns. They found that FAP would have a modest impact on migration between the South and the non-South. Their findings suggest that the impact of FAP would be substantially larger on white net-migration than on black net-migration. It would reduce the black migration from the South to other regions (especially the Northern metropolitan areas) by about 2 percent annually, while increasing white net in-migration from about 4 to 9 percent annually. The increased white net in-migration rates are in part explained by FAP's discouraging effect on the out-migration of Southern whites (Kain and Schafer, 1971: 75 and 80). Kain and Schafer's estimates of FAP's impact on Southern black out-migration seem somewhat lower than what would be expected and future studies might yield different results.

If national income maintenance programs offer uniform payments to the eligible recipients regardless of their geographical locations and their differences in living costs, such as the FAP, these programs would encourage and increase the flow of migrants to areas where their

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[1] A recent empirical study of the interregional migration of the poor in the United States found that in the 1965-1970 period the poor did migrate toward areas with higher welfare payments (Glantz, 1973: 76).

real incomes or consumption returns would increase. Areas with very low living costs, with pleasant climates, with friends and relatives, or with better amenities are likely to receive increased flows of migrants if a national income maintenance program of this nature is instituted. In the United States, such a plan would not only reduce the out-migration flows of the poor from the South and Midwest and from the rural areas, but also might reinforce the current new trend of reverse migration,i.e., from the non-South to the South, and from the urban to non-urban areas (Roseman, 1977).

The migration of the poor under a national income maintenance program may be conditioned by the age factor of the potential migrants. Bonner (1971b) suggests that migration of the poor will become a more dichotomous phenomenon under the FAP. Among poor young adults, migration should increase and their movement should be more responsive to differences in economic opportunity (less sensitive to high marginal tax rates on earnings) as well as in social amenities. Among the remaining poor, the opposite will be true. In general, metropolitan areas provide more economic opportunities and better amenities than nonmetropolitan areas. Therefore, there will be a relative concentration of the young poor in metropolitan areas and a corresponding concentration of the remaining poor in the nonmetropolitan areas.

However, the net result of these changes expected by Bonner (1971b) is not certain. It is possible that many old or middle-aged poor with dependent children will also migrate to metropolitan areas where it is usually difficult for them to find jobs to support themselves or their families. With the Family Assistance payments, the need for employment to gain subsistance is no longer vital. They can leave the

backward rural areas and seek the amenities of the urban areas. But this rural to urban migration of the poor, young or otherwise, under the FAP probably will only occur in the poor regions since their major urban centers are still small in size relative to that of the rich regions. The in-migration of the poor to the urban centers of the poor regions may yet help them to realize the economies of scale in the provision of urban services. The major urban centers of the more developed rich regions are so large in size that the diseconomies of scale have probably already set in motion (Hansen, 1973: 160). The in-migration of the poor to these centers will be discouraged by the rapidly increasing costs and inconvenience, such as traffic congestion, pollution, and crimes associated with living there.

Thus, under the FAP, it is reasonable to suggest that overall interstate migration by the poor will decline (especially from the South to other regions) while that by the non-poor will increase (to the less developed poor regions, such as the South). At the intrastate level, the rural to urban migration will increase in the poor regions while the reverse migration (from urban to rural) will take place or increase in the rich regions. The intermediate-sized urban centers in the poor regions are likely to be the destination of the poor migrants of these regions, while rural areas near the major metropolitan centers in the rich regions will draw people away from these large urban centers (Hansen, 1973).

Due to the complexity of possible effects of income maintenance programs on migration, existing empirical studies of migration are of little help in enabling policy-makers to determine the effects an income maintenance program might have on population redistribution

(DaVanzo, 1972; and DaVanzo and Greenberg, 1974). A comparison of the similarities and differences between several important empirical studies of migration in the United States has been made by DaVanzo (1972, Appendix C). Most of the current empirical studies of migration are theoretically inadequate and the data used are often inappropriate. Many migration models, such as those of Sjaastad (1962), Schwartz (1968), Bowles (1970), and O'Neill (1970), tend to overlook an important factor of migration that for married persons the decision-making unit is the family rather than the individual; the wife's employment opportunities affect the husband's migration decision, and vice versa. A wider range of demographic groups, such as women and nonwhites, had until recently been excluded in most migration models. Most of the explanatory variables used in various models tend to be economic-incentive oriented (Silvers, 1977). Many important non-economic determinants of migration, such as good climate, social and cultural amenities, and psychic benefits, have been included in some of the recent migration studies, but the focus of these studies rarely goes beyond examining the determinants of migration per se. Almost all of the literature dealing with the determinants of migration is devoid of direct policy implications (Greenwood, 1975: 421). Thus, Greenwood (1975) argues for the development and utilization of the simultaneous-equation models of migration, so that policy variables can be explicitly introduced into the models to estimate and demonstrate the impacts of policy decisions on migration.

