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EFFECTS OF A FINANCIAL INCENTIVE  
ON AFDC EMPLOYMENT--MICHIGAN'S  
EXPERIENCE BETWEEN JULY 1969  
AND JULY 1970

By

Gary Louis Appel

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## ABSTRACT

### EFFECTS OF A FINANCIAL INCENTIVE ON AFDC EMPLOYMENT--MICHIGAN'S EXPERIENCE BETWEEN JULY, 1969 AND JULY, 1970

By

Gary Louis Appel

In 1967, the Social Security Act was amended to include a financial work incentive for AFDC recipients. The ostensible goal of the incentive is to encourage employment, but employment is a means, not necessarily an end in itself. Therefore, in this study, we examine the work incentive in terms of the following objectives of employing those on welfare: (1) to decrease the welfare caseload, (2) to decrease the welfare cost per employed case, (3) to decrease total welfare costs, and (4) to raise the incomes of employed AFDC families at a low taxpayer cost per welfare family.

The conceptual analysis in this study suggests that the work incentive will tend to increase employment but that the employment is consistent with only the last of these objectives--to raise AFDC family incomes. Further, increased employment and higher incomes may be accomplished only at the expense of the other objectives.

Through specific numerical examples from the Michigan AFDC program, this study shows exactly how much more attractive welfare becomes under the work incentive. It is also shown that, as a consequence of this, high earnings are essential in order to achieve the objectives of reducing both the average and the total welfare expenditures on AFDC families. The examples show that if AFDC employment is encouraged, and the earnings of those who respond are not above certain specific levels, the average and total AFDC costs will increase rather than decline. These examples

prepare us for the empirical analysis which occupies the remainder of the study.

The empirical study concentrates on the Michigan AFDC program's first year under the work incentive from July, 1969 to July, 1970. The principal data source was the central AFDC payroll records of the Michigan Department of Social Services. Cross section samples of 4,660 female-headed families were drawn for July, 1969 in order to obtain employment data immediately prior to the incentive; similar samples of 7,656 families were drawn for July, 1970 in order to obtain data for a date one year later. A longitudinal sample of 4,588 female-headed families was also drawn. The samples were stratified by thirteen geographic regions of the state--including highly urban, rural, and intermediate areas. Samples were drawn from counties representing about 90 percent of the total AFDC caseload in Michigan.

In the empirical chapters, employment and earnings data are evaluated in order to judge the effectiveness of the work incentive in achieving increased employment, increased earnings, and reduced short-run welfare costs. The employment data indicate that the AFDC employment rate increased significantly in all thirteen sample areas between July, 1969 and July, 1970, with increases of from 3.3 to 9.9 percentage points. The crucial question, however, is: Did the work incentive cause this increase? To answer this question, it is necessary to isolate the effects of other variables (such as changes in labor market conditions) which could have caused the increase. Our examination indicates that the incentive did cause a significant part of the observed increase in AFDC employment.

In contrast, the work incentive did not appear to cause an increase in average AFDC earned income. Although the earnings data show a slight

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increase in average AFDC earnings, our theoretical analysis does not support the contention that the work incentive caused this increase.

The effect of the incentive on increased caseloads and costs was estimated using the earnings data. Part of the incentive's tendency to raise the AFDC caseload was isolated by showing who would have been removed from AFDC because of excessively high earnings had there not been a work incentive. By indicating how low AFDC earnings actually were, it was further shown that the net short-run costs to the taxpayers increased for employed AFDC mothers who received child care subsidies. But in this case, their net incomes were raised considerably more than the added taxpayer costs. There was a cost saving, however, derived from employing mothers who did not receive child care payments. For all employed mothers generally, net short-run costs were slightly lower than they would have been had no recipients worked at all. However, these slight cost decreases do not appear to be large enough to offset the probable cost increases resulting from the caseload expansion caused by the work incentive. Therefore, our overall conclusion on welfare costs is that they probably increased as a result of the work incentive.

Therefore, in terms of the four objectives of the work incentive we have used, this analysis suggests that the incentive has achieved, through stimulating employment, the first--increasing AFDC incomes--but not the last three--decreasing the AFDC caseload, costs per case, and total costs.

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## Chapter 1

### Public Welfare Policy and the Development of the Work Incentive Program

#### Introduction

The current debate over welfare policies in the United States may give the impression that the struggle over these issues is something new. It is not. There are questions which are common to both British and American history. In Great Britain, these questions have been debated for at least 500 years; and in the United States, from the colonial period. One of the most important of these is the question of work. Traditionally, British and American thinking have placed a strong emphasis on work and have shown a deep concern over the negative effects which welfare was expected to have on employment. These attitudes, however, have gone through distinct and even contrary changes. At times, unemployment was not considered to be the fault of the individual, and welfare was based upon need alone. At other times, unemployment was considered the result of undesirable moral character and, under certain conditions, was a crime punishable by imprisonment. Then again, for the first thirty years of the nineteenth century, a guaranteed wage policy (the Speenhamland Doctrine) was adopted in Great Britain. In retrospect, this program looks as modern as the welfare reform proposals of the 1970's.

Despite changes in attitudes about why the poor were poor and what welfare should do about it, the idea of a "worthy poor," based on ability to work, was always a consideration in determining who was to

receive assistance. The aged, the disabled, the sick, widows and orphans were considered "worthy" because it was felt that they were unable to work. It is not surprising then that welfare legislation in the United States, first at the state and then at the federal level, singled out these same groups for public assistance. Even within this "worthy" group, however, female heads of households were not only expected to work but at times forced to work under penalty of losing their welfare payments. For example, in the 1920's, welfare payments to female heads of households and their families were cut in some states (such as Michigan) during the fall crop harvest -- the presumption being that work was available and that the family members should be forced to take the agricultural jobs.

The belief that welfare mothers should be employed has continued; despite this, however, recent programs in the United States, designed to give them financial relief, have made work relatively less attractive for them. Welfare grants for individual female-headed families in such states as California, New York, Massachusetts, and Michigan increased more rapidly than the earning power of the mothers. This made them less able to earn enough to leave welfare without a financial cost.<sup>1</sup> At the same time, under the traditional welfare policies, welfare grants were reduced as earnings increased on a dollar-for-dollar basis; so there was no net financial return for working while on welfare.

Increasing welfare rolls and costs in the post-World War II period, along with a trend toward more female employment in general, increased public demands that welfare recipients should be employed. Similar demands have been made during the past 400 years, and these have repeatedly led to attempts to force people to leave welfare rolls and find employment.



The work provisions included in the 1967 Social Security Amendments are an example of this. An attempt was made to force some of the mothers on the Aid to Families with Dependent Children program (AFDC) into job training or work. But the 1967 Amendments did more. A change in federal legislation allowed every AFDC mother, for the first time, to keep part of her earnings. This in effect allowed the welfare recipients to supplement their relief payments through earnings. It was hoped, by those who formed the legislation, that the financial work incentive would increase the desire of AFDC mothers to work while on welfare. Once employed, it was hoped that their earnings would increase until they could leave welfare.<sup>2</sup>

This study is concerned with those changes in employment and earnings of AFDC mothers which may be caused by the 1967 Amendments. In the remainder of this chapter, however, we will take up the broader issues of public policy, work, and the reasons for the work incentive in the 1967 Social Security Act Amendments; and we will put them into historical perspective.

#### A Brief History of Welfare Policy

Much of the early thinking about welfare payments in the United States can be traced to attitudes and experiences in Great Britain.<sup>3</sup>

Prior to the mid-fourteenth century, welfare had a strong religious overtone and was considered a right of the poor and an obligation of the rich. The poor were not considered to be necessarily responsible for their economic plight. Unemployment without an apparent reason -- such as age, sickness, or dependency (as in the case of a widow or an orphan) -- was looked upon with disfavor, but this did not necessarily preclude the giving of assistance. But, between the

mid-fourteenth century and the late sixteenth century, the attitudes toward the unemployed changed drastically. Vagrancy was looked upon as a criminal act, and assistance to the able-bodied poor was severely sanctioned.

The establishment of the Elizabethan Poor Law (1597-1602) established the doctrine of providing relief through the secular government rather than the church and again re-established the notion that, for welfare purposes, persons could be unemployed for reasons beyond their control. The poor were divided into three groups: vagrants or voluntarily unemployed were harassed and even imprisoned; the involuntarily unemployed were provided government-sponsored work, often in alms houses; those who were unable to work were given relief without being institutionalized.

From the beginning of the sixteenth through the eighteenth centuries, wealth or poverty was considered a reflection of personal character. The Calvinist belief that the poor deserved to be poor was one of the major reasons for once again placing the blame for unemployment on the individual. Work houses became a place to punish the unemployed rather than a place to supply jobs. Work was insisted upon for any wage, and relief was given only when there were no jobs available.

During the brief period of the Speenhamland Doctrine (1795-1830), welfare policies in Great Britain were made more liberal by supporting wages through a guaranteed weekly income which looks surprisingly modern. The Speenhamland Doctrine, which provided minimum incomes for the poor, was established in 1795 by the justices of Berkshire in Speenhamland, England, during a period of great economic stress. The Speenhamland

support was tied directly to earnings, family size, and the price level.

As described by Polanyi, the principle was:

. . . When the gallon loaf of bread of definite quality "shall cost 1 shilling, then every poor and industrious person shall have for his support 3 shillings weekly, either procured by his own or his family's labor, or an allowance from the poor rates, and for the support of his wife and every other of his family, 1 shilling, 6 pence; when the gallon loaf shall cost 1/6, then 4 shillings weekly, plus 1/10; on every pence which the bread price raises above 1 shilling he shall have 3 pence for himself and 1 pence for the others."<sup>4</sup>

Support below the specified minimum was given whether the person worked or not. Relief was reduced on a dollar-for-dollar basis with earnings, and the grant size fluctuated with the price level.

A large increase in pauperism coincided with the Speenhamland Doctrine. It looked as if supplying aid in support of wages had led to more economic suffering rather than less. A severe reaction, in the form of the Poor Law of 1834, appears to have been an attempt to severely limit all relief outside of the work houses, and the work houses themselves became places of punishment, not help.

#### State and federal welfare attitudes prior to federal grants in aid

Attitudes, at about this same time in the United States, emphasized the value of work and the hazards of welfare. In 1827, the Guardians of the Poor of Philadelphia, reflecting the puritan ethic, stated what could be considered the dominant public position about "outdoor relief" (outside of poorhouses):

Calculated in an especial manner to blunt and ultimately destroy the noble pride of Independence, the birth right of every American Citizen on which the very pillars of our Republic, have their Basis--as its consequences are to create a dependence on the bounty of others, rather than excite the laudable ambition of creating resources of our own, it cuts the sinews of Industry and of consequence promotes idleness and not infrequently Crimes, its having become common has made it fashionable . . . .<sup>5</sup>

Because there existed such a dim view of welfare, especially outdoor relief, it is not surprising that it was not until 1909 that the federal government expressed an interest in providing economic aid enabling poor female-headed families to remain together, rather than have the children put in institutions. In that year, the first White House Conference on Children reflected the increasing concern for the children of broken families.

Home life is the highest and finest product of civilization. It is the great molding force of mind and character. Children should not be deprived of it except for urgent and compelling reasons. Except in unusual circumstances, the home should not be broken up for reasons of poverty.<sup>6</sup>

This concern for the children was not expressed in federal legislation until the Aid to Dependent Children program (ADC) was established through the 1935 Social Security Act which provided some grants in aid to states for welfare programs. Prior to that time, however, some states such as New York, Massachusetts, and Michigan -- developed their own limited programs for dependent children.

In Michigan, the first program to provide outdoor relief to dependent children (where the mother is the head of the household) was the Mother's Pension established as a 1913 Amendment to the Juvenile Courts Act of 1907. This act did not provide state funds for dependent children but merely encouraged the counties to make payments of up to three dollars per week per child to the mother -- provided that she was unmarried, widowed, divorced, or deserted.

Under the Mother's Pension, some children were considered "worthy" of welfare only if their fathers could not support them for "good reasons." In Michigan, it took until 1924 before welfare eligibility requirements were broadened to cover the families of fathers who were

imprisoned, or who were in state hospitals for the blind, epileptic, paralytic, insane, or tubercular. But families could not receive financial aid if the father was at home with these same ailments or in a private hospital.

The provisions of the 1913 and 1924 Michigan laws demonstrate the restrictiveness of the eligibility requirements and the fact that the financial aid was directed only to children of the family. The mother was specifically excluded. She was not "worthy" because it was felt that she could work. There appears to have been a strong reluctance in Michigan to provide general relief to the poor except under the most severe economic deprivation, and even then, there was no attempt to provide anything but a bare subsistence allowance. Presumably this was done to encourage a short stay on welfare.

The Mother's Pension placed a continual stress in Michigan on family self-help. Welfare was not to be considered a permanent source of income. Many counties in Michigan, for example, arbitrarily cut welfare payments during the berry-picking season in the 1920's, since all families were assumed to be able to supplement their income by picking berries. Apparently no consideration was given to a family that could not work. Families without male heads were not merely encouraged to supplement their incomes in this way; they were forced by the threat of removal from the welfare rolls.

#### State and federal welfare attitudes after federal grants in aid

The federal government first provided financial aid to dependent children through Title IV of the Social Security Act passed in 1935. Under this provision, the states were encouraged to establish

semi-autonomous ADC programs with grants-in-aid from the federal government. Since 1935, the trend in states such as Michigan, Ohio, New York, and California has been to make more families eligible for welfare payments and for increased ADC benefits. This is particularly evident in the northern and western industrialized states. There has also been a trend, stimulated by federal legislation, toward encouraging rather than forcing ADC mothers to work.

#### Recent Michigan policies toward ADC employment

Initially, Michigan administrators of the ADC program did not emphasize employment but rather family stability.

Through contributing to or supplying the family's economic support, aid to dependent children should, for example, make it possible for a mother to choose between staying at home to care for her children and taking a job away from home. She has little or no choice, however, unless the aid available to her is enough to meet the family's maintenance needs and unless that aid is regular and continuous so that she can rely on it.<sup>7</sup>

Despite these statements, concern remained over ADC employment. After World War II and the large increase in female employment, the emphasis on work for welfare mothers was increased even more at the state level. In 1948, the employment policy of the Michigan ADC program was changed in response to this concern. The welfare grant was reduced in an amount equal to the earnings the mother would make in any job offered to her -- whether or not the employment was accepted. This policy, however, was subject to these qualifications: the mother had to have the prerequisites for the job; suitable child care had to be provided; and the youngest child could not be under two years of age. In 1953, pressure on welfare mothers to find employment was increased by the policy of state AFDC.<sup>8</sup> After that time, welfare mothers had to find employment or make substantial efforts to secure a job in order

to remain on welfare. If the incidence of unfilled jobs indicated that suitable employment did exist, it was assumed that the applicant had not made a "substantial effort," and she was refused welfare on that basis.

Federal change toward positive encouragement of employment

The 1962 Amendments to the federal Social Security Act provided the first federal attempt to provide more than simple income maintenance for AFDC families. Welfare was viewed -- at the federal level -- as a temporary condition which, hopefully, could be shortened through rehabilitative services and training rather than by forcing employment. Work, it appeared, for the first time in history, was to be encouraged by more than just threats and pressure.

President Johnson heralded the new direction in public welfare when he said:

This measure embodies a new approach -- stressing services in addition to support, rehabilitation instead of relief, and training for useful work instead of prolonged dependency. This important legislation will assist our state and local public welfare agencies to redirect the incentives and services they offer to needy families and children and to aged and disabled people. Our objective is to prevent or reduce dependency and to encourage self-care and self-support -- to maintain family life where it is adequate and to restore it where it is deficient.<sup>9</sup>

The change from forcing mothers to work to encouraging them to work was reflected at the state level as well. In 1966, Michigan abandoned the earlier policy of refusing aid to qualified mothers simply because jobs were available. After that time, recipients who were considered eligible for work were referred to the State Employment Security Commission for job counseling and assistance.

A short time later, however, federal legislators decided that

training and services were not adequate to solve the problem of increased welfare costs. In 1967, Congressman Byrnes of Wisconsin, who has worked on social security legislation for years, explicitly stated that services and training were not sufficient to motivate members of AFDC families to find work. He said:

We thought the welfare legislation we enacted in 1962 would provide the basis for getting these people on their feet and off the relief rolls. We were shocked to see what little effect that legislation actually had.<sup>10</sup>

In 1967, President Johnson proposed changes in the Social Security Act which would provide, for the first time in history, a financial incentive for AFDC mothers to work.<sup>11</sup> This work incentive was intended to complement the services and training provided by the AFDC program.

Prior legislation had exempted the income of children from a welfare tax but had taxed the mothers at a 100 percent rate. President Johnson's new proposal would have allowed mothers to keep the first fifty dollars of their earnings. All earnings above that amount would still be taxed at a 100 percent rate.