Impact on Regional Economic Growth

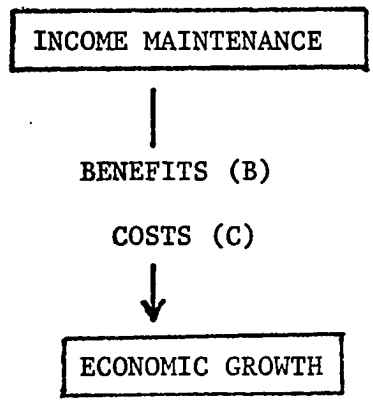
The most important and yet least understood issue of income maintenance programs is their potential impacts on economic growth, national as well as subnational. At the national level, most economists believe that there is a trade-off, or opportunity costs, between economic growth and income redistribution (income maintenance programs are one of many policy means to redistribute income). But such a trade-off may be politically desirable and imperative (Kuznets, 1955). An inherent assumption associated with this type of argument is that economic growth or development always precedes and is a pre-condition of income redistribution. However, some economists, such as Seers (1970), and Higgins (1973), argue that efforts to redistribute income and to reduce regional gap are essential part of the basic development thrust, for their influences to accelerate growth, reduce unemployment, and maintain price stability. The present study adopts this type of reasoning in the analysis of the potential impacts of income maintenance on economic growth (Figure 20).

At the subnational level, a question arises concerning how would an income maintenance program, through its redistribution of income, affect the economic growth of individual regions. Would the economic growth of the poor regions be stimulated by the transfer payments at the expense of the rich regions, or vice versa? The answers to these questions will be the main focus of this section.

In general, income maintenance programs would affect economic growth directly through their effects on savings, consumption, imports, economies of scale, and factor utilization; and indirectly through their effects on labor supply, migration, and demographic structure (Figure 21).

FIGURE 20

NET EFFECTS OF INCOME MAINTENANCE ON ECONOMIC GROWTH



NET EFFECTS (N)

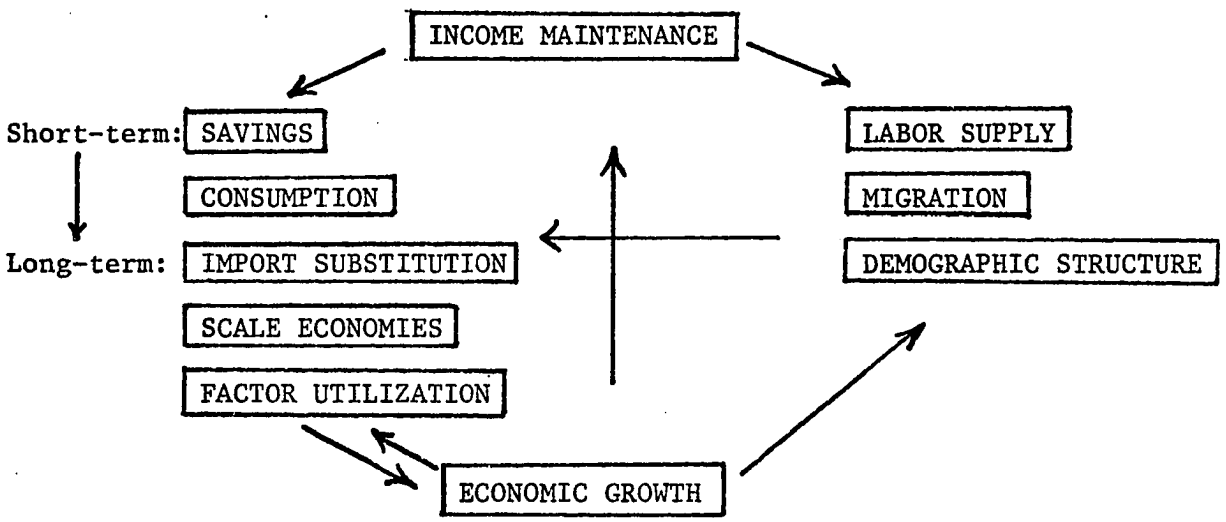
= B - C

where B = economic, social and political benefits, and

C = opportunity costs.

FIGURE 21

RELATIONSHIPS BETWEEN INCOME MAINTENANCE AND ECONOMIC GROWTH



The issue of savings is linked to the considerations of capital formation which is one of the major determinants of economic growth. Economists, such as W. Arthur Lewis (1954), Galenson and Leibenstein (1955), argue that entrepreneurial profit is the major source of savings, because the profit recipients save a higher portion of their income than wage recipients do.[1] But other economists, including Keynes, Friedman (1957), Modigliani and Brumberg (1954), and Cline (1972), believe that the savings rate is more related to the level of personal income than to the type of personal income. This argument is theoretically more convincing, since there is a high correlation between entrepreneurial income and upper income level. If we accept this argument that the savings rate is a function of the personal income level, how would an income maintenance program affect aggregate savings behavior? If an income maintenance program is financed through means other than increased taxation, it would have no, or very insignificant, impact on the overall savings behavior, since the higher income groups will not be adversely affected by the program and the increased incomes from the program for the lower income groups will only be spent for various consumer items rather than be saved by these groups. If an income maintenance program is financed through increased taxation, such as the FAP, the effect of the program on aggregate savings is likely to be negative, since there will be no increase in savings for the lower income groups while a decreased rate of savings is likely to occur among the higher income groups.

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[1] Estimates of an empirical study by H. S. Houthakker (1961) tend to support the hypothesis that the propensity to save for entrepreneurial income is greater than that for labor income.

The magnitude of such a negative impact on savings is, however, still not clear, perhaps depending upon the extent the high income groups' income will be affected by the program's financing and their income elasticity of savings.

Cline (1972), in a simulation study, estimated the potential effects of income redistribution on economic growth for several Latin American countries. His calculations of the savings effect of income redistribution show that attainment of the level of income equity found in Britain would cause decreases in the growth rate (due to the reduction in savings) on the order of 1 percent annually in Brazil and Mexico, 0.66 percent in Argentina, and no decrease in Venezuela. Since these figures were estimated for less developed countries, it would be reasonable to suggest that income redistribution through income maintenance programs would have much less negative effect on savings, hence economic growth, in highly developed countries, such as the United States. The revenues needed to attain a certain level of equity (say that of Britain) would be a much smaller proportion of GNP in highly developed countries than in less developed countries.

The negative effect of the income maintenance programs on savings may be offset by their positive influence on the consumption demand. It can be argued that income redistribution through income maintenance programs would stimulate long-run growth because consumption would increase and encourage investment in an otherwise stagnant economy. Lange (1938) proposed the concept of an "optimum propensity to consume" which extends Keynes' normal model. He maintained that investment was a negative function of the interest rate but a positive function of consumption. Although investment behavior is much more complex than

only these two determinants can suggest, their dominant influences on investment behavior are nontheless beyond dispute.

The previous section on the income maintenance programs' consumption impact suggests that such an effect would be modest at the national level, but with significant regional variations, i.e., inducing higher increases in consumption in poor regions. These increases in consumption in the poor regions may or may not be at the expense of the rich regions, depending upon the ways the programs are financed. The Family Assistance Plan, for example, would increase the consumption expenditures in the poor regions of the United States, such as the South, at the expense of the consumption expenditures of the rich regions. But the net results would be a modest increase in consumption for the nation as a whole. Even though the total national consumption expenditures would not experience a drastic increase, the increased consumption expenditures in the poor regions may be big enough to stimulate growth in these regions through multiplier effect of such increase in consumption expenditures.[1]

An income maintenance program, such as the FAP, would benefit not only the low income groups, but also the middle and high income groups through its multiplier effect. An empirical study by Silvers (1970), designed to estimate the differential multiplier income impacts of public programs incident to specific income groups, has found that the distribution of indirect benefits to each income group is independent of the distribution of the direct benefits. His results show that 16 percent of all indirect impacts will be incident

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[1] A good example of multiplier effect is provided by Bolton (1966).

to the low income group, approximately 53 percent will be incident to the middle income group, and about 31 percent will be incident to the high income group. The size of the aggregate multiplier, according to Silvers (1970), increases as the proportion of the direct income benefits going to the poor increases. Thus, the transfer income to the poor will benefit the entire community or region most before its multiplier effect runs out.

Although income maintenance programs may not have too much effect on aggregate consumption demand, they may have a greater effect on the composition of such demand. As the section on income maintenance programs' consumption impact suggested, the program-induced increases in consumption would mainly concentrate on basic consumer items, such as food, clothing, housing, and urban services, which are labor-intensive. Increased demand for these basic items in the poor regions may create significant economies of scale in the production of these items locally, thus not only reduce the leakage effect of these regions' imports (of these items) but also create employment opportunities within these regions through the establishment of import substitution industries. Such an initial exogenous influence provided by the income maintenance may provoke a series of iterative adjustments in consumer demand structure, factor use and income distribution. As Cline (1972) puts "if redistribution caused a shift in demand toward more labor-intensive goods, employment opportunities would rise and the resulting increment in labor earnings would equalize income distribution further; this further change would cause a demand shift toward labor-intensive goods again, and the process would become one of iteration with successive rounds having more equal income distribution and greater weight of

labor-intensive goods in the production structure."

In the poor regions, there is usually the chronic problem of surplus labor, the program-induced shift in demand for more labor-intensive goods would considerably benefit workers in these regions from increased employment opportunities. But some caveats about the program-induced positive effects are needed. Firstly, the program's direct effects in the poor regions may be offset by its indirect effects since in the short-run most of those advantages mentioned before may not occur and the increased consumption in the poor regions may only benefit the more industrialized rich regions through the poor regions' increased demand for consumer items which are mainly produced by the rich regions. As confirmed by Golladay and Haveman (1977), two income maintenance proposals (FAP and NIT) would increase retail purchases in Southern states, but "a high proportion of the real production required by these purchases occurs outside the South." Secondly, most of the program-induced effects are of short-term nature while economic growth is a long-term process, there is a time lag before the short-term effects could show their influences on the long-term process. It would take time for the poor regions to establish their import-substitution industries and to realize economies of scale in the production of those formerly imported goods and services. Lastly, if income maintenance programs greatly improve the incomes of the people in the poor regions, their increased incomes may cause a shift in demand for more capital-intensive goods, such as consumer durables, since capital-intensive goods have higher income elasticities of demand than that of labor-intensive basic consumer goods. The consequence is that the more industrialized

rich regions would benefit more from their increased exports of these durable goods to the poor regions. These program-induced benefits to the rich regions, however, may be a strong argument for the income maintenance programs because they will benefit both poor and rich regions.