The House Ways and Means Committee of the United States Congress strengthened the proposed work incentive provision by raising the level of the mother's earnings exempted from a welfare tax (i.e., the reduction in welfare grant caused by increased earnings) to thirty dollars per month plus one-third the remaining earnings. This plan also exempted from welfare taxation all earnings of all children aged sixteen and younger, as well as all earnings of children between seventeen and twenty-one who were in school full time, or in school part time and not employed full time. (The full implications of these incentive provisions are discussed in Chapter 2 of this thesis.)

But the proposed 1967 Amendments not only included a work



incentive but also incorporated a provision designed to force AFDC mothers to seek training or employment. This was viewed by some legislators as a distortion of the initial intent of the AFDC program -- to encourage AFDC mothers to remain home with their children. Thus, legislative debate over the employment issue did not center on the work incentive but rather on the provision which forced qualified AFDC mothers to be referred to state employment agencies under penalty of removal from AFDC. This provision had the effect of forcing welfare mothers to either seek a job or training.<sup>12</sup> John A. Volpe, then the Governor of Massachusetts, summarized the opposition to this provision of the bill this way:

The original concept of AFDC was to keep families together. Section 201, by requiring that mothers enter the labor force, would negate this original concept.<sup>13</sup>

Possibly as a result of these differences in opinion, the 1967 Amendments to the Social Security Act included both the provision requiring qualified mothers to seek training or employment and also a work incentive provision almost identical to that proposed by the House Ways and Means Committee.

Why the work incentive was passed into law is not clear. The historical trend had been to force, rather than encourage, welfare recipients to work. It is not known whether the incentive was due to a more "enlightened" legislature or was simply a means of placating those who strongly opposed the provisions of a bill which appeared to once again force AFDC mothers to work. Nevertheless, the 1967 Amendments contained a positive work incentive provision for the first time in history. The effects of this provision on the work and earnings of welfare mothers are particularly important for this study.

Evolution of the contemporary work  
incentive provision

The 1967 Amendments decreased both the marginal and average welfare tax rates by exempting a lump sum plus a constant portion of earnings from the welfare tax. The exact method of calculating the amount of earnings to be exempted was developed by a combination of legal and administrative interpretation.

It is difficult to determine why the incentive provision of thirty dollars plus one-third of earnings was chosen in preference to certain other figures. The Senate version of the proposed 1967 Social Security Amendments provided for an incentive of fifty dollars per month plus one-half of further earnings.<sup>14</sup> The House version called for an incentive of thirty dollars per month plus one-third of further earnings. However, the Conference Committee decided upon the House version without significant change. The belief that the House version was too small was expressed by Senator Robert Kennedy; in reaction to the Conference Committee report, he stated:

The provision which the conference agreed to -- \$30 a month plus one-third of the rest of the earnings -- is so small that it may not prove to be a meaningful test of the theory that a welfare recipient will go to work if he has some chance of keeping a significant portion of what he or she earns.<sup>15</sup>

Kennedy's reaction was countered by Wilbur Mills of Arkansas, Chairman of the House Ways and Means Committee, who said: "We believe this provision will furnish ample incentive to AFDC recipients to take employment and increase their earnings to the point where they become self-supporting."<sup>16</sup> However, when asked how the thirty dollars plus one-third incentive was decided upon, John M. Martin, the Chief Counsel of the Committee, responded on June 19, 1970:

Before reaching its decision on this provision, the Committee on Ways and Means considered numerous alternatives with varying dollar amounts and percentages of earnings to be disregarded. The Committee decided upon the provisions that were adopted in an attempt to achieve a balance between the amount of work incentive that should be provided to welfare recipients and the reasonableness of the income (including welfare grant and earnings) which the recipients could achieve.<sup>17</sup>

According to Martin, therefore, the Committee was aware that the incentive would allow the AFDC mothers to supplement their welfare income, but as a consequence, they could obtain much higher gross earnings and still remain on welfare. At the same time that the incentive was intended to increase work, it was recognized that it would also encourage AFDC mothers to stay on welfare. The thirty dollars plus one-third of the remaining earnings provision appears to have been a compromise between providing a work incentive and keeping the maximum earnings of persons still on welfare to an acceptable level.

The incentive provisions of the 1967 Amendments to the Social Security Act were ambiguous on one point: what should be done about work expenses? Prior to the 1967 Amendments, a working mother could keep an amount of earnings equal to her expenses of employment.

The incentive provisions of the 1967 Amendments were initially interpreted by the United States Department of Health, Education and Welfare<sup>18</sup> to mean that the amount of exempted income (no welfare tax applied) was to be determined by subtracting all work expenses from earnings and applying the thirty dollars and one-third formula to the adjusted gross income. This meant that the total income the employed mothers have available for work expenses and themselves is equal to the first thirty dollars per month plus, one-third of the remaining earnings plus, two-thirds of the work expenses. (See Footnote 20.)

In a later policy statement from the Department of Health,

Education and Welfare, dated January 29, 1969, the interpretation of the work incentive took a new form:

In arriving at the amount of earned income to be applied against the assistance budget the amount to be disregarded is to be deducted from gross income, rather than from net income. Next, the amount allowed for work expenses is to be deducted. The remaining amount is then applied against the assistance budget.<sup>19</sup>

In other words, under the final interpretation, the total income of the employed mother available to keep or spend on work expenses is equal to the first thirty dollars per month, plus one-third of the remaining earnings, plus all work expenses. The mother is better off due to this final interpretation by an amount equal to one-third of her work expenses.<sup>20</sup>

In summary, there has been a long history of concern in Britain and America over the employment of welfare recipients. The 1967 Amendments to the Social Security Act, however, were the first attempt to positively encourage employment rather than force it through negative sanctions. The welfare mother was offered an incentive of the first thirty dollars of earnings plus one-third the remaining earnings regardless of the amount she paid for work expenses.<sup>21</sup> The effects of this financial incentive on earnings and employment are the subject of this thesis.

#### Review of the Literature

Because the financial incentive established by the 1967 Amendments to the Social Security Act is such a recent occurrence, there have been no completed studies, to date, on its effects. However, the idea of a work incentive for welfare recipients is not new. It has been mentioned repeatedly in income maintenance proposals made over the last ten years, such as negative tax plans. There are only two previous studies of welfare employment under a work incentive plan. In neither case was the incentive exactly like that of the 1967 Social Security Act Amendments.

There are, however, a number of related studies: a demonstration project on work incentives done in Denver in the early 1960's; one study on the effects of a form of work incentive which existed in certain states because of peculiarities in their welfare policies; a limited number of studies of AFDC employment prior to a work incentive program; empirical studies on the employment of married women who are not on welfare; some theoretical work on the employment effects of various welfare programs; studies of the effects of high rates of taxation on work. A discussion of these studies, in terms of their implications for this study, follows.

#### Proposals for work incentives

Financial work incentives for welfare recipients were proposed years before they became a reality. These proposals were made in conjunction with suggestions for negative income tax and other income maintenance plans. The work incentive plans of the leading proposals for a new form of income maintenance have two important things in common:

- 1) the incentives are generally equal to at least 50 percent of income;
- 2) the 50 percent figure is offered with no empirical or theoretical support, and the question of how much a different size of incentive would affect work is ignored for the most part.

One of the first and most prominent economists to suggest a negative income tax plan, including a financial work incentive, was Milton Friedman.<sup>22</sup> Friedman did not discuss implications of different sized incentives, but he did use 50 percent of adjusted gross earnings as an example of such an incentive. James Tobin used alternative work incentives of 50 percent and 66-2/3 percent in a negative income tax plan described in detail in 1967.<sup>23</sup> An incentive of 50 percent of income was

also suggested in model legislation proposed by the President's Commission on Income Maintenance Programs in 1970.<sup>24</sup> Robert Lampman, another leading proponent of negative tax plans, suggests incentive rates of about 50 percent or more.<sup>25</sup>

So the most prestigious proponents of new income maintenance programs appear to have suggested a higher incentive than the approximately 33-1/3 percent established by the 1967 Social Security Act. But, as pointed out in the following chapter, the liberal treatment of work expenses under the AFDC work incentive plan makes the 33-1/3 percent of income incentive a much higher incentive than it may appear. The treatment of work expenses makes the incentives proposed in the negative tax plans nearly comparable to the AFDC incentive in terms of income net of expenses of employment. This similarity between proposed and actual incentives suggests that the actual incentives may provide a reasonable test for the incentive propositions raised in the income maintenance plans. The work incentives have been proposed because of the belief that people will be more likely to work (for wages) when they gain financially. But no substantial theoretical or empirical evidence of the effectiveness of financial incentives was presented in any of the proposed negative tax plans. The above proposals are therefore of limited value to us in our attempt to empirically determine whether the incentive did affect earnings and employment of welfare recipients.

#### Work incentive demonstration project

The effects of a financial work incentive program, which allowed AFDC mothers to keep the first twenty-five dollars plus 25 percent of the remaining monthly earnings, were studied by the Denver Department of Public Welfare between July, 1959 and July, 1961.<sup>26</sup> The incentive's

effects were measured for three study groups. The largest (and most comparable to that used in this study) was comprised of control and experimental groups of one thousand mothers each, selected from the general AFDC population. For this large group of mothers, the rate of families leaving AFDC due to employment reasons was almost the same for the experimental group with the incentive and the control group without it (34.0 percent versus 33.2 percent). But the earnings of the mothers in the work incentive group were 15 percent higher than those without the incentive. The employment rates were 13.4 percent for those with incentive and 11.4 percent for those without. However, a chi square test determined that this difference was quite likely to have occurred by chance. Nevertheless, the study gives some early evidence that welfare employment and earnings may increase in response to incentives.

#### Previous study of a form of work incentive

Some states set what they consider to be an acceptable minimum income for welfare recipients above the size of the welfare grant they actually provide. This means that AFDC mothers in these states can earn up to an amount equal to the difference between the welfare grant and the minimum acceptable income without the grant being reduced; i.e., without paying any welfare tax. In 1968, Irene Cox studied the effects of this financial incentive to work; her study was based on 1961 survey data obtained through Department of Health, Education and Welfare surveys made in all states.<sup>27</sup> Cox compared the rates of employment of AFDC mothers in those states (mostly southern and western) which set welfare grants below their minimum established need to

employment rates in the twenty states which paid 100 percent of the established need. The results of the study showed that ". . . the median proportion of families with an employed mother was almost four times greater in states with earnings exemptions than in states without."<sup>28</sup> Median earnings of AFDC mothers in the states with a gap between assistance and grant, however, were lower than in those without such a gap.

Cox's work was only preliminary and can be subjected to questions such as the following. Can differences among states in labor market conditions, work attitudes, etc. account for the differences in AFDC employment rather than the existence of work incentives? Did the earnings data which were used reflect only the mother's income or that of any other member of the family? (Our analyses of existing welfare data show that this may have happened.) Nevertheless, the study provides some evidence that AFDC mothers do work more because of financial gains from work.

#### AFDC employment without work incentives

Leonard Hausman used 1960 earnings data, together with Department of Health, Education and Welfare AFDC occupational information, to study the potential of AFDC mothers (as well as AFDC-UP, or unemployed, fathers) to support their families with earnings that were equal to the levels of the welfare grant.<sup>29</sup> Hausman estimated in his study that ". . . nearly two-thirds of the AFDC mothers and one-third of the AFDC-UP fathers could not have supported their families at the levels of income they could attain on welfare in 1965 . . . ." <sup>30</sup> Despite concern which Hausman raises about his data problems and his assumptions necessary for the estimations made in his study, the evidence does lend support to the



contention we raise in Chapter 2 that it is virtually impossible for AFDC mothers -- under the work incentive program -- to earn enough to leave AFDC without suffering a financial loss.

Another study which is an excellent aid in analyzing some of the conceptual issues surrounding AFDC employment is the work done by Elizabeth Durbin.<sup>31</sup> While she does not attempt to empirically test for the effects of a financial work incentive, the study is very useful. In her study of welfare in New York City between 1957 and 1967, she developed an economic framework, which includes the family unit (rather than the individual), as the decision-maker and also an analysis of the effects of welfare payments on the decision of welfare mothers to work. She also discusses some of the institutional questions of how various welfare policies affect the decision to work. Durbin's ideas in such matters as the "opportunity costs" facing welfare clients were helpful in developing a framework (Chapter 4 of this study) for analyzing the financial implications of the work incentive.

#### Studies of the employment of married women in the labor force

Studies have been made by Jacob Mincer,<sup>32</sup> Marvin Kosters,<sup>33</sup> and Glenn Cain,<sup>34</sup> among others, on the subject of the participation rates of married women in the labor force. The major issue of these studies centers around the effects of certain variables -- such as husband's income, race, education, and the presence of children -- on the rate of labor force participation of women. The results of these studies would be particularly relevant for a study which attempted to determine why some AFDC mothers work and others do not. But, because this study considers AFDC employment rates and earnings for the welfare caseload

generally, information on demographic variables and employment of married women who are not on welfare is not directly relevant. The effect of demographic variables on AFDC employment generally is accounted for in this study without requiring knowledge of the employment effect of each.

#### Theoretical work on welfare and employment

In 1964, Brehm and Saving<sup>35</sup> made a study of the demand for funds from a particular welfare program called "general assistance." The study did not cover work of welfare mothers nor even the AFDC program but rather covered a broader welfare program including all types of persons and families. For these reasons, the empirical results on the demand for welfare payments are not particularly relevant to this thesis. The study is mentioned here because its theoretical analysis is used as a usual starting point for work applying economic theory to the subject of welfare and employment; it will be discussed further in Chapter 3.

The theoretical analysis in the Brehm-Saving paper uses indifference curves under normal assumptions. The conclusions obtained as a result of the analysis are not as important to this study as is the information gained from looking at the mechanics of the analysis itself. Specifically, the effect of welfare payments and individual preferences on the shape of the relevant budget lines can be viewed as the critical variable in the theoretical analysis of welfare programs and work.

Christopher Green<sup>36</sup> and Michael Boskin<sup>37</sup> developed the analysis further by showing how welfare taxes affect the budget lines and how, according to economic theory, this affects the individual's employment decisions. Green's analysis explicitly states how, through the

theoretical ideas of income and substitution effects, changes in the size of welfare grants and the welfare tax rates affect decisions on how much time will be spent on work. The most important insights drawn from Green's work for purposes of this thesis are that increases in the size of the welfare grant led to an income effect which, under normal theoretical assumptions, means less work and that changing the welfare tax (which the work incentive does) produces opposing income and substitution effects leading to an ambiguous net effect on work. Both of these ideas are developed further in Chapter 3 of this thesis and are used in explaining the expected effects of the incentive.

Boskin's work was similar to Green's but explained why increasing welfare grants may, contrary to theory, actually increase the amount of work done. More money, Boskin points out, may lead to better diets and better health; this long-run investment in children may eventually lead to the increased work effort of welfare recipients. Of these factors, health is the only one which we will explicitly discuss in this thesis (refer to Chapter 5). The others are not likely to be of major importance for the short-run period covered by this study.

#### Studies of high tax rates on work

Studies such as those by Break<sup>38</sup> have observed the effect of high tax rates on the employment of professional males who are not on welfare. Break's conclusion is that for those studies, there is little evidence that high tax rates cause a disincentive to work.<sup>39</sup> Conversely then, there should be little effect from reducing a high tax rate. However, Break does not go to the extreme of stating that there would be no disincentive at a 100 percent tax, which is what welfare mothers faced prior to July, 1969. Therefore, it does not shed light on what would

happen to work if a 100 percent tax were reduced. Furthermore, it does not consider female employment nor employment where a minimum income is guaranteed through welfare payments. For these reasons, the studies on high tax rates and employment are not directly applicable to this study which considers the effects of work incentives for mothers who head welfare families.

## FOOTNOTES

<sup>1</sup>Leonard J. Hausman, "The 100% Welfare Tax Rate: Its Incidence and Effects" (unpublished Doctor's Dissertation, University of Wisconsin, 1967). A study on the earnings ability of welfare mothers compared to welfare grants.

<sup>2</sup>Congressman Wilbur Mills quoted in the U.S. Congressional Record, 90th Cong., 1st Sess. (1957), CXIII, No. 17, 23054.

<sup>3</sup>Historical works on the complex interaction between economic, religious and social factors which led to the development in British and American attitudes toward work and welfare include in part: G.D.H. Cole, A Short History of the British Working Class Movement (New York: The MacMillan Co., 1927); Sidney J. and Beatrice P. Webb, English Poor Law History (New York: Longmans, Green and Co., 1929); Samuel Mencher, Poor Law to Poverty Program; Economic Security Policy in Britain and the United States (Pittsburgh: University of Pittsburgh Press, 1967; also see Blanche D. Coll, "Perspectives in Public Welfare: The English Heritage," Welfare in Review, No. 3, 4 (March, 1966), 1-12, for an excellent summary article.

<sup>4</sup>Karl Polanyi, The Great Transformation: The Political and Economic Origins of Our Time (Boston: Beacon Press, 1957), p. 79.

<sup>5</sup>Blanche D. Coll, "Perspectives in Public Welfare: Colonial Times to 1860: Part II," Welfare in Review, No. 4, 6 (July-August, 1968), 14.

<sup>6</sup>U.S., Congress, Senate, Proceedings of the Conference on the Care of Dependent Children, 60th Congress, 2nd Sess., 1908-1909 (Washington: Government Printing Office, 1909), p. 9.

<sup>7</sup>Michigan Social Security Board, Bureau of Public Assistance, Statement of the Purpose of the Aid to Dependent Children Program, State Letter No. 43 (Lansing, Michigan: Department of Social Service Library, December 2, 1944).

<sup>8</sup>The name of the ADC program was changed to Aid to Families with Dependent Children in 1949.

<sup>9</sup>Catherine M. Miller and Olive B. Ott, "State Action on the Public Assistance Provisions of the 1962 Amendments," Welfare in Review, No. 2, I (August, 1963), 2-15.

<sup>10</sup>Congressman John Byrnes quoted in the U.S., Congressional Record, 90th Cong., 1st Sess. (1967), CXIII, No. 17, 23062.

<sup>11</sup>U.S., Congress, House, Committee on Ways and Means, President's Proposals for Revision in Social Security System, Hearing, 90th Cong., 1st Sess., (Washington: Government Printing Office).

<sup>12</sup> Clause 19, Section 402(a) of the 1967 Social Security Act, forced the mothers to enter the work incentive training program. Because that training program was too small for the number of persons assigned to the program not all qualified mothers were forced into the program.

<sup>13</sup> U.S., Congressional Record, 90th Cong., 1st Sess. (1967), CXIII, No. 17, 22781.

<sup>14</sup> U.S., Congressional Record, 90th Cong., 1st Sess. (1967), CXIII, No. 24, 32599.

<sup>15</sup> Senator Robert Kennedy quoted in the U.S., Congressional Record, 90th Cong., 1st Sess. (1967), CXIII, No. 27, 36785.

<sup>16</sup> Congressman Wilbur Mills quoted in the U.S., Congressional Record, 90th Cong., 1st Sess. (1967), CXIII, No. 17, 23054.

<sup>17</sup> Based on personal correspondence between John M. Martin, Jr., Chief Counsel of the U.S. House of Representatives Committee on Ways and Means, and the writer, June 19, 1970.

<sup>18</sup> Federal Register (33 F.R. 10230) July 17, 1968.

<sup>19</sup> SRS Program Regulation 20-7, Department of Health Education and Welfare, Social and Rehabilitation Services, Washington, D.C., January 29, 1969.

<sup>20</sup> The initial interpretation of the mothers gain due to the work incentive can be presented as  $\$30 + 1/3 [(Y-WE)-\$30] + WE$ , or  $\$20 + 1/3Y + 2/3WE$  where Y equals gross earnings and WE equals work expenses. The gain under the final interpretation can be shown as  $\$30 + 1/3(Y-\$30) + WE$  or  $20 + 1/3Y + WE$ . The gain to the mother is 1/3 of work expenses.

<sup>21</sup> This statement is strictly true as long as the gross earnings minus  $30 + 1/3$  earnings plus work expenses equals or exceeds zero. If not, the mother pays no welfare tax but earnings, less work expenses, exceeds  $30 + 1/3$  earnings.

<sup>22</sup> Milton Friedman, Capitalism and Freedom (Chicago: University of Chicago Press, 1962); also see Christopher Green, Negative Taxes and the Poverty Problem (Washington, D.C.: The Brookings Institution, 1967), for the historical development of income maintenance plans.

<sup>23</sup> James Tobin, Joseph Pechman and Peter Mieszkowski, "Is a Negative Income Tax Practical," The Yale Law Journal (November, 1967), 1-27.

<sup>24</sup> The President's Commission on Income Maintenance Programs, Technical Studies (Washington, D.C.: U.S. Government Printing Office, 1970).

<sup>25</sup> Christopher Green, Negative Taxes and the Poverty Problem, (Washington, D.C.: The Brookings Institution, 1967) pp. 59-60.

<sup>26</sup> Denver Department of Public Welfare, The Incentive Budgeting Demonstration Project (Denver, December, 1961).

<sup>27</sup> Irene Cox, "Working Paper on Effects of an Earnings Exemption on Employment of ADC Mothers," Division of Intramural Research, Department of Health, Education, and Welfare. Also see, Cuyohoga County Welfare Department, Employment Incentives and Social Services: A Demonstration Program in Public Welfare (Cleveland, Ohio, 1966) for a similar local study.

<sup>28</sup> Ibid., p. 5.

<sup>29</sup> Leonard J. Hausman, "The 100% Welfare Tax Rate: Its Incidence and Effects" (unpublished Doctor's dissertation, University of Wisconsin, 1967). A study on the earnings ability of welfare mothers compared to welfare grants.

<sup>30</sup> Leonard Hausman, "Potential for Financial Self-Support Among AFDC and AFDC-UP Recipients," Southern Economic Journal, July, 1969, 63.

<sup>31</sup> See Elizabeth F. Durbin, Welfare Incomes and Employment: An Economic Analysis of Family Choice (New York: Frederick A. Praeger, Publishers, 1969), pp. 96-101, for added analysis on the expected effects of work incentives which were applied to part of the New York City caseload in late 1967.

<sup>32</sup> Jacob Mincer, "Labor Force Participation of Married Women," Aspects of Labor Economics, A Conference of the Universities, National Bureau Committee for Economic Research (Princeton: Princeton University Press, 1962), pp. 63-105.

<sup>33</sup> Marvin Kosters, "Income and Substitution Parameters in a Family Labor Supply Model" (unpublished Doctor's dissertation, University of Chicago, 1966).

<sup>34</sup> Glen G. Cain, Married Women in the Labor Force, An Economic Analysis (Chicago: University of Chicago Press, 1966).

<sup>35</sup> C. T. Brehm and T. R. Saving, "The Demand for General Assistance Payments," American Economic Review, December, 1964, pp. 1002-1018.

<sup>36</sup> Christopher Green, "Negative Taxes and Monetary Incentives to Work: The Static Theory," Journal of Human Resources, III (Summer, 1968), 280-288; Michael Jay Boskin, "The Negative Income Tax and the Supply of Work Effort," National Tax Journal (December, 1967) 353-367.

<sup>37</sup> Michael Jay Boskin, "The Negative Income Tax and the Supply of Work Effort," National Tax Journal (December, 1967), 353-367.

<sup>38</sup>George F. Break, "Income Taxes and Incentives to Work: An Empirical Study," American Economic Review, XLVII (September, 1957), 529-549.

<sup>39</sup>For further citations on studies with similar results to those of Break's study, the incentive effects of high tax rates, see Christopher Green, Negative Taxes and the Poverty Problem (Washington, D.C.: The Brookings Institution, 1967).



## Chapter 2

### Analysis of the Financial Implications of the Work Incentive

The work incentive allows welfare mothers to supplement their welfare grants by working for wages; i.e., the welfare grant is no longer reduced on a one to one basis as earnings increase. This means that, given the provisions of the 1967 Amendments to the Social Security Act, the effective wage rate (defined here in terms of changes in disposable income) facing AFDC mothers went from zero to about one-third of the gross wage over the relevant range. The question of what effect the incentive will have on AFDC employment and earnings can be viewed as a problem of determining the effect which a rise in the wage rates will have on AFDC employment. And the question of the expected effect of an increased wage rate on work can be answered, in part, by using traditional economic analysis; but the work incentive may affect AFDC employment and earnings in an indirect manner, not covered by traditional analysis.

As we will see in this chapter, the mother's ability to earn enough to be forced off welfare falls drastically when the work incentive is established. The work incentive also increases the financial costs of leaving welfare and, consequently, increases the opportunity costs to those not already on welfare. Therefore the work incentive provides AFDC mothers a new financial gain from work, which may cause more employment and higher earnings. We can call changes in AFDC employment, caused by this direct encouragement to work, the primary

effect of the incentive.

But the work incentive changes the financial alternatives facing the mother in a way which tends to decrease the number of families leaving AFDC and to increase the number entering AFDC. The incentive's effect on the flow of mothers into and out of the AFDC program may also change AFDC employment rates and earnings of the caseload generally. We will call the change in AFDC employment, due to this altered flow of mothers through AFDC, the secondary effect of the incentive.

The primary and secondary effects of the work incentive are the subject of this chapter. The primary effects are discussed briefly, using traditional economic analysis. We will discuss the secondary effects by using examples; we will see how the incentive changed the financial alternatives facing mothers -- both on and off welfare -- who head families. The subject of work expenses is so important to these financial alternatives that a separate section of this chapter is devoted to it. Some of the empirical results of this study are presented there in order to demonstrate how important these expenses really are. The chapter is concluded with an analysis of the implications of the work incentive for AFDC earnings and welfare costs.

#### The Primary Employment Effect of the Incentive

Traditional economic analysis of the effect of increased wages on hours worked leads to an ambiguous conclusion. The higher wage rates increase the price of leisure in terms of effort made to gain income; and therefore, the consumption of goods obtained through work is substituted for the consumption of leisure. Hours of work tend to increase because of this substitution. At the same time, however, the higher

wage increases total income which tends to increase the consumption of all "normal" goods, including, under usual assumptions, leisure.

The net effect of these two opposing tendencies is not known a priori; this depends on the relative preference for income and leisure. One could argue that the small incomes of AFDC families, in contrast to the large consumption of leisure (time spent in non-wage producing activities<sup>1</sup>), would create a strong relative preference for income. In this case, the incentive would be expected to cause more hours of work.

We can, however, make a stronger case that the work incentive will increase employment for the AFDC caseload generally. Most AFDC mothers were not employed at the start of the incentive program. The rise in wage rates (i.e., via lower "welfare tax") for most, therefore, would raise the effort price of leisure but, because they are not employed, would not increase their income; so there is no income effect. This eliminates the theoretical rationale for the idea that higher wages cause less hours worked. Accordingly, the higher wages will cause an unambiguous tendency toward more hours of work for those mothers who were not employed. Since approximately 90 percent of the mothers on AFDC were not employed at the inception of the incentive program, that program, in theory, provides an unambiguous tendency for most AFDC mothers to increase the number of hours in wage paying employment.

The results of the analysis imply that the work incentive will provide a tendency for the employment rates of the AFDC cases as a whole to increase.

### The Secondary Employment Effect of the Incentive

In this section, the incentive's effect on the financial gain from employment is compared to its effect on increased total income (including welfare payments and wage supplements), increased costs of leaving welfare, and the resulting increased opportunity cost of staying out of the welfare program. The subject of work expenses is essential to this section; therefore, empirical evidence developed by this study is presented here rather than later in the thesis.

#### Analysis of AFDC mothers' financial gain from work

What is a welfare mother's net financial gain (increase in spendable income) from working under the work incentive program? The benefit from work is her gross earnings. The cost of employment is the welfare tax (reduction in the welfare grant caused by the earnings). The monthly gain to employment with the work incentive -- as specified in Department of Health, Education and Welfare regulations<sup>2</sup> -- is thirty dollars plus one-third the remaining monthly income regardless of work expenses. Work expenses can be considered irrelevant to the mother for most earnings levels. The reason is that the welfare tax reflects work expenses. That is, the AFDC family's grant is reduced by the amount that earnings exceed the first thirty dollars per month plus one-third of the remaining earnings plus all work expenses. If work expenses increase, the AFDC recipient loses nothing. (The increased work expenses do, however, cause a decrease in the grant reduction, or -- looked at another way -- an increase in the cost of welfare to taxpayers.) In simplified form, then, the net financial gain from employment equals twenty dollars plus one-third of earnings.<sup>3</sup>

Examples of the gain in spendable income to AFDC mothers for earnings from \$100 to \$600 per month are shown in Table 2.1.

Table 2.1  
AFDC Recipient's Financial  
Gain from Employment (with the Work Incentive)

Monthly earnings from work	\$100	\$200	\$300	\$400	\$500	\$600
Monthly financial gain from working	\$53	\$86	\$120	\$153	\$186	\$220

The figures in the table apply to all family sizes. A mother of a family of one, or ten, who earns \$300 has \$120 more disposable income for her family. It follows that the same increase in spendable income from the given level of earnings results in different per capita gains to different sized families. Such differences may well affect the manner in which mothers of different sized families respond to the work incentive.

From Table 2.1, it is evident that even with the work incentive there is a high welfare tax rate which transforms even relatively high earnings levels into relatively small increases in disposable incomes. To the extent, however, that a working mother receives certain fringe benefits from work, such as life insurance or a retirement plan, or to the extent that she receives nonpecuniary rewards from employment, the data in Table 2.1 understate the mother's total gain from working. Also, to the extent that work expenses claimed by the mother are higher than actual, the table also understates the

mother's gain and vice versa.

Taxes can be used as an example of how this works. The treatment of exemptions for tax purposes under the provisions of the work incentive is sufficiently ambiguous to allow mothers to claim fewer dependents than the maximum allowable under federal tax law for tax withholding purposes. This means that more taxes -- which are work expenses -- are deducted from the gross pay but without effect on the net income of the AFDC family. When the mother files her income tax return, all dependents can be claimed, netting a gain in the form of a tax refund. In this way the mother can turn a work expense into a financial gain which is in excess of that shown in Table 2.1.

Maximum gross earnings coincident  
with continued AFDC eligibility

Both before and after the establishment of the work incentive, the AFDC family lost its eligibility for welfare when the mother's earnings became high enough for the welfare tax to equal the welfare grant (the amount of money given to the family through AFDC). Prior to the work incentive, this occurred when gross earnings minus work expenses equalled the non-welfare grant because the welfare grant was reduced on a dollar for dollar basis with changes in net earnings.

The size of the welfare grant, or basic need standard, is administratively determined by each state and varies primarily with family size. The main components of the basic need standard include money for food, clothing, and rent. While most medical expenses of AFDC recipients are typically paid by the respective governments, they are not considered part of the AFDC grant. In other words, an AFDC family of four might receive a money grant of three hundred dollars

per month and, in addition, receive five hundred dollars worth of medical care. That family's grant is still three hundred dollars.

Under the work incentive, the AFDC family continues to remain eligible for welfare until the welfare grant equals zero.<sup>4</sup> The only change, as a result of the work incentive, is the rate at which the grant is reduced in response to increased earnings.

The AFDC welfare grant will be reduced to zero when the grant reduction -- caused by the welfare tax net of work expenses -- equals the recipient's initial, non-work AFDC grant. The preceding discussion of Table 2.1 has shown that for each dollar earned the recipient receives about thirty-three cents additional disposable income. But the remaining sixty-seven cents does not go entirely toward reducing the AFDC grant because the final grant reduction is the 67 percent tax minus work expenses. Therefore, in order to determine the earnings level at which the grant will equal zero, or the maximum gross earnings which are possible while the mother is on welfare, some estimate of work expenses must be made.

#### Estimation of AFDC work expenses

Discussions of negative income tax plans and work incentives often ignore or minimize the importance of work expenses. In the 1967 Social Security Act Amendment establishing the AFDC work incentive, work expenses were ambiguously discussed. This is one more indication of how little importance many persons assign to the work expense issue when dealing with financial incentives.

According to Michigan regulations, covering the July, 1969 - July, 1970 period, the actual reported work expenses for women AFDC recipients should be twenty dollars per month for miscellaneous expenses such as

cosmetics, plus an amount equal to: (1) business expenses, such as the cost of tools, special clothing, or uniforms; (2) transportation; (3) training expenses where required by the employer; (4) FICA tax; (5) income tax withheld; (6) mandatory payroll deductions such as retirement funds, union dues, and group insurance plans; (7) court-ordered payments such as wage garnishments. The twenty dollars for miscellaneous expenses is the same as it was before the work incentive. Child care is not considered an employment expense immediately prior to and after the incentive program because it is paid by the State of Michigan in both cases.

The figures obtained in this study from samples of employed AFDC mothers indicate that work expenses are very large in proportion to earnings. Table 2.2 shows the percent of gross earnings accounted for by work expenses for the sample of women who head Michigan AFDC households.