Regional labor supply will affect regional economic growth through its effects on the price of labor utilized in the region. If the supply of labor exceeds the demand for labor in a region, the price of labor will fall in that region. And, the price of labor will rise if the supply of labor is insufficient to meet the demand for labor within a region. An oversupplied labor market tends to sustain the low rates of wages and to maintain very high rates of unemployment and underemployment. These conditions are detrimental to economic growth of a region for the inefficient use of factor of production (in this case, the labor) and the lack of incentives on the part of entrepreneurs to mechanize and industrialize their activities or to develop more profitable and technologically more advanced industries of capital-intensive and labor-saving nature. An undersupplied labor market may have some negative effects on the local, or regional, economic growth in the short-run, but these very negative effects may result in many positive effects in the long-run. In the short-run, the undersupplied labor market will force the price of labor to rise to the point that regional products loose their comparative advantages due to higher costs resulting from soared labor costs. Also, the undersupplied labor market might utilize labor of inferior qualities, such as uneducated or less-educated workers, or workers with less-than-adequate skills, thus lowering the productivity or increasing

the production costs due to additional training expenditures. In the long-run, however, the high labor costs or the shortage of qualified labor may force the entrepreneurs to mechanize and industrialize their activities, or to utilize capital-intensive means of production, thus changing the local or regional economic structure and improving its competitiveness with other localities or regions. Even the utilization of inferior labor may benefit the local or regional economic growth in the long-run for the increased occupational mobility in the labor force and the increased training opportunities they receive from such upward movement within the occupational structure.

The effects of various income maintenance programs, including the FAP, on the supply of labor are mainly concentrated on the eligible married women with dependent children and the eligible married male family heads with low-paying jobs in the service or secondary sectors of the economy. In the United States, these groups of population are mainly located in the South, and the rural portion of the North Central region, and in the urban cores of rich and more developed regions, such as the Northeast, the West, and the highly industrialized portion of the North Central region. Due to a lack of reliable empirical evidence, we are not sure about the exact magnitude of the labor supply effect of income maintenance programs. We can reasonably assume, however, that these effects will be of modest magnitude at most, because many other important factors, such as wage rates, growth rates of labor force, unemployment rates, employment structure of the local or regional economy, and the interregional migration of labor, are also affecting the labor supply function. The modest labor supply effects of income maintenance will be felt more severely in the poor or depressed regions

of the United States due to the higher concentration of potential recipients. Thus, many labor-intensive secondary or service industries, using low-paid and low-skilled labor, in these regions may be adversely affected due to the income-maintenance-induced decline in labor participation rates or the program-induced rise in labor costs. Of course, these negative effects might provide some incentives for local or regional entrepreneurs to introduce more modern capital-intensive and labor-saving equipment, thus changing and upgrading the local or regional economic structure.

The labor supply effects of income maintenance programs will be minor or insignificant in the rich and more developed regions due to their much smaller share of potential recipients and their already much higher wage rates in those sectors mostlikely to be affected by income maintenance programs.

Interregional migration of labor has long been drawing attention from economists and growth planners for its potential negative effects on the economic growth of the poor regions. This process is highly selective due to the prohibitive money costs as well as other costs, e.g., opportunity, information, social, and psychic costs, of migration. The migrants are usually characterized as young, educated, and skilled workers (Parr, 1966). Williamson (1965) points out "selective migration of this type obviously accentuates the tendency towards regional income divergence: labor participation rates, ceteris paribus, will tend to rise in the rich and fall in the poor regions." Precious human capital will tend to flow out of the less developed poor regions and into the more developed rich regions, thus "making regional resource endowment per capita all the more lopsided and geographic

imbalances all the more severe." (Williamson, 1965). These negative effects are also called "backwash effects" (Myrdal, 1957), or "polarization effects" (Hirschman, 1958). Although these effects are considered to be most severe during early stages of economic development in the less developed countries, their severity is also felt quite strongly in the underdeveloped or depressed regions of the highly developed countries, such as the United States.

Income maintenance programs, such as the FAP, would reduce the flows of interregional migration of the poor, but might increase the migratory flows of the poor at the intraregional level, i.e., from rural to urban areas. The reduction in interregional migration will help the poor regions to retain their much needed human capital; and the increase in intraregional migration (from rural to urban) will serve to help rural workers move into more productive, more skilled, and higher-paying jobs in the urban areas, thus also increasing their occupational mobility. This program-induced rural to urban migration within the poor regions will equalize within-region personal income inequalities (which are much greater in the poor regions than in the rich regions) and help rural areas to mechanize their economic activities in the long-run.

In the rich regions, income maintenance programs, such as the FAP, would reinforce a reverse migration, i.e., from urban to rural areas, thus alleviating many urban problems, such as traffic congestion, housing inadequacies, and increasing costs and inefficiency in the provision of urban services in these areas. This urban-to-rural migration might help to develop and industrialize the rural areas in the rich regions. This positive effect of urban-to-rural migration

is part of "spread" effects (Myrdal, 1957) or "trickling-down" effects (Hirschman, 1958).