The reported expenses of employment remain remarkably stable as a portion of gross earnings. Work expenses are roughly 25 percent to 31 percent of earnings for earnings between \$150 and \$500 per month.<sup>5</sup>

The importance of exempting, from the welfare tax, an amount of earnings equal to or near 100 percent of work expenses becomes apparent from these figures. If a state or the federal government were to put a ceiling on the amount of allowable work expenses, the marginal tax rate on earnings (welfare tax plus work expenses such as federal income tax) would approach 100 percent of earnings whenever work expenses exceeded the maximum allowable. For example, if a \$40 per month ceiling were placed on work expenses,<sup>6</sup> then, according to the figures in Table 2.2, AFDC recipients earning in excess of \$151 per month would,



Table 2.2

Work Expenses as a Percent of Gross Earnings<sup>a</sup>

Earnings (gross per month)	Estimated work expenses range as a percent of gross earnings	Average work expense in dollars per month <sup>b</sup>
\$100-150	27-41%	\$41.00
\$151-200	26-34%	\$52.00
\$201-250	26-32%	\$64.00
\$251-300	25-30%	\$74.00
\$301-350	27-32%	\$95.00
\$351-400	26-31%	\$106.00
\$401-450	26-29%	\$117.00
\$451-500	26-29%	\$129.00

<sup>a</sup> Sample size: 1,139, which includes all the sample cases with earnings in the July 1970 sample of female-headed AFDC households.

<sup>b</sup> These figures are net of child care costs which are paid by the State.

Source: Data obtained from records of the Michigan Department of Social Services.

on the average, pay all added work expenses out of non-exempt earnings. Suppose that a welfare mother who is earning more than \$151 per month takes additional employment which increases her gross income by \$100 per month. Out of the additional one hundred dollars of gross monthly earnings, she would pay a sixty-seven dollar welfare tax, plus about twenty-five dollars for added work expenses, leaving her only a net increase of eight dollars. The total amount kept by the family out of the added one hundred dollars of gross earnings is eight dollars. This can hardly be considered a substantial improvement from the pre-work incentive period.

The policy implications are clear. Any ceiling on expenses of employment -- such as that included in the welfare reform Family Assistance Plan proposed by President Nixon -- should be imposed only with the full realization that it could destroy the marginal financial work incentive.

#### Calculations of maximum earnings possible while eligible for AFDC

Using data from July, 1969 to July, 1970 and assuming work expenses to be 25 percent of gross earnings plus a twenty dollar miscellaneous expense, we can estimate the maximum amount of gross earnings which Michigan AFDC families of various sizes could have earned while remaining eligible for welfare. Table 2.3 shows the estimated maximum earnings possible both with and without the work incentive.

The figures in Table 2.3 suggest that it is unlikely that many AFDC recipients would be able to obtain jobs with earnings high enough to force them off AFDC, either with or without the work incentive.

Table 2,3

Maximum Gross Earnings Possible while on AFDC,  
for the 69-70 Fiscal Year<sup>a</sup>

Number of recipients in family	2	3	4	5	6	7	8	9	10
Dollar amount of the initial (i.e., non-work) grant <sup>b</sup>	\$182	221	261	299	339	376	413	450	487
Pre-work incentive	\$269	321	375	425	479	528	577	627	676
With work incentive	\$481	574	669	760	855	943	1,031	1,119	1,207

<sup>a</sup> The table shows for each case that earnings level for which the welfare tax equals the non-work AFDC grant. The welfare tax is equal to all income less work expenses (.25 of income + \$20) without the work incentive and all income less \$30 plus one-third of earnings in excess of \$30 plus all work expenses.

<sup>b</sup> The grant levels are averages for the Michigan program. In actuality, they may vary for families of the same size. The grant estimates include an \$88 per month imputed rental allowance.

Under the work incentive, however, it becomes virtually impossible for larger families to earn their way off AFDC. This is expected to cause a decrease in the number of families leaving welfare which could affect AFDC employment rates.

#### The financial cost of leaving AFDC

The financial cost of leaving AFDC is simply the sum total of the welfare benefits which are lost. The most obvious cost is the loss of whatever welfare grant the recipient receives. There are, moreover, three other important costs: the loss of free child care for those who work, medical assistance which is provided by the Medicaid program, and the Food Stamp bonus.<sup>7</sup> Although in certain instances (e.g., a large number of children receiving child care or extremely high medical expenses) a family could still receive a portion of these services, the dollar value of the services lost is substantial.<sup>8</sup>

The exact amount depends on such factors as the number of children in the AFDC family, the number who receive child care, the amount of such care they receive, and the extent to which family members utilize Medicaid services. For purposes of obtaining an idea of the orders of magnitude involved, the value of additional Medicaid services were estimated to average about fifty dollars per month<sup>9</sup> for AFDC families in Michigan. The value of the child care subsidy was conservatively estimated to average about four dollars per day for the first child and two dollars per day for each additional child, totalling roughly eighty dollars per month for the first and forty dollars per month for each additional child. The Food Stamp bonus varies by family size. A family of four would receive a bonus of forty-six dollars per

month as of February, 1970, if they took advantage of the program.<sup>10</sup>

Using these cost estimates, a mother of a family of four with one child who required child care, who left the AFDC program after earning enough to have a zero dollar AFDC grant and therefore lost Medicaid, child care payments, and the Food Stamp bonus, would lose services worth about \$176 per month. If the mother left AFDC while earning less than the amount which would reduce her AFDC grant to zero, she would lose the value of the grant as well as the \$176 per month.

A more important question pertaining to the effect of the incentive on case openings and closings is: what would the mother have to earn in order to leave AFDC without a financial loss? With or without the work incentive, the AFDC family would lose the same amount per month of added services if it left the welfare rolls. Therefore, either with or without the incentive, a mother of a family of four who is earning the maximum allowable on AFDC (zero grant) must earn an additional net income of \$176 per month to be able to leave AFDC without a loss in income. Assuming work expenses to be 25 percent of earnings, this means that 75 percent of the additional gross earnings must amount to at least \$176 per month. In other words, the family in this example must earn \$234 more than the maximum allowed per month in order to leave AFDC without a financial loss. This same calculation was made for other family sizes. The earnings at which families of various sizes are forced to leave AFDC are presented in Table 2.3. The additional gross earnings required to enable such families to leave AFDC without financial loss were then added to the earnings figures in Table 2.3 to produce Table 2.4.

Table 2.4

Gross Earnings Necessary Before an AFDC Mother  
Can Leave AFDC Without Financial Loss<sup>a</sup>

Number of recipients in family	2	3	4	5	6	7	8	9	10
Pre-work incentive	\$476	546	610	669	718	789	849	915	979
With work incentive	\$688	799	904	1,004	1,103	1,204	1,303	1,407	1,510

<sup>a</sup> The cost of services lost by leaving welfare from the zero grant point is assumed at \$50 per month per family for Medicaid, \$80 per month for one child who requires day care, and an amount for the Food Stamp bonus. These figures are based on the assumption that work expenses amount to 25 percent of gross earnings over the entire earnings range. The figures, therefore, are the same as in Table 2.3 plus  $\frac{4}{3}$  of a constant \$130 (for child care and Medicaid) plus  $\frac{4}{3}$  of a Food Stamp bonus which changes with family size.

The conclusion drawn from Table 2.4, in conjunction with Hausman's study<sup>11</sup> and our studies of Michigan AFDC earnings reported in Chapter 6, is that almost no female-headed AFDC family can work its way off AFDC at zero dollar cost to itself. In addition, the figures in the table show that the probability of closing because the mother obtains employment is expected to fall as family size increases. It is, therefore, unreasonable to expect AFDC mothers to earn their way off welfare unless it is assumed that they like being self-sufficient at a financial cost to themselves.<sup>12</sup> If mothers continue to work their way off welfare (voluntarily leave), it would indicate a strong desire to be self-supporting.

But, as we indicated earlier, it is expected that the higher earnings allowed for AFDC recipients and the high cost of leaving welfare will decrease the number of families leaving welfare when they find jobs. If recipients work while remaining on AFDC, the employment rate generally will rise. This must be accounted for in empirical estimates of the employment effects of the incentive.

#### Incentive to enter the AFDC program

The changes brought about by the AFDC work incentive have significant implications for the low-income population which is not currently a part of the AFDC program; by attempting to make work more attractive to AFDC recipients, the program also has made AFDC more attractive to the working poor.

The financial incentive to enter the AFDC program is equal to the financial cost of leaving AFDC. The magnitude of the financial incentive to enter the AFDC program is, therefore, difficult to

determine for the same reasons that the financial costs of leaving AFDC are difficult to determine. Some poor families which are not on AFDC are eligible for other and varied forms of assistance. The most important assistance in Michigan for these non-AFDC poor families is partially or totally subsidized child care and some Group II Medicaid services. This poses problems for estimating the value of the financial incentive to enter AFDC. Despite these problems, an attempt was made, using certain simplifying assumptions, to derive some rough estimates of the financial incentive to participate in the welfare program. Only single parent female-headed households were chosen for comparison. Also, the assumption was made that the mother's gross earnings are the same whether or not she is in the AFDC program.

If the family was in the AFDC program, it would receive a disposable income equal to the sum of the non-work grant (Table 2.3) plus the financial gain from working (Table 2.1). In addition, it can be assumed that the family receives fifty dollars per month worth of medical expenditures, eighty dollars per month for child care for one child, and a Food Stamp bonus. If the family was not in the AFDC program, it would receive only its gross earnings reduced by work expenses, assumed to be 25 percent of gross earnings. Table 2.5 compares these net spendable income figures for welfare and non-welfare mothers with gross earnings of \$300, \$400, and \$500 per month. The figures in the table show the actual dollar difference between net incomes due to the welfare program.

From the table it is clear that the AFDC program, including the work incentive provision creates a large financial incentive



Table 2.5  
Financial Incentive to Enter the AFDC Program

		Income net of work expenses: on AFDC <sup>a</sup>	Income net of work expenses: not on AFDC	Financial gain from AFDC
Family of two monthly earnings <sup>b</sup>	\$300	\$457 <sup>c</sup>	\$225	\$232
	\$400	490	300	190
Family of four monthly earnings	\$300	557	225	332
	\$400	590	300	290
	\$500	623	375	248
Family of six monthly earnings	\$300	645	225	420
	\$400	678	300	378
	\$500	711	375	336

<sup>a</sup> This includes a Food Stamp bonus of \$25, \$46, and \$56 used in these calculations for the family sizes 2, 4, 6 respectively. These are actual amounts in Michigan as of February 1970. It also includes amounts of \$50 and \$80 for Medicaid and child care.

<sup>b</sup> No comparison is made for earnings of \$500 since a family of two with those earnings is ineligible for AFDC assistance.

<sup>c</sup> This figure is the sum of \$182 welfare grant (from Table 2.3), \$120 work incentive (from Table 2.1), \$80 child care, \$50 Medicaid and \$25 Food Stamp bonus.

for the non-AFDC working poor to attempt to enter AFDC. The incentive to enter welfare is greater for larger families but decreases as earnings increase; however, it is large at all the expected earnings levels shown in the table.

The actual increase in new cases caused by this financial incentive depends not only on the desire to become an AFDC recipient but on the effectiveness of the barriers specifically designed to reduce such movement onto welfare. According to the 1967 Social Security Amendments, eligibility requirements for AFDC do not change because of the work incentive. This means that if a non-welfare family has earnings (net of work expenses) which are larger than the welfare grant the family would receive if it were on AFDC that family is not eligible for AFDC. Once on AFDC, however, the family can earn the much greater amounts in row 3 of Table 2.3 and still remain eligible for AFDC benefits. The work incentive, therefore, provides an incentive to reduce earnings temporarily in order to become a welfare recipient.

Not changing eligibility requirements also means that male-headed households are for the most part precluded from AFDC. Although the AFDC program does include some male-headed families under the provisions for the unemployed (AFDC-UP), eligibility requirements generally place a stringent barrier to entry to AFDC. This can be overcome most effectively if the father leaves.

If the response to this incentive is significant, and if the various eligibility barriers to entry are overcome or circumvented, the result will be a significant increase in the AFDC caseload size. This increase can cause a change in the AFDC employment rate which

should be empirically isolated from the primary effect of the incentive described above. If the barriers to entry cannot be overcome, a serious question of equity is raised. Families on welfare are clearly treated better than those which are not on welfare.<sup>13</sup>

### Summary

Under the work incentive, an employed AFDC mother supplements her AFDC grant by about one-third of her gross earnings. This is expected to have some positive effects on AFDC employment generally, which are called primary effects in this study.

At the same time, the incentive raises the maximum allowable earnings for AFDC mothers. This, together with the high financial cost of voluntarily leaving welfare, is expected to decrease the number of families leaving AFDC for employment related reasons. The decrease in families leaving AFDC, the first of two secondary employment effects of the incentive, should be accounted for in any empirical estimation of the employment effects of the incentive.

Likewise, the other secondary employment effect -- the expected increase in families entering AFDC because of the incentive -- should be accounted for in a study of AFDC employment. The work incentive makes welfare financially more attractive only for those who work. Therefore, the increase in new families coming on AFDC, because of the incentive, should include those who are most likely to work. This will affect AFDC employment rates generally and should be studied for these employment effects.

The work incentive is, therefore, expected to increase AFDC employment rates for three reasons: increased financial return from work, decreased number of families leaving welfare when they find jobs, and

an increased attractiveness of AFDC for non-welfare mothers who want to enter AFDC and work.

#### The Expected Earnings Effect of the Incentive

From the earlier analysis in this chapter it is evident that higher earnings levels are possible for AFDC recipients under the work incentive. Table 2.3 showed that the maximum possible earnings coincident with continued AFDC eligibility could increase by over 70 percent depending on family size. This implies that some mothers, who would have been forced off welfare because of high earnings prior to the work incentive, will now remain on AFDC. This will cause a tendency toward higher average earnings.

Our analysis in the beginning of this chapter demonstrated that it is uncertain whether previously employed AFDC mothers will seek additional employment under the incentive. This uncertainty exists because there are opposing income and substitution effects which preclude the determination of such an a priori conclusion. Further analysis indicated that AFDC mothers who were employed prior to the work incentive will seek employment because of the incentive. We, however, determine how much they will earn.

The work incentive exempts the first forty-eight dollars of monthly earnings from all welfare tax.<sup>14</sup> Therefore, it provides the greatest financial return (per hour worked) for part-time employment. If it does encourage more work for low earnings, the average AFDC earnings will tend to fall. At the same time, higher potential earnings are possible while on AFDC which will tend to increase average AFDC earnings. These opposing forces, plus the expected effect of the incentive to encourage more employed persons to enter AFDC at

unknown earnings levels, leave the net expected effect on earnings in an ambiguous state. Therefore, the changes in earnings caused by the incentive will have to be estimated empirically without the aid of unambiguous theoretical conclusions.

An Analysis of the Expected Benefits  
or Costs of the Incentive  
to the Taxpayers

What implications does the operation of the work incentive have for the non-welfare taxpayer? (Since welfare recipients are likely to pay some form of taxes, the term non-welfare taxpayer is used in preference to taxpayer.) If only the narrow context of financial gain or cost is considered, then any reduction in the welfare grant given to the recipient can be viewed as a gain to the non-welfare taxpayer. In addition, the state and federal income taxes paid by the working recipient can be viewed as a gain to that taxpayer.

On the cost side, if a formerly unemployed AFDC mother obtains a job outside the home, the state -- as we have noted above -- will assume the costs of child care up to established maximum amounts. This, of course, represents an additional cost to the non-welfare taxpayer. These child care costs naturally vary with the number of young children in the family. The non-welfare taxpayer cost is therefore expected to be greater if the AFDC mothers, who work because of the work incentive, head families which are larger and younger.

So in terms of our narrow definition of costs and benefits, there is a net financial benefit to non-welfare taxpayers when an AFDC recipient finds a job if the reduction in the AFDC grant, plus her state and federal income taxes, minus the added child care costs, is positive. The estimated costs or benefits to the non-welfare

taxpayer of AFDC employment for three earnings levels is shown in Table 2.6.

Although the figures in the table are only illustrative, they do give a general idea of the incomes which Michigan AFDC families must earn before the cost of a given AFDC case to the non-welfare taxpayer becomes lower than it would be if the recipient were not working. It is doubtful that many recipients currently on AFDC can obtain employment with earnings at or above the amounts necessary to provide a net gain to the taxpayer. This will be explained further in the empirical section of this paper. Even if a net non-welfare taxpayer gain was found by the above measurement process, it does not necessarily mean that there was an actual gain. A complete estimate of benefits or costs must include the expected effects of the incentive in increasing AFDC case openings and decreasing case closings. This is impossible to estimate a priori; therefore, estimates of benefits or costs for all employed recipients --whether or not they are on AFDC because of the work incentive --is the best that can be done without empirical evidence.

A net short-run financial cost of AFDC employment does not preclude a long-run gain for the non-welfare taxpayer; however, very little is known about the long-run gain. Nevertheless, we cannot exclude the possibility that the effects of higher incomes and employment on AFDC mothers and their children may significantly increase the probability that AFDC children will grow up to become economically self-sufficient.

The added point can be made that an increase in short-run financial cost represents a gain for the AFDC families. It should,

Table 2.6

Non-Welfare Taxpayer Gain from AFDC Employment<sup>a</sup>  
(Monthly Figures)

Earnings	\$100	\$300	\$500
<u>Family with one child receiving child care</u>			
Grant reduction <sup>b</sup>	+22	+105	+182
Estimated State and Federal taxes paid <sup>c</sup>	0	+28	+68
Child care costs (1 child)	-80	-80	0
Taxpayer net gain (or cost if negative)	-58	+53	+250 <sup>d</sup>
<u>Family with two children receiving child care</u>			
Grant reduction	+22	+105	+188
Estimated State and Federal taxes paid	0	0	+44
Child care costs (2 children)	-120	-120	-120
Taxpayer net gain (or cost if negative)	-98	-15	+112
<u>Family with three children receiving child care</u>			
Grant reduction	+22	+105	+188
Estimated State and Federal taxes paid	0	0	+24
Child care costs (3 children)	-160	-160	-160
Taxpayer net gain (or cost if negative)	-138	-55	+52

<sup>a</sup> Grant reductions are calculated using the work expense figure of 25% of gross earnings. Child care costs are estimated from Michigan payment schedule at \$80 for the first child and \$40 for each added child.

<sup>b</sup> Grant reduction equals all gross income minus \$20+1/3 income plus work expenses or for earnings of 300:  $300 - [20 + 1/3(\$300) + \$75] = \$105$ .

<sup>c</sup> Estimates were based on the appropriate State and Federal tax regulations for 1970.

<sup>d</sup> Under our work expense assumptions, a family of two with earnings of \$500 per month is ineligible for AFDC. We thus assume the non-welfare taxpayer net gain to be equal to the basic non-work AFDC grant, shown in Table 2.3 to equal \$182, plus the State and Federal taxes paid by the former client.

therefore, be emphasized here that a higher welfare cost may not be an improper objective because it may obtain a better quality of life for those on welfare.

### Summary

The AFDC recipients receive a net gain from work of thirty dollars plus one-third of earnings. Work expenses are not a consideration to the recipient once she has earned sufficient income to pay any welfare tax. Work expenses, however, are deducted from the welfare tax. Considering this deduction, we find that it takes a very high level of earnings before the welfare tax equals the AFDC grant and the family becomes ineligible for AFDC. This, together with the fact that families which leave welfare lose their AFDC grant and most Medicaid and Food Stamp benefits, suggests that the AFDC caseload will probably increase as a result of the incentive. The improved financial alternatives which the incentive make available only for the AFDC family will also tend to increase the AFDC caseload. This means that we should attempt not only to isolate the total effect of the work incentive on AFDC employment rates but also to judge the employment effects of the increased caseload caused by the incentive.

We drew no conclusions about the effect of the work incentive on average AFDC earnings levels. We demonstrated that more recipients were expected to earn in the low and high earnings categories, but nothing could be said about changes in average earnings. It was shown that high earnings are required before the welfare costs of employed AFDC families can fall if those families receive child care payments.

The foregoing raises some issues for our empirical investigation. We have found two possible ways in which employment may be caused by a



work incentive plan: (1) retaining employed mothers on AFDC when they otherwise would have left; and (2) encouraging working mothers who were not on welfare to enter the AFDC program. In order to determine the effect of the first point, we must study earnings data; for the second, we must study new case openings.

Furthermore, earnings data should be studied to judge the effect of the incentive on increasing existing earnings or stimulating low earnings. Interpreting the meaning of changes in average earnings can be difficult because the incentive's zero welfare tax on low earnings may encourage persons to keep earnings low. At the same time, it encourages high earnings, by keeping working mothers on welfare. The change in average earnings represents the net result of these offsetting forces.

Our empirical analysis of the incentive's effects on welfare costs must include not only earnings and the welfare tax but work expenses and child care expenditures as well.

## FOOTNOTES

<sup>1</sup>Clearly mothers work even when they do not work for wages. The misconception that mothers who are not employed in the wage sector of the economy, are lying around doing nothing, is one of the reasons for the hostility directed toward the AFDC program.

<sup>2</sup>SRS Program Regulation 20-7, Department of Health, Education, and Welfare, Social and Rehabilitation Service, Washington, D.C., January 29, 1969.

<sup>3</sup>Denote earnings by  $Y$ , work expenses by  $E$ , the gross AFDC tax by  $T$ , and the grant reduction by  $R$ . The grant reduction is  $R=T-E$ . The gross tax is 67 percent of all earnings in excess of \$30 monthly; i.e.,  $T=.67(Y-30)$ . If  $B$  represents the client's financial gain, then, as shown above,  $B=Y-R-E$ . Since  $R=T-E$ , this becomes  $B=Y-(T-E)-E=Y-T$ . Since  $T=.67(Y-30)$ , we have  $B=Y-.67(Y-30)=.33Y+20$ . That is, the client's financial gain equals \$20 plus one-third of gross earnings.

<sup>4</sup>The actual cut off point is \$4 per month but assumed to be zero for simplicity.

<sup>5</sup>The results of a regression equation expressing work expenses as a function of earnings is  $\$7.87 + .232Y$  where  $Y$  is gross monthly earnings. The  $R^2 = .464$ , and the standard error of the coefficient of  $Y$  is .007. This equation does not account for differences in work expenses between family sizes which is quite likely due to differences in taxes paid. The reason 25 percent of earnings was used rather than the above equation is because it was felt that the regression has a downward bias for larger earnings where the most accurate estimate of work expenses is required for purposes of calculating the breakeven earning level. The 25 percent figure is simpler to use and gives a conservative estimate of work expenses as a portion of earnings.

<sup>6</sup>The State of Michigan imposed a maximum of \$40 on earnings exempted for work expenses in September, 1970.

<sup>7</sup>The Food Stamp program operated only in selected counties in Michigan. The Food Stamp program was in operation in 45 of 83 Michigan counties by the end of fiscal 1969 and 63 of 83 by the end of 1970. All counties had Medicaid and paid for child care costs up to a maximum amount per child.

<sup>8</sup>For example, Medicaid coverage is classified into two groups. Group I coverage is for persons who receive a money grant under one of the categorical aid programs such as AFDC. Group II coverage is for those persons who for some reason are not eligible for a categorical assistance program but have large enough medical bills to reduce their net income below some predetermined level. A major difference between the groups is the comprehensiveness of the coverage

provided. In-patient hospital services, skilled nursing home services, home health services, emergency treatment, transportation, and physical therapy services are identical for both groups. However, Group I coverage is broader in the areas of outpatient hospital services, physicians' services and pharmaceutical services. In addition, family planning services are available only to Group I members. Thus, while the non-AFDC family may be eligible for Group II benefits, the Group I benefits under AFDC are, potentially at least, of greater value.

<sup>9</sup>The average Medicaid expenditure for AFDC families was about \$50 per month in 1970.

<sup>10</sup>These figures are based on the Michigan cost experiences for day care and Food Stamp bonus for February, 1970.

<sup>11</sup>Leonard Hausman, "Potential for Financial Self-Support Among AFDC and AFDC-UP Recipients," Southern Economic Journal (July, 1969), 60-66.

<sup>12</sup>Over one-third of those having AFDC prior to July, 1969, left because of employment while about 23 percent of those leaving between July, 1969 and July, 1970, left for the same reason. Unless these persons did not know the financial loss which they incurred, this is strong indication of a dislike for AFDC status by many AFDC mothers.

<sup>13</sup>Some of these inequities may be partially reduced by the Family Assistance Plan.

<sup>14</sup>Set the welfare tax equal to zero. Let Y equal earned income, T equal the welfare tax, and E the work expenses of .25Y. Solving,  $Y - [30 + 1/3 (Y - 30) + E] = 0$ , for Y gives the highest gross earnings exempt from all welfare tax or \$48.

### Chapter 3

#### Will the Work Incentive Stimulate AFDC Employment?

##### Application of Economic Theory to Simplified Versions of Public Assistance Programs

#### Brehm-Saving

One of the first applications of the classical work-leisure model to welfare issues was made in 1964 by Brehm and Saving.<sup>1</sup> The subject of the Brehm and Saving article was the demand for a specific welfare program called general assistance payments. General assistance is a noncategorical assistance program, which means that applicants do not have to meet the same eligibility requirements as they would for Aid to the Blind, OASDI, Aid to the Disabled, or AFDC.

The Brehm-Saving paper laid out the theoretical framework for the analysis of the effect of welfare programs in general on the decision to work. The demand for welfare assistance was viewed as "a special case of the demand for leisure. . .," and the authors developed the graphical analysis in Figure 3.1 in this way.

Plot total real income  $Y$  on the vertical axis and leisure  $L$  along the horizontal axis. The budget constraint is  $L_m Y_m$  with the slope of the line given by the constant real wage rate  $W_0$ . With this budget constraint and the set of indifference curves, the individual would maximize his satisfaction by choosing income  $Y_0$  and leisure  $L_0$  with the amount of work effort represented by  $L_0 L_m$ .

Now consider a government guaranteed minimum income level  $Y_b$  and assume the individual may value income from welfare differently



from income derived from work. Let  $k$  be a discount rate which equates the value of a welfare dollar received to a work dollar (where  $k \geq 1$ ). From the recipient's point of view, the new guaranteed income level is  $kY_b$ . The new budget constraint becomes  $L_mBCY_m$  with triangle  $L_mBC$  presenting the set of new alternatives available to the individual. Under the minimum income plan,  $kY_b$  income can be obtained with zero work at point B. Brehm and Saving assume that if the client works the government's income support is reduced on a dollar-for-dollar basis with earnings.<sup>2</sup> Line BC has a slope greater than zero, however, because, in the Brehm-Saving analysis, the welfare dollars lost are to be discounted,  $K < 1$ , by the welfare recipient. The real income of the recipient, therefore, goes up by  $W_0(1 - k)$  for each hour worked or by the added value attached to earnings.

Brehm-Saving conclude the following from their analysis. First, the income maintenance plan cannot injure the welfare of the potential recipient. The potential recipient cannot be worse off under the income maintenance plan because line  $Y_m L_m$  is still attainable while line  $L_mBC$  is a new possibility. Second, the effect of the welfare program on work is zero unless line BC is tangent to a higher indifference curve than attainable without the welfare program. The higher the income floor (higher point B) the more likely a person will increase his consumption of leisure. Third, as welfare payments are discounted a greater amount (smaller  $k$ ), fewer persons will change their work behavior due to the existence of a given welfare program. That is, individuals display a reluctance to becoming a welfare recipient. Fourth, the lower the wage rate  $W_0$ , the greater the probability that a certain level of income maintenance will decrease

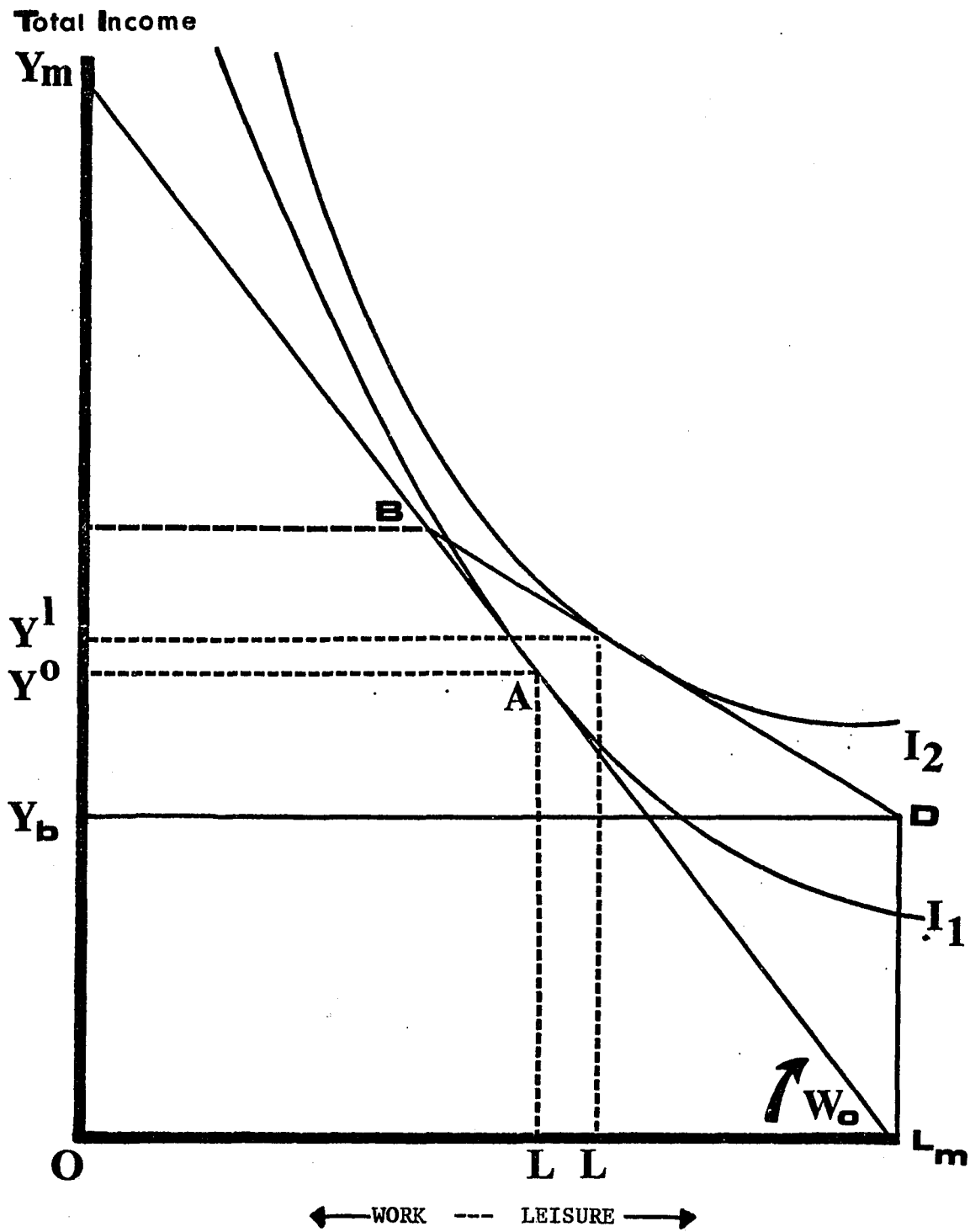
a person's work effort.

The Brehm-Saving analysis did not deal with the question of how different welfare taxes affect net earnings, nor with the institutional factors which affect work effort. It did, however, present the economic rationale behind some straight forward conclusions on the effect of welfare payment on work effort.

Christopher Green and Michael Boskin expanded the application of the work-leisure analysis to cover welfare taxes and institutional factors in separate articles on the subject of negative income taxes.<sup>3</sup> Parts of Green's and Boskin's analyses are almost identical, and we will discuss them by reference to Green's work. Boskin's additional ideas are included separately.

### Green

Green begins his analysis with a method that is similar to Brehm and Saving. Total income is placed on the vertical axis and time on the horizontal axis. The non-welfare budget constraint is  $L_m Y_m$  with the slope of the line given by a constant real wage rate  $W_0$ . He then adds a government subsidy of  $OY_b$ . At zero work, the person is at point D with total income equal to the government subsidy. As the person works, he gains in total money income along BD. The determinates of the slope of BD versus the slope of BC in the Brehm-Saving article indicate one important difference between the articles. The slope of BD is determined in part by the wage rate, in a fashion which is similar to the Brehm-Saving analysis; however, it is also determined by the government's marginal welfare tax on earnings.<sup>4</sup> The slope of BC in the Brehm-Saving paper, on the other hand, was determined by the wage rate and the rate of discount which a welfare recipient



GREEN'S ANALYSIS

Figure 3.2



applies to income received from welfare. Green goes into a more detailed analysis than Brehm-Saving, explicitly discussing the presence of income and substitution effects.

Green calls the income effect of the increased non-work grant the "lump sum income effect." Part of the higher income will be used to purchase leisure, if leisure is a normal good. The increased non-work grant should, therefore, tend to decrease work effort.

Since the welfare programs not only provide a non-work grant but place a welfare tax on earnings as well, the price of leisure for those on welfare falls. The tax, then, is a force leading toward the greater consumption of cheaper leisure. In other words, the welfare tax has a substitution effect which leads to increased consumption of leisure. Thus, both the lump sum income effect and the substitution effect operate to decrease work effort. The welfare tax, though, lowers the net income from any given work effort below what it would be without the tax and therefore has an additional income effect. Green calls this a "pure income effect." The pure income effect has a positive impact on work because, as income falls, there will be a reduced consumption of all normal goods, and therefore, some leisure will be sacrificed in order to increase earnings toward the pre-welfare tax level. This welfare tax could be viewed simply as a reduction in the size of the lump sum income effect.