The effects of income-maintenance-induced changes in demographic characteristics on regional economic growth are more indirect and less clear at the present time, because of the lack of relevant reliable empirical evidence and their long-term nature. According to the very limited evidence suggested in a previous section, the effects of various income maintenance programs, including the FAP, on the fertility, formation and dissolution of families, family structure and stability are very mild or insignificant. Income maintenance programs' major effect on the demographic characteristics may be more adequately viewed in terms of their impact on the improvement of human capital. If income maintenance programs do not increase significantly the fertility rates of recipients, the increased income from government transfers may be used to improve the quality of their lives, such as better housing, more balanced diet, or increased and better education, thus improving their human capital and potentialities. The economic growth of all regions, poor or rich, will benefit from this improved human capital in the form of better prepared workers and their higher productivity.[1] Of course, the poor regions would benefit more from this improvement due to their lower level of education among the general population and their greater share of national income maintenance payments.

If income maintenance programs should have much greater effects

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[1] A study indicated that if malnutrition among members of the poverty population in the U.S. were eliminated, the present value increase of national product, conservatively estimated, would be between $14.4 and $50.3 billion (Popkin, 1972: 134).

on demographic characteristics in general and on fertility in particular, their effects on regional economic growth would be greater. For example, the program-induced higher rate of fertility would increase the population growth and its associated demand for more public welfare and public services, such as education and medical care. In the poor regions, this increased demand for welfare and public services would compete with other economic activities for limited public resources, thus having some negative effects on the regional economic growth rates. But the increased family stability induced by some income maintenance programs, such as the FAP, would have some positive effects on the labor performance, and hence indirectly on the economic growth. The program-induced increase in marriage rates among the young adults may have some positive effects on the consumption demand of specific nature, such as the demand for housing, durable goods, and private automobiles, which would have a large effect on the local or regional economy.

The above general treatment of the impacts of income maintenance programs, including the FAP, on regional economic growth has indicated that the poor regions would benefit more from these programs than would the rich ones. These benefits to the poor regions may or may not come at the expense of the rich regions. In many aspects, the rich regions would also benefit from these income maintenance programs. Therefore, we can reasonably suggest that income maintenance programs, such as the proposed FAP, would have some positive impact on the national economic growth in the long-run. The rich regions' economic loss through taxation for financing the programs may be compensated for by the program-induced benefits, such as the increased exports

of consumer goods to the poor regions, and the reduced in-migration of the poor from the poor regions. Thus, many economists and policy-makers may have overestimated the income maintenance programs' opportunity costs to the national economic growth. The present writer believes that reducing regional gaps, such as regional inequality in personal incomes, should be considered as a major goal of national economic development planning and not as a by-product of national economic development. Seers (1970) and Higgins (1973) have placed the relation of income redistribution and national economic development in the right perspective. The efforts to redistribute income and to reduce regional gap are essential part of the basic development thrust.

Traditional approach to regional growth has adopted the concept of competitive growth which assumes that the national growth rate is given, and then a given increment of growth will be distributed among the regions of the system according to their characteristics (such as locational advantages and disadvantages, relative market potential, comparative costs). Thus, the growth of one region is always at the expense of another. Richardson (1973) points out the major weakness of this approach, i.e., "treating regions as spaceless subsets of the national economy." And the consequence is that "regional growth rates are regarded as being decomposed from the national growth rate, and the possibility of growth in any region having any propulsive impact on the national growth rate is ignored." (Richardson, 1973). He then suggested a "generative growth" approach which treats the national growth rate as the result of the growth rates of the individual regions. And growth within any part of the national economy must have a specific locational origin (locality or region). He believes that the growth

performance of an individual region can be raised and may have an impact on the national growth rate without necessarily adversely affecting the growth rate of its adjacent regions.

The present writer believes that the income-maintenance-induced benefits for the poor regions will improve their economic performance in the long-run and contribute to a higher aggregate national growth rate. This belief is in line with the "generative growth" approach.

Income Inequality and Regional Economic Growth

A much overlooked and yet essential issue of regional economic growth is the relationship between regional income inequality and regional economic growth. Traditional economists often assume an over-simplified one-way relationship, i.e., the extent of income inequality between or within regions is a function of national or regional economic development. Regional income inequality would increase in the early stages, culminate in the middle stages, and finally decrease in the later stages of economic development. Such assumption would not only ignore the impact of regional income inequality on national and regional economic development, but also lead to some questionable decisions in economic development planning.