Green's indifference map analysis presents some additional insights into the decision to work under a welfare program. If the initial (pre-welfare program) equilibrium indifference curve/budget-line tangency point is above point D, and if an indifference curve does not cut DB at all, there will be no change in behavior. This

point is made by Brehm and Saving also. If, however, an indifference curve cuts DB from above, work effort will fall so even those persons with earnings higher than, or even at, point B may reduce their work due to the income supplement. This is important because it shows that a public assistance program with less than a 100 percent tax on earnings will affect the amount of work done by persons even though they have earnings in excess of the assistance level.

Green and Boskin both raise the possibility of an increased work effort due to a welfare program which includes a lump sum welfare grant with less than a 100 percent welfare tax on earnings. Green suggests two reasons why work may increase in a static analysis. First, leisure may be an inferior good. This is reasonable for a person who has a great deal of leisure for which he cannot find an interesting use. Green also suggests that to the extent that people discount welfare payments (Brehm and Saving's  $k$  factor) the lump sum income effect becomes less. In the extreme, he suggests that if only the wage rate is taken into account by the person ( $k$  must = 0):

. . . then the lump sum income effect of a negative income tax plan vanishes and the consumer unit reacts solely to the tax rate part of the plan. In these circumstances, whether the consumer unit increases or decreases its work effort depends on the relative weights of the substitution and "pure" income effects produced by the negative tax rate.<sup>5</sup>

But why there should be any income or substitution effects at all is questionable under Green's assumptions. The amount of  $Y_b$ , the government aid, is the only thing affected by the welfare tax rate in real world welfare programs (see Chapter 2). The welfare tax is applied against the government grant and not earnings directly. Since under the  $k = 0$  assumption the value of  $Y_b$  is discounted to zero, a change in the tax which affects only  $Y_b$  should have zero effect on

work effort. In this extreme situation, where the loss or gain of income from the government means nothing and the wage rate  $W_0$  is the only thing that matters in the work decision, we simply have a situation where a person does not care about welfare payments; so naturally, his work decision would be based on the wage rate only. Green is correct that as  $k$  falls the lump sum income effect falls. But in addition, because the welfare tax is applied against the welfare grant, the pure income effect falls as  $k$  falls because the value of the income gained or lost decreases. Similarly, the substitution effect, caused by changes in the effective wage rates via the welfare tax, also decreases. This implies that work incentives which affect grant sizes are less likely to change hours of employment for those persons on welfare who have a stronger dislike of welfare dollars. Conversely, it will have the greatest potential effect on those persons who like welfare. This underscores the earlier statement in Chapter 2 that the incentive may encourage people to work but that they may remain on welfare regardless. The above analysis suggests that those who may be affected most by the incentive may also be those most interested in remaining on welfare.

### Boskin

Boskin's treatment of the traditional economic analysis of income maintenance programs and work effort is similar to Green's. His real contribution to the theoretical problems of work effort occurs when he suggests three reasons why conclusions drawn from traditional theory may be erroneous and that income maintenance may, in fact, increase rather than decrease work effort.

Boskin calls the first reason the "productivity effect." If at least part of the increased income from an income maintenance plan is used for improved health (i.e., better diets), this may increase productivity. If productivity increases, it will be reflected in an increased wage rate and a new budget constraint. This increased wage rate increases the cost of leisure and, therefore, generates a substitution effect favoring work. This new force may be sufficiently large to lead to a net increase in work effort.

Boskin calls the second reason for a possible increase in total work effort because of a negative tax the "restricted activity effect." A person may work less than he wants to because of poor health; i.e., his actual preference set is biased in favor of leisure. If this is the case, the added income from the negative tax may improve health and remove this restriction (or alter his preference set away from leisure). The net effect may, once again, lead to an increased work effort.

Boskin calls the final reason the "investment effect." This effect will not be felt for a long period of time because it depends on the investment in poor children and its eventual effect on their work effort. The argument is made by Boskin that in time the investment will produce a higher total work effort.

Boskin's work raises the possibility that a work incentive may lead to more work, then more income, then even more work. The question is: When measuring the effect of the incentive is one measuring the initial effect on work or that effect compounded by the secondary effects on health, etc.? While these secondary effects are likely to be unambiguously positively correlated with work, their impact in the

short run (one year in our study) is not likely to be great and is assumed to be insignificant.

### Summary

The theoretical work done on welfare payments and work effort has almost exclusively used the traditional work-leisure analysis approach. The conclusions drawn from static theory indicate that a welfare program made up of a lump sum non-work grant and a positive marginal welfare tax on earnings is likely to decrease the total work effort. According to the theory, the work effort is inversely related to the non-work welfare grant and the welfare tax, and is directly related to the rate of discount on welfare payments. None of these articles specifically deals with the AFDC program nor the expected effects of financial work incentives alone, both of which are the subject of the following sections of this study.

### Budget Constraints for AFDC Mothers Before and After the Work Incentive

The preference sets of the AFDC mothers are unknown and must be considered as given. An analysis of work behavior can then be made using differing assumptions about these assumed preference sets. One important variable remains; we must explain how welfare programs affect employment through changing the shape of the relevant budget lines. The shape of the budget lines facing an AFDC mother before and after the work incentive was stated algebraically in Chapter 2. In this section of the thesis the relevant budget lines are presented graphically and used to: (1) show the expected effects of the work incentive with various assumed preference sets; (2) show precisely how the work incentive affects the budget constraints; (3) contrast

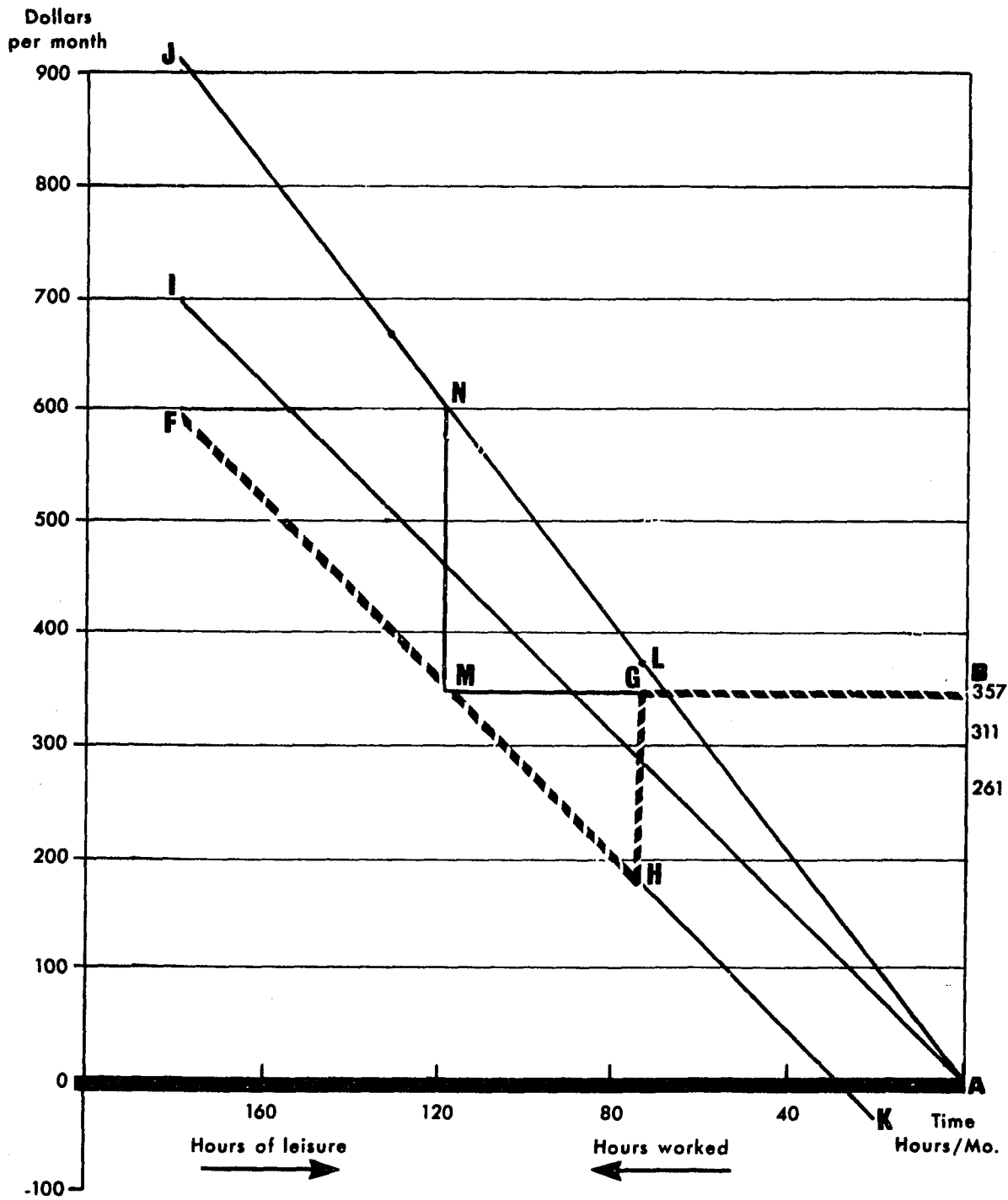
the actual budget constraints under the AFDC program with those assumed in the theoretical discussions of Brehm-Saving, Green, and Boskin, which we have discussed above.

Figures 3.3 and 3.4 compare the AFDC family's budget constraints with and without the work incentive. Income in dollars per month is plotted along the vertical axis. Time in hours per month is plotted along the horizontal axis. At point A, an individual consumes all available time in leisure.<sup>6</sup> Moving left from point A increases hours of work for wages.

In order to make a numerical comparison of the budget constraints, a certain family size has to be selected. We will select a family of four as most representative of the Michigan AFDC population as a whole. The AFDC grant in Michigan for a family of four was estimated in Table 2.3 at \$261 per month between July, 1969 and July, 1970. In addition, we estimate \$50 per month for Medicaid expenditures<sup>7</sup> and \$46 per month for an available Food Stamp bonus.<sup>8</sup> The total AFDC grant plus income-in-kind represented by AB in both figures 3.3 and 3.4 is, therefore, an estimated \$357 per month.

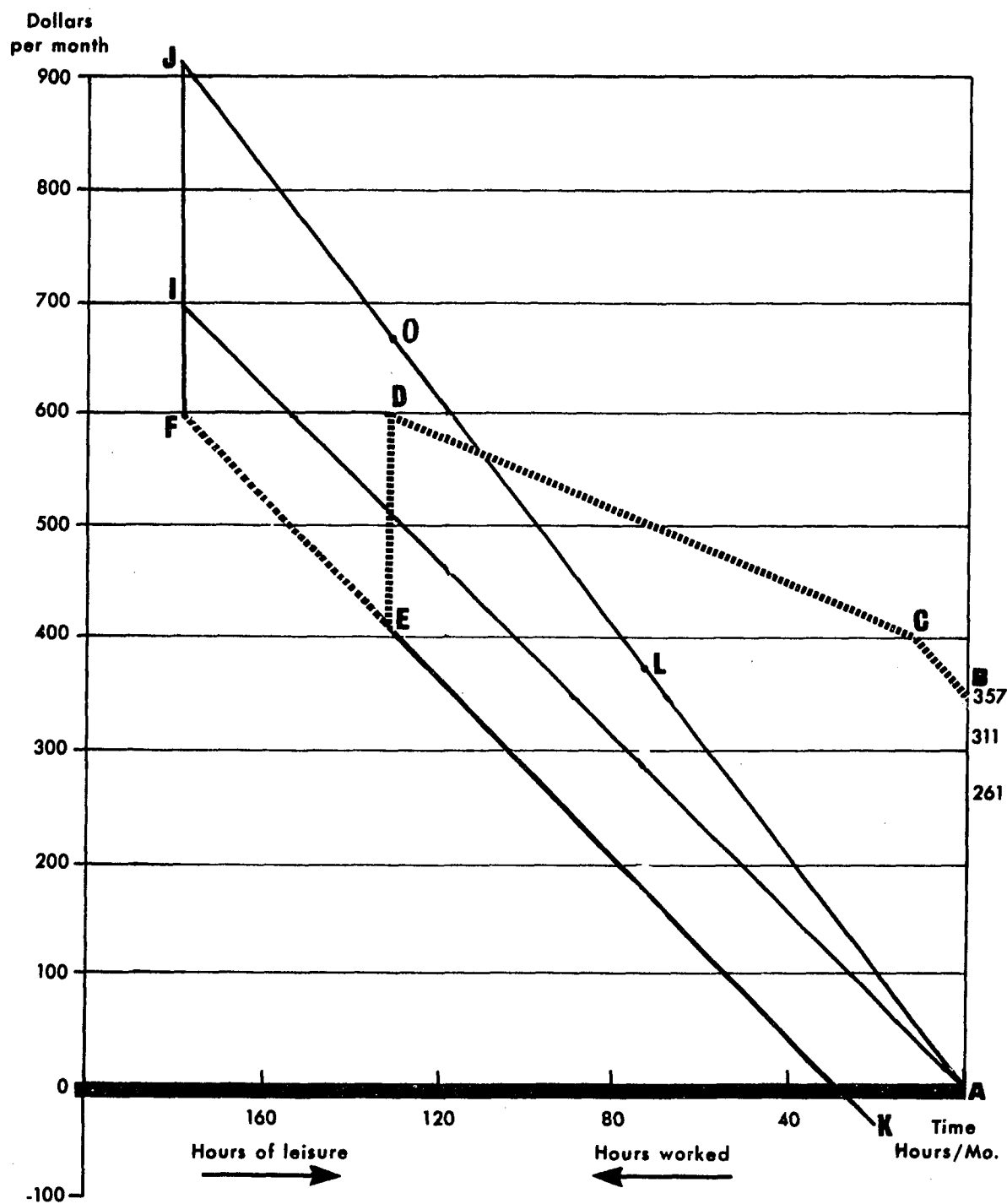
Line AJ, in both figures, represents an assumed gross earnings line at a wage rate of \$5 per hour. This is why: Figure 3.4 demonstrates that under the incentive the mother will have to work over forty hours per week to earn the \$904 per month necessary to leave AFDC without losing money by doing so. (See Table 2.4 for comparable figures for other family sizes.) At lower hourly earnings rates, the number of hours of work for wages required to leave welfare without financial loss becomes unrealistically high.

Line AI in both figures 3.3 and 3.4 shows the income net of work



BUDGET CONSTRAINT FOR AN AFDC AND NON-AFDC  
FAMILY BEFORE THE WORK INCENTIVE

Figure 3.3



BUDGET CONSTRAINTS FOR AN AFDC AND NON-AFDC  
FAMILY UNDER THE WORK INCENTIVE

Figure 3.4



expenses for a non-welfare recipient. Based on evidence presented in Chapter 2, we assume work expenses to be 25 percent of gross earnings. Income net of work expenses and child care costs is shown by KF. Line KF is drawn with an assumed child care cost of eighty dollars per month for one child, irrespective of the number of hours worked. The invariance of child care costs is not completely realistic but is simple and does not distort the analysis at the points of interest. Line KF, therefore, represents a reasonable estimate of the budget constraint, representing income net of all work expenses for a non-welfare family of four which must pay for the care of one child. This idea of income net of work expenses is particularly important in our comparative analysis of employment of mothers who are either on or off welfare. A non-working welfare mother's grant is totally available for the family (ignoring the problems with income-in-kind like Medicaid) without any work expenses. Therefore, in order to be relevant, a comparison of the income of employed mothers to that of unemployed mothers should be made on the basis of income net of all employment expenses (assuming no utility is gained from income spent on expenses).

The budget constraint representing income net of expenses for the AFDC family prior to the work incentive is shown in Figure 3.3 as ABGHF. This line shows that as long as the mother is on AFDC income net of work expenses does not change as earnings rise. A budget constraint drawn under the assumption that positive utility is gained from work expenses would not be flat over BG but would slope upward reflecting the twenty dollars plus most actual work expenses that the mother keeps under AFDC regulations. The flat line used by

many (See Brehm-Saving, Green and Boskin earlier in this chapter) to show the 100 percent welfare tax is, therefore, only a special case where the income spent on work expenses gives no utility to the family.

At point G of Figure 3.3 the family is forced off AFDC and the net income of the family falls to H (the "notch effect"). GH reflects the loss of Medicaid, Food Stamp bonus, and the child care costs<sup>9</sup>, all of which the mother would assume in full upon leaving AFDC. The family is forced off welfare at a gross earnings of \$375 (point L along AJ) which is the earnings level at which the AFDC grant is zero. (See Table 2.3 for comparable figures for other family sizes.) Notice that the mother would now have a net income budget constraint along HF. In order to have net income equal to that of the welfare mother, the non-welfare mother must be at point M along HF with a gross earnings of \$610 (see Table 2.4) at point N along AJ. This shows that, without the work incentive, the working non-welfare mother's earnings must be very high before the net income for her family is equal to that of the non-working AFDC mother. This emphasizes an idea which we proposed in Chapter 2: The high rate of mothers leaving AFDC to take employment is despite a probable financial loss. Therefore, either the recipients were ignorant of the loss or they had a strong desire to be self-supporting.

Line ABCDEF, in Figure 3.4, is the available income budget constraint for an AFDC family with the work incentive.<sup>10</sup> Segment BC has the same slope as AI, reflecting zero welfare tax and work expenses of 25 percent of gross earnings. The zero welfare tax is explained by the fact that the first \$48 of earnings (the vertical

distance between B and C plus an amount equal to actual work expenses) is exempt from welfare tax because of the mechanics of the incentive plan.<sup>11</sup> Between C and D the gain in net income is equal to one-third the added gross earnings. As we explained in Chapter 2, work expenses are absorbed by a reduction in the gross welfare tax and therefore do not affect the slope of CD. It is important to note that CD would be steeper if work expenses were assumed to yield positive utility.

At point D there is a "notch effect." For gross earnings over \$669, at point O along AJ (see Table 2.3 for figures for other family sizes), the AFDC family loses its AFDC eligibility. It loses an amount equal to DE which is the amount of Medicaid, Food Stamp bonus, and child care costs. The loss is identical to the non-work incentive case; therefore, DE in Figure 3.4 is the same height as GH in Figure 3.3. By the same process we used in the non-work incentive case we can determine Point J along AJ. Thus, the net income of an AFDC mother earning \$669 per month is equal to that of a non-AFDC mother earning \$904 per month, or nearly \$11,000 per year. This implies that an AFDC mother, who knows her alternatives and has no objection to accepting welfare, is not expected to leave AFDC voluntarily unless she attains an income of \$11,000 per year. (This ignores the possibility raised earlier in reference to Green's work that even higher earnings than this may be required to get mothers to want to leave welfare depending on the shape of the indifference curve which may be tangent to AJ above J but also intersect DC from above.)

## Traditional Economic Analysis Applied to the Michigan AFDC Program

### General analysis

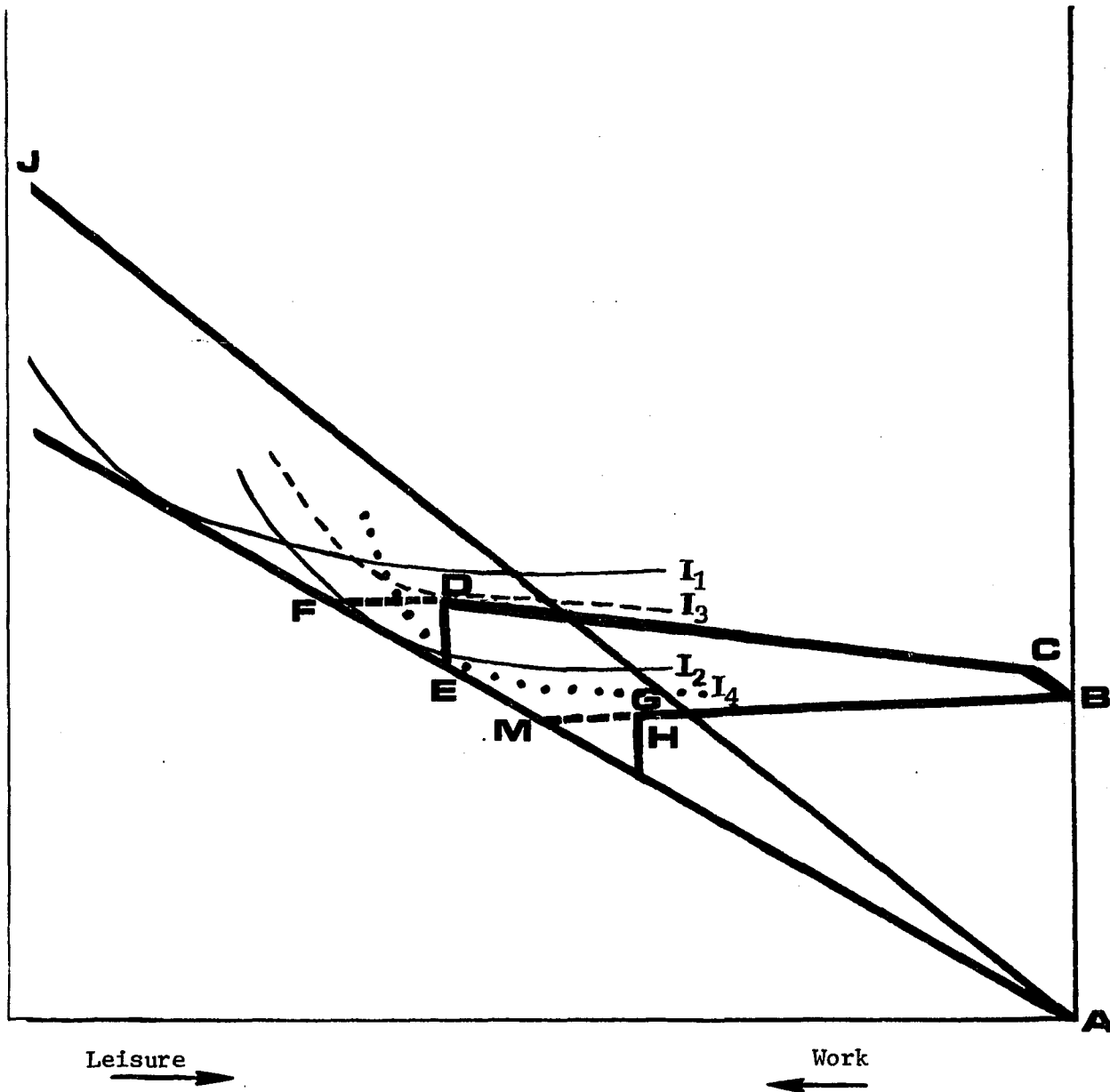
We are now ready to apply indifference curve analysis to a specific welfare program, the AFDC work incentive. In Figure 3.5 we have a simplified version of figures 3.3 and 3.4 which can be used for the analysis.

The work incentive reduces the marginal welfare tax rate and shifts the relevant budget line up from AFGHF to ABCDEF. The reaction to the incentive depends on the tangency of the indifference curve prior to the work incentive as well as its slope.

### The work incentive's effect on persons not on AFDC

If the highest attainable indifference curve everywhere lies above ABCDEF( $I_1$ ) the work incentive will not affect the work of that non-welfare person. For other persons who were not on welfare prior to the incentive but whose indifference curves do intersect the new budget line, the work effort will decline. For those earning between F and E( $I_2$ ), there will be a definite decline in hours worked (if they can get on AFDC) unless they are satiated with leisure. This is so because the same income can be obtained with no more work than at point D. Further decline in hours worked is possible. For those earning above F before the incentive and with a higher indifference curve from the same preference set that is tangent to DC ( $I_3$ ), work will decline to between D and zero depending on the shape of the indifference curve. The steeper the curve, the more the work effort will be reduced toward C. This merely shows that -- for a given consumption of leisure -- persons who place a higher marginal utility on leisure

Dollars  
per month



PRESENTATION OF SIMPLIFIED BUDGET CONSTRAINTS

Figure 3.5

versus income will decrease their work effort further.

With a given indifference map, the steeper DC (the less the welfare tax) the further any new equilibrium tangency point along DC moves toward D. While a steeper DC is expected to increase the number of persons who seek welfare, these new entrants to welfare are more likely to earn near the maximum coincident with continued AFDC eligibility (toward D). This makes sense because the price of leisure in terms of income is raised as the welfare tax rate is lowered. With a given indifference map, the point of tangency to DC is more likely to be at a point on the indifference curve where the  $MU_L/MU_Y$  is greater or the indifference curve more steep; in other words, where less leisure is consumed.

Those earning between M and E ( $I_4$ ) will definitely become AFDC recipients under the work incentive if they have no bias against welfare payments or institutional restrictions barring entry to the welfare program. Those earning between H and M would move onto welfare even without the incentive. There is, however, one specific barrier to becoming an AFDC recipient. Under the provisions of the incentive, persons who are not on AFDC but earn between M and E are not eligible for AFDC. Persons in such a position must somehow reduce their net earnings below M in order to be eligible for AFDC. Once on AFDC, the recipient has the option of remaining on welfare and earning between M and E. Once these people are on welfare, however, they will work less than before because of the work incentive; this is because they gain in income and face cheaper leisure. Therefore, the income and substitution effects caused by the work incentive operate in the same direction.

In general, for persons not on welfare prior to the work incentive, that incentive will either leave the number of hours worked unchanged or it will reduce the hours worked. This means that the AFDC caseload will probably increase; we will examine the effects of this on AFDC employment rates in Chapter 5.

The work incentive's effect on persons on AFDC

What can we expect to happen to hours worked of those who were on AFDC prior to the institution of the work incentive? The highest attainable indifference curve tangency point would be along BG as drawn in Figure 3.5. The only reasons for their not having been at Point B would be that they were satiated with leisure or had discounted the welfare dollar. Tangency along a flat BG would imply a necessarily flat or upward bending indifference curve (satiation of leisure). In this case, a work incentive will cause both an income effect and a substitution effect which will favor work. Those persons satiated with leisure will therefore work more because of the work incentive.

If, as Brehm and Saving show, BG has a positive slope because of a discount of welfare dollars or if, as suggested earlier, persons gain positive utility from income used for work expenses, tangency along a positively sloped BG is possible without their being satiated with leisure. Unfortunately, the effect of the work incentive on these persons is ambiguous. The incentive causes their income to increase but increases the price of leisure as well; therefore, it is not known a priori what the effect of the incentive will be on the employment and earnings of AFDC mothers who worked under a 100 percent welfare tax because they discounted the value of welfare dollars.

For those welfare recipients who did not work at all before the incentive (tangency of highest attainable indifference curve at Point B), there is an unambiguous effect toward more employment. Since income for the unemployed AFDC mother does not change with the incentive, the only effect is the substitution effect caused by a drop in the income price of leisure. This is extremely important since most AFDC recipients fall into this category, and this implies a priori that the work incentive will tend to increase AFDC employment. We will try to measure this increase in Chapter 5.

### Summary

The conclusions of analyses, such as those of Brehm-Saving, Green, and Boskin, apply less to a work incentive and more to the effects of adjustments in welfare grant levels. The analyses do not apply directly to the AFDC program; this has to be treated separately.

Neither the previous literature nor our added analysis of the AFDC program are adequate to fully explain the expected effect of the incentive. Yet, we draw two important theoretical conclusions for empirical study: (1) since most AFDC recipients are not employed, it is likely that the work incentive will increase AFDC employment; and (2) the welfare caseload is likely to increase because of the incentive.



## FOOTNOTES

<sup>1</sup>C. T. Brehm and T. R. Saving, "The Demand for General Assistance payments," American Economic Review, December 1964, pp. 1002 - 1018.

<sup>2</sup>The mechanics of the 100 percent tax were described in Chapter 2. The actual tax is 100 percent of earnings minus work expenses.

<sup>3</sup>Christopher Green, "Negative Taxes and Monetary Incentives to Work: The Static Theory," Journal of Human Resources, III (Summer 1968), 280 - 288; Michael Jay Boskin, "The Negative Income Tax and The Supply of Work Effort," National Tax Journal, December 1967, pp. 353 - 367.

<sup>4</sup>The welfare tax can be defined as  $\frac{dG}{dY} = -k$  with G being the welfare payment and Y being earnings. The sign of the derivative is negative and ranges from zero to one. As in the Brehm-Saving analysis this ignores work expenses.

<sup>5</sup>Green, op. cit., p. 288.

<sup>6</sup>The use of the term leisure does not mean no work, but rather no work for wages. This is important in the analysis of AFDC employment.

<sup>7</sup>The size of this imputed value is not important for the analysis but does present an interesting problem. If the budget constraint includes all income available for consumption, including income in kind, the question is how do we handle this income in kind? Can we assume that a dollar as income in kind is the same to the welfare recipient as a dollar in money? If it is not, the budget constraint shifts outward by less than the dollar value of income in kind as determined in the market place. In this sense, the budget constraint is equal to the dollar income plus the dollar value the person attaches to the income in kind. We assume that the value of Medicaid is equal to the average monthly family Medicaid expenditure or about \$50 per month in Michigan in 1970.

<sup>8</sup>The same point as made in footnote 7 applies here. The fact that only about 37 percent of the eligible AFDC families in Michigan took advantage of food stamps in the July, 1969 through July, 1970 period indicates that persons may discount the value of that program.

<sup>9</sup>Some of these benefits are available to non-AFDC families with low incomes or very high medical expenses. In Michigan between July, 1969 and July, 1970, at earnings high enough to force a family from AFDC, it is unlikely that the family would receive any welfare benefits once it left AFDC.

<sup>10</sup>This does not consider earnings of the children which are exempt from welfare tax in most cases. It also assumes no income from sources other than earnings or AFDC grant. Income from child support reduces the grant on a dollar for dollar basis and has the effect of decreasing

the total potential earnings of the AFDC family.

<sup>11</sup> Applying the analysis of Chapter 2, set the welfare tax equal to zero. Let  $Y$  equal earned income,  $T$  equal the welfare tax, and  $E$  the work expenses of  $.25Y$ . Solving,  $Y - [30 + 1/3 (Y - 30) + E] = 0$ , for  $Y$  gives the highest gross earnings exempt from all welfare tax or \$48.

## Chapter 4

### The Empirical Issues and Data Selection

In this chapter, we will examine in detail problems involved in isolating the effect of the work incentive, attempts to solve these problems, and the sample selection and data for the study as well as some of the existing data problems.

Our analysis in Chapter 2 and Chapter 3 suggests that the work incentive will, other things being equal, lead to a higher rate of AFDC employment. Determining whether or not employment rates have increased is a relatively easy empirical problem. But other things are not equal; over the year of this study AFDC employment rates may have changed because of factors other than the work incentive. Our problem is in isolating the effect of the incentive on rates of employment.

In order to do this, we will first of all specify the more important variables which affect AFDC employment. These have been, in part, obtained from earlier work cited in Chapter 1.<sup>1</sup> We will then try to eliminate some of the variables through sample selection, by restricting the scope of the problem, and by making simplifying assumptions. The employment effects of the remaining variables will be discussed in Chapter 5 and Chapter 6. In this manner, we intend to isolate the work incentive to see whether it alone has caused changes in AFDC earnings and employment.

### Variables Affecting Market Work

The employed portion of the AFDC caseload can be considered a function of three categories of variables: (1) demographic characteristics of those on welfare, (2) welfare program variables, (3) outside factors.

(1) Demographic characteristics often used in labor supply studies include: (a) sex, (b) family status [one or two parents], (c) family size, (d) health, (e) job skills, (f) education, (g) race, (h) age of the mother, (i) age of the children, (j) outside income [alimony, etc.], (k) previous work history. Ideally we could isolate the effect of the work incentive on persons with varying characteristics. However, the theoretical as well as empirical problems, which arise in trying to isolate the effect of each, are very great and place demands on data which far exceed those available for this thesis.

A much less ambitious task is to take the initial demographic composition of the AFDC caseload as given and then to account for the employment effects of changes in that composition. We will not estimate how the incentive would have affected AFDC employment differently had the initial caseload been different.

Changes in the demographic composition of the caseload occur primarily because of different types of families leaving and entering AFDC. The normally high rate of AFDC turnover provides an opportunity for substantial change in the caseload composition. Between July, 1969 and July, 1970 (the period of this study), an estimated 41,500 families entered the AFDC program in Michigan, while 16,500 families left the program.<sup>2</sup> Because the normal turnover is so high, and because the AFDC employment rate is likely to vary with the type of persons on welfare, that turnover must be considered as a potentially important source of change in AFDC .

employment. This presents problems in measurement which complicate the task of empirically isolating the effect of the work incentive.

How turnover in AFDC cases affects welfare employment rates can be estimated by looking at the employment status of those who have recently become welfare recipients and those leaving welfare. Similarly, the effect of turnover can be partially isolated by following a certain group of mothers over a length of time. Both approaches are used in the empirical work presented in Chapter 5 and Chapter 6; we assume that this strategy will eliminate the most important source of change in the demographic composition of the caseload other than those caused by features of the welfare program and outside factors.

(2) The work incentive is an example of one of several ways in which policy makers affect work decisions through changes in the welfare program. Other program variables include: (a) the size of the welfare grant, (b) teaching AFDC mothers to understand the economic alternatives they face, (c) work training [the WIN program in particular], (d) Medicaid, (e) child care provisions, (f) transportation provisions. As in the case of the demographic variables we discussed above, we will account for the employment effects of changes in program variables. We expect program changes to affect employment in one of two ways: first, through changes in the program variables during the period of study (changes in the size of the welfare grants or welfare tax rates and so forth); second, through possible lagged effects of programs which have changed in the past. For example, the health level of the AFDC caseload may improve for a period of time after a medical care plan is introduced.