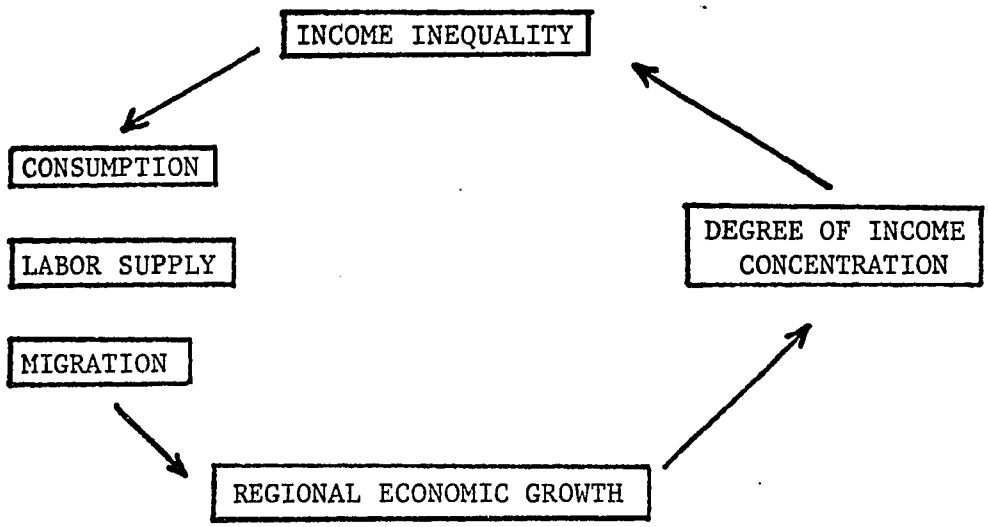
Severe income inequalities between or within regions would exert serious strains on regional economic growth, especially in the poor regions, through their effects on consumption, labor supply, and migration (Figure 22).

Effects on Consumption

Severe income inequalities between or within regions would hold down or even reduce regional consumption, especially in the poor regions, if low-income families account for a large proportion of the total

FIGURE 22

RELATIONSHIP BETWEEN INCOME INEQUALITY AND REGIONAL ECONOMIC GROWTH



regional population. This is attributed to the fact that high-income families tend to have lower marginal consumption propensities than that of low-income families. Low consumption rates and expenditures would affect regional economic growth through their negative effects on the aggregate demand for various consumer items. Thus, they would prevent these regions from benefiting from an increased demand for consumer items and their associated multiplier effects on income, consumption, and employment.

Low consumption rates and expenditures would prevent poor regions from developing their own indigenous industries, or import substitution industries, to produce various consumer goods, due to a lack of effective demand big enough to realize the scale economies in producing these goods locally.[1] The poor regions would suffer not only from losses due to the leakage effects of importing these consumer items from the rich regions, but also from the loss of potential employment opportunities.

Effects on Labor Supply

Severe income inequalities between or within regions may or may not have much effect on the quantity of the regional labor supply. But it would have a greater effect on the quality of the labor supply within a region. Severe income inequality usually deprives the low-income families of adequate diet, housing, medical care, education, and recreation, thus preventing them from becoming a better and more productive labor force. A lack of qualified labor force or a low rate of labor productivity would have some negative effects on the regional economic growth, especially in the poor regions where a high percentage of total

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[1] It has been noted that in general much of the consumer goods consumed in poor regions are often produced in the industrially more advanced rich regions.

regional population can be placed in the low-income category.

The low-quality labor force would set in motion a vicious circle in the poor regions. The low-productivity labor force would prolong the low wage rates (usually at the subsistence level) and the underemployment associated with such labor force, thus further sustaining, if not increasing, its low productivity problem.

Effects on Migration

Severe income inequalities between regions would prolong or even aggravate interregional migration of the poor. This migration of the poor would drain the poor regions much of their young and better-educated human capital, thus adversely affecting their economic growth prospects. The large influx of the poor into the rich regions, especially their urban cores, may not necessarily benefit the receiving regions. Often these poor in-migrants would create or intensify various financial, social, and environmental problems in the already much crowded urban centers of the rich regions. The over-populated depressed urban cores, or central cities, in the large and rich American metropolitan areas are well illustrative of these problems. These financial, social, and environmental strains on the large urban centers of the rich regions are often detrimental to their economic growth. Programs designed to solve these problems would compete with other economic activities for public resources, thus incurring opportunity costs to the rich regions at the expense of their economic growth.

Interregional migration of the poor would create or aggravate not only a shortage of qualified labor force in the poor regions, but also a surplus of relatively low-skilled labor force with very limited mobility, physical as well as occupational, in the central cities of

the rich regions. Such inefficiencies in the labor supply function would have much negative effects on the economic growth of both the rich and poor regions. And if the shortage of qualified labor force in the poor regions prevents outside entrepreneurs from moving into these regions, or induces local entrepreneurs to out-migrate to other regions, such consequences of the interregional migration would discourage economic growth of the poor regions even more.

Thus, income maintenance programs aiming at eliminating or reducing severe income inequalities, such as the Family Assistance Plan, are well justified in not only political and humanitarian, but also economic terms.

CHAPTER VII

SUMMARY AND CONCLUSIONS

This study has estimated the regional patterns of benefits of an income maintenance program, the proposed Family Assistance Plan, and its potential impacts on the inter-and intra-state income inequalities, regional labor supply, regional consumption, regional demographic characteristics, inter-and intra-regional migration, and regional economic growth in the United States. At the first glance, the plan would benefit those more populous states than it would for other states. On a per capita basis, however, the higher levels of benefit would go to Southern and border states. States in the Deep South would benefit most from the plan on the per capita basis.

The political support for the plan both in the House of Representatives and the Senate indicates a very significant inverse relationship between states' per capita program benefits and their political support for the plan in Congress. This inconsistency between political support and program benefits can not be easily explained. Two reasons have been suggested, namely, the lack of understanding of benefits by the electorate as a whole and their elected representatives' different motives in evaluating the benefits of the Family Assistance Plan.

The analysis of income inequalities in the United States reveals that the present welfare system has caused a slight increase in inequalities between states. At the intra-state level, it has the effect of slightly reducing inequalities in some states while slightly

increasing or making no difference in other states. The proposed Family Assistance Plan and a version of it adjusted for cost-of-living differences between states would mildly reduce inequalities both at the inter-state and intra-state levels. Their effectiveness in reducing within-state inequalities varies among states, with a strong inverse relationship between the Family Assistance Plan's effectiveness in reducing inequalities and the degree of affluence of individual states.

The inclusion of geographical location, urban-rural character, and economic structure variables in the analysis of intra-state income inequalities indicates important relationships between the effectiveness of the Family Assistance Plan in reducing inequalities and these variables. The plan would be most effective in the Southern states, followed by states in the North Central, the West, and the Northeast in a descending order. There seems to be a high correlation between the geographical location variable and the affluence variable. In other words, the plan would be less effective in reducing inequalities in a state located in a more developed, hence more affluent region.

The relationship between the plan's effectiveness in reducing inequalities and individual states' proportions of total population residing in the urban areas is a strong inverse one, except for the measure of information statistic. The relationship between the plan's effectiveness in reducing inequalities and individual states' shares of total income derived from agriculture is a strong positive one. All these results seem to support the hypothesis that income maintenance programs are more effective and more desirable in the industri-

ally less developed rural regions or areas.

The impact of income maintenance programs on the labor supply function is the most controversial issue confronting the Family Assistance Plan. Various studies of income maintenance programs, including the Family Assistance Plan, suggest that their effects on the labor supply will be mild or minor, depending on program specifications. These effects, however, will have different meanings for male and female workers and different magnitudes for various sectors and regions. Under income maintenance programs, including the FAP, the female labor force will experience a greater decline in the participation rates than the male labor force, except for those unskilled or low-skilled male workers in the secondary and service sectors.

The program-induced decline in labor supply will be concentrated in the underdeveloped rural regions and the depressed urban cores in the more developed regions due to the concentration of program recipients in these regions.

The income maintenance programs, including the FAP, will have minor effects on the national consumption expenditures. If the programs are financed through increased taxation, such as the Family Assistance Plan, the poor regions will experience an increase in consumer expenditures at the expense of the rich regions. The income maintenance programs will have greater effects on the composition of consumption, especially in the poor regions. In these regions, the program-induced increase in consumption will be concentrated on the basic consumer items, such as food, clothing, shelter, and urban services.

Economic theories suggest that income maintenance programs will

have some positive effects on the fertility rates of the recipients, because they make children less expensive to produce. Existing empirical evidence, however, indicates that these effects of various income maintenance programs are either very minor or insignificant. Income maintenance programs' impact on the formation, dissolution, and stability of families is less clear due to a lack of empirical evidence. But we could expect income maintenance programs, such as the FAP, to have some positive effects on the family formation and negative effects on the family dissolution, and hence some positive effects on the family stability. These effects would be felt most strongly in the underdeveloped rural regions and depressed urban cores.

The impacts of income maintenance programs, such as the FAP, on inter-regional migration of the poor are more complex than are understood. Income maintenance payments would facilitate the financing of the physical moving of the potential migrants and help reducing the opportunity costs and risks associated with such move. But the migration of the poor seeking better economic opportunities, such as job opportunities and higher wages, may be discouraged by the plans', especially that of the FAP, higher marginal tax rates on outside incomes. Also discouraged are those migrants seeking higher welfare benefits in other states or regions. Thus, under income maintenance programs, such as the FAP, we could expect a decline in inter-regional or inter-state migration of the poor.

At the intra-regional or intra-state level, income maintenance programs, such as the FAP, might increase the rural-to-urban migration of the poor in the poor regions to take advantage of the better social and cultural amenities available there, while the programs might induce

or enhance a reverse migration, from urban to rural, in the rich regions due to the diseconomies of urban size experienced in these regions.

The income maintenance programs, such as the FAP, would affect regional economic growth or development directly through their effects on savings, consumption, imports, utilization of factors, and scale economies, and indirectly through their effects on labor supply, demographic characteristics, and regional migration of the poor. These programs would have some negative effects on savings. But the program-induced loss in savings may be compensated for by the program-induced increase in consumption. The programs would induce an increase in the consumption of basic consumer items, such as food, shelter, clothing, and urban services, in the poor rural regions and thus create scale economies in producing these items locally and job opportunities for the surplus labor force in these regions. These trends are of long-term nature, while in the short-term more developed rich regions would benefit from this increase in the consumption of basic consumer items in the poor regions.

The income maintenance programs, such as the FAP, would have some negative effects on the labor supply of female and unskilled and low-skilled male workers in the underdeveloped rural regions or depressed urban cores. The decline in labor supply or an increase in wage rates in these regions might induce entrepreneurs to resort to more capital-intensive and labor-saving methods of production or mechanize and industrialize their activities, thus changing and improving the economic structure, hence economic potential, of these regions. The program-induced increase in family stability and improvement in the human capital would increase the productivity of the workers in the regions,

poor or rich alike. Under the income maintenance programs, such as the FAP, the decline in inter-regional migration of the poor might help poor regions to retain much of their better educated and better trained young migrants while relieving rich regions of their problems of increasing congestion and strains on the urban resources due to constant and large influx of the poor from the poor regions.

The present study has focused mainly on the effectiveness of a national income maintenance program, the proposed Family Assistance Plan, in reducing inter-state as well as intra-state income inequalities in the United States. The lack of adequate data and resources has limited the present study of the FAP's impacts on other economic and social behavior to a fairly general and theoretical nature. Empirical studies of these impacts, however, are essential to a sound evaluation of any income maintenance programs, existing or proposed. Because of the complexity and immense costs of these studies, they should be carried out by a group or groups of an interdisciplinary nature and with adequate funding. The theoretical inferences of the present study can serve to provide some plausible hypotheses for future studies of income maintenance programs, especially those of the United States.

Since 1965, many income maintenance programs have been established explicitly or implicitly as a part of the 'war on poverty' in the 1960s. Although many of these programs explicitly designed to reduce income poverty proved to be rather ineffective, some of the unanticipated and unplanned effects of other programs helped to increase the economic welfare of those belonging to the low income groups (Haveman, 1977: 3). The net result was a considerable reduction in poverty over the decade.

But this reduction in poverty during the decade is difficult to attribute to the direct effects of the programs that were an explicit part of the 'war on poverty.' While all these programs helped to reduce the absolute poverty gap, serious income inequality still remains and may even become greater in the future between different socio-economic groups (Haveman, 1977). Thus, in the next decade, the welfare concern of the policy-makers and the general public will be shifted from the absolute income poverty to the relative income inequalities between regions and between various socio-economic groups. The effectiveness of the welfare system in eliminating or reducing income inequalities between regions and between population groups of various definitions will attract more public attention. The estimates of the present study with respect to the effectiveness of the Family Assistance Plan in reducing inter-state and intra-state income inequalities will provide policy-makers and the general public with some of the needed information for their decisions on the welfare reform of this nature. The measures of income inequality utilized in the present study will provide relevant tools for evaluating the effectiveness of various income maintenance programs in reducing income inequalities between various socio-economic groups of the population and between regions.

The present study has made a comparative analysis of the potential impacts of various present and proposed income maintenance programs. The results of the present study, empirical or theoretical, seem to support the notion that a uniform national income maintenance program, if designed properly, is the solution to the present welfare dilemma. In addition to the tremendous savings in the program costs and the administrative costs, a uniform national income maintenance program

would eliminate or reduce much of the major problems confronting the present welfare system.

As suggested by Haveman (1977), the major goal of the social policy for the next decade may very well be that of checking and reducing the increasing income inequalities between various demographic groups. The present study indicates that a uniform national income maintenance program, such as the Family Assistance Plan, would reduce income inequalities both between and within states in the United States. Although these reductions in income inequality caused by the FAP are less impressive, they reflect the inadequacy of the plan's design, not the validity and utility of the income maintenance concept. The raising of the minimum program benefit levels and the relaxation of some of the program restrictions concerning eligibility requirements may render the income maintenance benefits to many hitherto ineligible families and individuals in the low and middle income brackets. This extension of income maintenance benefits to more low and middle income families and individuals would greatly improve the program's effectiveness and efficiency in eliminating the absolute poverty and in reducing the relative income inequalities among various demographic groups and among regions.

A major obstacle to the implementation of such a uniform national income maintenance program is the belief that any redistribution of income through income maintenance programs is detrimental to economic growth or development for their alleged negative impacts on the recipients and on the growth process. The present study contends that this need not be the case. Many positive effects of an income maintenance program may in the long-run outweigh its negative effects. The

total net effect of such a program may be a positive one for both the rich and poor regions.[1]

A critical reevaluation of the present welfare system has long been overdue. Many incremental welfare reforms have been attempted by various governmental agencies, but with little remedial effects on the entire welfare system. The time has come for a comprehensive and interdisciplinary study of the feasibility, effectiveness, efficiency, and possible impacts of a national income maintenance program. Since this program may be our only solution to the present welfare mess, the responsibility for carrying out such a study clearly lies with the federal government for the essential study financing, coordination, and administration.

Of course, future studies of the impacts of various welfare reform programs should go beyond the scope of income inequality analysis and should include their economic, political, and social implications. The study of the economic impacts of welfare reform programs requires a comprehensive analytical model capable of estimating their first, second, . . . and final rounds of impacts, direct as well as indirect ones. Although such a model is yet to appear, the work and contribution of researchers and practitioners in various disciplines have made this task less formidable. The political and social impacts of welfare reform programs would be complex and difficult to measure, thus requiring both the quantitative and qualitative approaches to the study of such impacts.

Also, the study of welfare reform programs should go beyond the

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[1]Income redistribution through income maintenance should be treated only as a supplementary stimulus to regional economic growth. Other economic stimulation schemes, such as the establishment of industries or economic bases with high income and employment multiplier effects, are more important and effective in stimulating regional economic growth.

impact-analysis stage and be more normative and prescriptive than is the case at present. Thus, welfare reform studies would provide policy-makers with not only the information about the potential impacts of various welfare reform programs, but also the optimal formats and contents of these programs in accordance with relevant policy goals and program criteria.

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