As in the above case of demographic variables, the absolute effect of the program variables on the rates of employment at any single

point in time will not be measured. The task we must accomplish after this simplification is to isolate the employment effects of program changes from those of the work incentive. Because program changes can affect turnover as well as directly alter employment of those on welfare, we must account for both possibilities. We take up this subject in Chapter 5 and Chapter 6 where, given the data limitations, we isolate the effects of the incentive on employment and earnings.

(3) Variables which can be classified as external to the welfare program (outside factors) also can have an important effect on the employment of persons on AFDC. Outside factors include: (a) labor market conditions, (b) work attitudes of non-welfare recipients, (c) attitudes toward welfare, (d) knowledge of non-welfare recipients about their economic alternatives. As in the case of program variables, changes in outside factors can cause changes in the employment of AFDC caseload by altering turnover and also directly altering employment of those already on AFDC. Both of these possibilities are considered in chapters 5 and 6. The employment effects of changes in outside factors will be discussed in a manner similar to the demographic and program variables. No attempt is made to determine how the incentive would have affected employment differently with different initial levels of outside factors.

The foregoing discussion outlines the variables we considered important to explaining AFDC employment. We simplified the problem of accounting for all these, and thereby isolating the effect of the incentive, in two ways: (1) by limiting the study to the effects of changes in these variables, and (2) accounting for many of the changes in the variables through studying the employment rates of cases entering and leaving AFDC. We will isolate the incentive's effect through two

additional steps. First, we will eliminate some variables by narrowing our focus and through sample selection. A rationale for this procedure follows next in this chapter. Second, we will identify the expected employment effects of changes in all variables not accounted for or eliminated through the simplification and focusing of the problem. This is done in Chapter 5 and Chapter 6.

#### Narrowing the Empirical Problem through Sample Selection

The empirical focus was narrowed by: (1) restricting the study to the one year period after the start of the incentive; (2) restricting the study to July, 1969 and July, 1970 only; and (3) studying female-headed families only. In addition to narrowing the focus, we felt that we could improve the study by selecting data stratified by geographic areas. The rationale for these is explained next.

(1) One of the most difficult empirical problems faced in this study was an inability to study the causes of changes in AFDC employment over a number of years prior to the work incentive. This caused us to restrict the study to a one year period after the incentive.

A one year interval for the study -- July, 1969 to July, 1970 -- was selected reluctantly. Ideally, we would also analyze AFDC employment data prior to the start of the work incentive on July, 1969, in order to fully interpret changes which occurred subsequent to it. But a search for such data yielded little, with the exception of surveys conducted by the State of Michigan as part of a nationwide study by the U. S. Department of Health, Education and Welfare (HEW). These surveys were made in November, 1961; December, 1967; and May, 1969. Unfortunately, they do not give a concrete picture of the pattern of

AFDC employment rates prior to the incentive. This is because employment rates in Michigan generally behave in a cyclical fashion and tend to be higher in late summer and mid-winter. The HEW studies were made in different months and are likely to reflect these cyclical differences; none were made in July and therefore do not provide good baseline information. In addition, general employment conditions and AFDC program variables were quite different at the time of the surveys than they were during the period under the work incentive. We feel, therefore, that no useful AFDC employment data exist before July, 1969 to provide baseline information.

The absence of such data implies that to ascertain the effects of the incentive it would be better to study as long an interval as possible after the start of the incentive. We, therefore, originally intended to obtain data for at least a year and a half after the start of the incentive. Unfortunately, the real world does not usually remain static long enough to satisfy the desires of the researcher, and this instance was no exception.

In September, 1970, major program changes were implemented in Michigan; a ceiling of forty dollars per month was placed on work expenses exempted under the work incentive mechanism, and AFDC grants were raised substantially. This had the effect of substantially reducing the financial rewards of employment for the AFDC recipient and raising the non-work income from AFDC. A reduction in the response of recipients to the work incentive would be expected for both of these reasons. At about the same time, a three-month General Motors strike began; this had a dramatic impact on Michigan's welfare caseload and general employment conditions. So it is likely that this strike influenced AFDC



employment as well.

Therefore, the employment data which can be used to analyze the effect of the work incentive do not, in our judgment, extend beyond October, 1970. Furthermore, because data on Michigan employment patterns show that typically there are differences between employment levels in July and the months of September and October,<sup>3</sup> and since AFDC employment data are not available for the months of September and October, 1969, we decided that interpreting AFDC data for September and October, 1970 would be so difficult that it was not useful. We will, therefore, confine the study of the work incentive to the period of July, 1969, to July, 1970.

(2) At the start of this study, AFDC employment data were available for July and October, 1969 as well as January, April, and July, 1970. October, 1969 and April, 1970 data were erased by error by the Computer Division of the Michigan Department of Social Services. Of the three remaining months, we considered July, 1969 and July, 1970 to be the most critical.

January, 1970 data are not reported because we are convinced, from historical data on Michigan employment rates, that labor market conditions in December are different than those in July. Because January, 1970 data reflect mainly labor conditions of December, 1969 and because there were no AFDC data available for any January prior to the work incentive, we felt that the problems of interpreting the January, 1970 data were too great.

(3) A further narrowing of the focus of this study involved selecting female-headed families only. Most of the AFDC recipients in Michigan are, in fact, single-parent families headed by women. However,

it was estimated that in July, 1970 there were a considerable number of male-headed AFDC-UP and stepfather cases in Michigan.<sup>4</sup> Under the presumption that the factors affecting employment in male-headed households are in many ways distinct from those of the majority of AFDC recipients, it was decided to simplify the study of AFDC employment and the work incentive by considering female-headed households only. There are obvious advantages to this. For example, if the male-headed AFDC component is eliminated, we can more effectively focus on the kinds of jobs which the remaining recipients would be likely to take. Therefore, labor market data can be more easily interpreted for possible impact on welfare employment. Looking only at female-heads eliminates another problem. During the period studied, AFDC-UP recipients (male family heads) were forced off AFDC if they worked more than sixty-four hours in any two-week period. This policy was followed irrespective of income and without regard to the work incentive. Earnings and employment of male headed families would, therefore, have to be interpreted apart from those of female-headed families, which did not have restrictions on hours of employment.

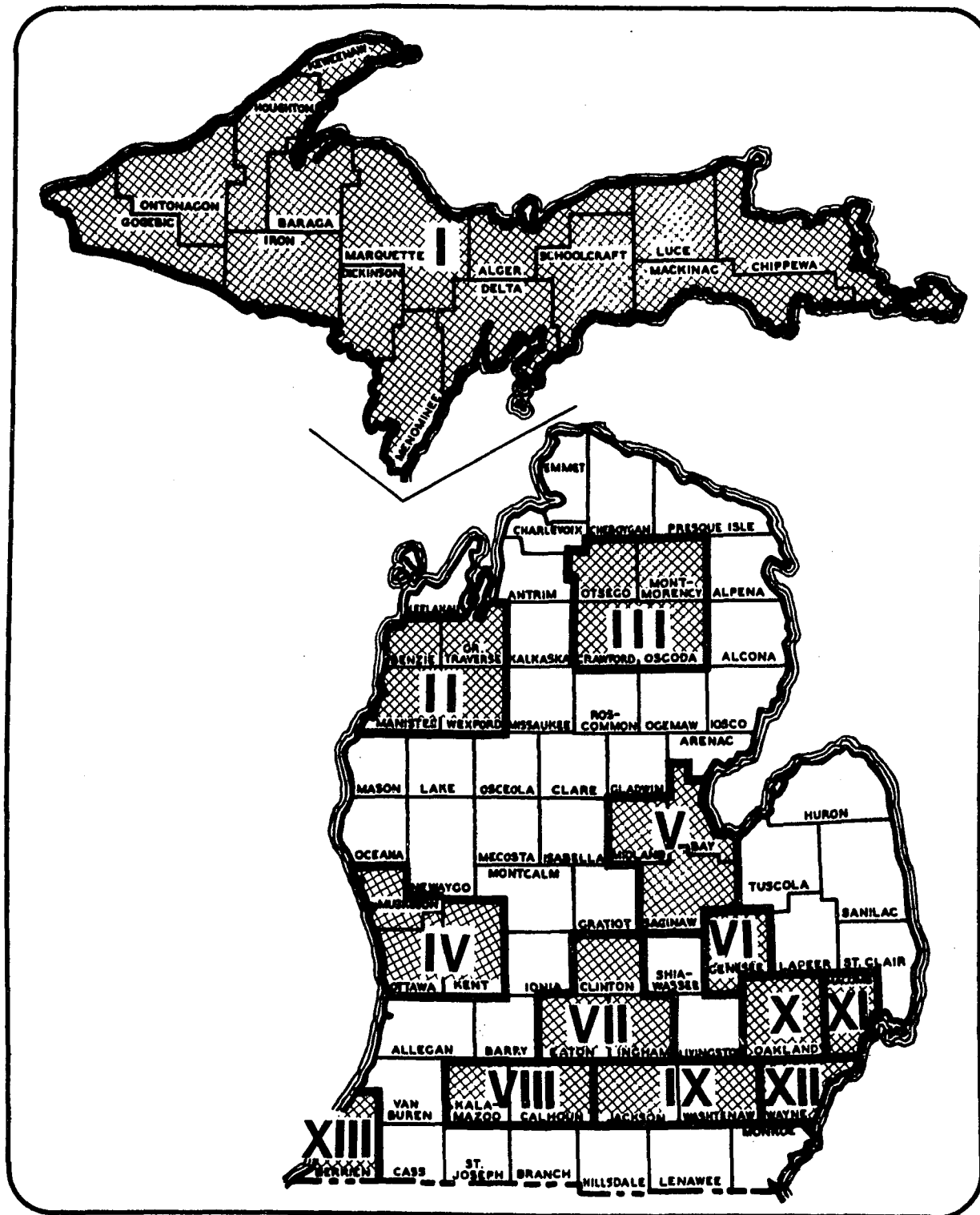
In addition to focusing our study, we improved our capacity to isolate the effect of the incentive on employment by selecting recipients in a way that allowed an examination of geographic differences in employment and caseload. Data samples were stratified by geographic area on the rationale that location was particularly important. We felt that geographic areas would provide a proxy for urban-rural differences, differences in labor markets, possible differences in work attitudes, and differences in the demographic composition of the caseloads.

### Description of the Data

One longitudinal (followed through time) and two cross section sets of data on active female-headed AFDC families in Michigan were drawn from the State of Michigan's Department of Social Services AFDC payroll tapes for each of the thirteen geographic areas shown in Figure 4.1. That is, one cross section sample was drawn in July, 1969, and those cases were followed to July, 1970 in order to provide the longitudinal data. Additionally, a completely new cross section sample was drawn in July, 1970 in order to measure the employment for the caseload as a whole at that time. In each area, a different sampling fraction (portion of cases sampled) was used in order to keep the total sample size relatively small (because of the limitations of the data processing equipment) while retaining a representative sample from each. In areas II and III, for example, 100 percent of the cases were selected since the caseloads were so small. But, in Area XII (Wayne County), which includes Detroit, a four percent sample was drawn since Wayne County possesses almost half of the state's total AFDC caseload.

The geographic areas were selected using several criteria. First, every major metropolitan area of the state was selected. Second, three predominately rural areas of the state were selected to represent rural Michigan. Third, Berrien County was selected because a Michigan Department of Social Services employment project was in progress; that study could provide data on AFDC families more detailed than that available from payroll records.

The geographic areas selected fall into three broad categories. areas I-III and XIII are primarily rural and poor, areas X-XII (including Detroit) are heavily urban with a lower proportion of families with



Locations of the 13 geographic sample areas

Figure 4.1

low incomes, and areas IV-IX form an intermediate group. In total, 89 percent of the entire July, 1970 AFDC caseload falls into one of thirteen areas from which the sample was drawn. The remaining 11 percent reside in areas similar to the rural areas which were included in the sample. (Additional information about the geographic dispersion of the Michigan population and AFDC caseload is presented in Appendix A of this thesis.)

The cross section sample sizes were 4,660 families for July, 1969 and 7,656 for July, 1970. The sampling fractions and sizes for each area are shown in Appendix B of this thesis. The longitudinal sample, which began with 4,660 families in July, 1969, contained 3,831 in July, 1970. The remaining 829 families were lost as active cases because they moved from a sample area or left AFDC.

In addition to the two cross section and one longitudinal samples of active AFDC cases, the same data were obtained for families which entered or left AFDC during the thirty days prior to July, 1970; 100 percent of these openings and closings were selected from all geographic areas, except the heavily populated Area XII where a 20 percent sample was taken. These cases were selected to determine how the active caseload was changed by the flow of people through AFDC and to consider the possible effects of the work incentive on changes in the AFDC caseload.

#### Data Problems

The primary data problem encountered in this study was a lack of information on some of the variables. This problem arises because the principal data source was the records used for AFDC payments.

These data were collected by a state agency for administrative rather than research purposes. The following are two examples of the kind of data missing from administrative records.

As we have already mentioned, there are no comparable earnings and employment data for the AFDC recipients prior to the July, 1969, starting date of the work incentive. Although state and federal welfare authorities knew of the incentives over a year in advance, no baseline data were obtained for any future research.

As a second example, gaps exist in the data which were recorded for each AFDC family during the work incentive program. Experience with Michigan data shows that much information was lost because it was not essential to the administration of welfare checks. The process of removing the family's opening date and replacing it with the date of last, previous, administrative action (such as correcting the spelling of a name) may appear reasonable for administrative purposes, but it eliminates information on the length of time AFDC mothers stay on welfare. This kind of procedure eliminated data on some demographic factors which influence the response of the caseload to the work incentive.

The failure of administrators to recognize the need for more research data has led to other important information gaps. While education, health, and work history are important factors in explaining the probable changes in work patterns because of the incentive, this information has not been crucial to the administration of the income maintenance program and is therefore not kept in any central location. These data can only be obtained through special surveys or from individual case records in each county.<sup>5</sup>

## FOOTNOTES

<sup>1</sup>Jacob Mincer, "Labor Force Participation of Married Women," Aspects of Labor Economics, A Conference of the Universities' National Bureau Committee for Economic Research (Princeton: Princeton Press, 1962); Glen G. Cain, Married Women in the Labor Force, An Economic Analysis (Chicago: University of Chicago Press, 1966); G. S. Becker, "A Theory of the Allocation of Time," Economic Journal, LXXV (September, 1965), 493-517; H. G. Lewis, "Hours of Work and Hours of Leisure," Industrial Relations Research Association Proceedings #9 (1956); William G. Bowen and T. Aldrich Finegan, The Economics of Labor Force Participation (Princeton: Princeton University Press, 1969); Marvin Kosters, "Income and Substitution Parameters in a Family Labor Supply Model," Unpublished Doctoral dissertation, University of Chicago, 1966.

<sup>2</sup>Estimated from adjusted data reported by the State of Michigan Department of Social Services Statistical Reports Section to coincide with the actual increase in the AFDC caseload.

<sup>3</sup>Data obtained from the Michigan Employment Security Commission, Division of Statistics.

<sup>4</sup>AFDC-UP is the part of AFDC designed for unemployed two parent families. We know that there were roughly 3,600 AFDC-UP cases in Michigan in July, 1970. The stepfather cases arise because stepfathers are not financially responsible for stepchildren of a later marriage unless they are legally adopted. This means that stepchildren in a home where the stepfather has a high income may still be eligible for some AFDC benefits. There is no record of the fact that the case is a stepfather case. Through a crude process of elimination based on the knowledge that stepfather cases have 2 or more adults in the case, we estimate that about 5,500 of the non AFDC-UP cases are headed by stepfathers (in July, 1970).

<sup>5</sup>There is an AFDC employment study headed by Vern Smith currently in progress in Michigan's Department of Social Services which utilizes detailed case record data for two counties. From that study it was learned that it takes an impractically long time to gather the data for a statewide study.

## Chapter 5

### Employment Effect of the Work Incentive

#### Introduction

Data are presented in this chapter in an attempt to isolate the effect of the work incentive on AFDC employment rates. We begin with a brief comment about employment and earnings for the caseload as a whole (male and female-headed families), which is presented as empirical support for the use of only two data cross sections for the more detailed analysis in this study.

We then present evidence that AFDC employment rates increased in all of the thirteen geographic areas we have chosen for this study. The remainder of the chapter is comprised of explanations of the probable employment effect of the variables listed in Chapter 4. In this way, we attempt to isolate the effect of the incentive.

The variables from Chapter 4 are presented in this sequence:

1. Outside factors, including two measures of changes in labor market conditions and possible changes in the attitudes of those on AFDC toward work
2. The effects of turnover on AFDC employment rates, including new cases and changes in the numbers of families leaving welfare caused by the incentive
3. Welfare program variables, such as increased AFDC grant sizes and the training aspects of the Work Incentive Program (WIN).



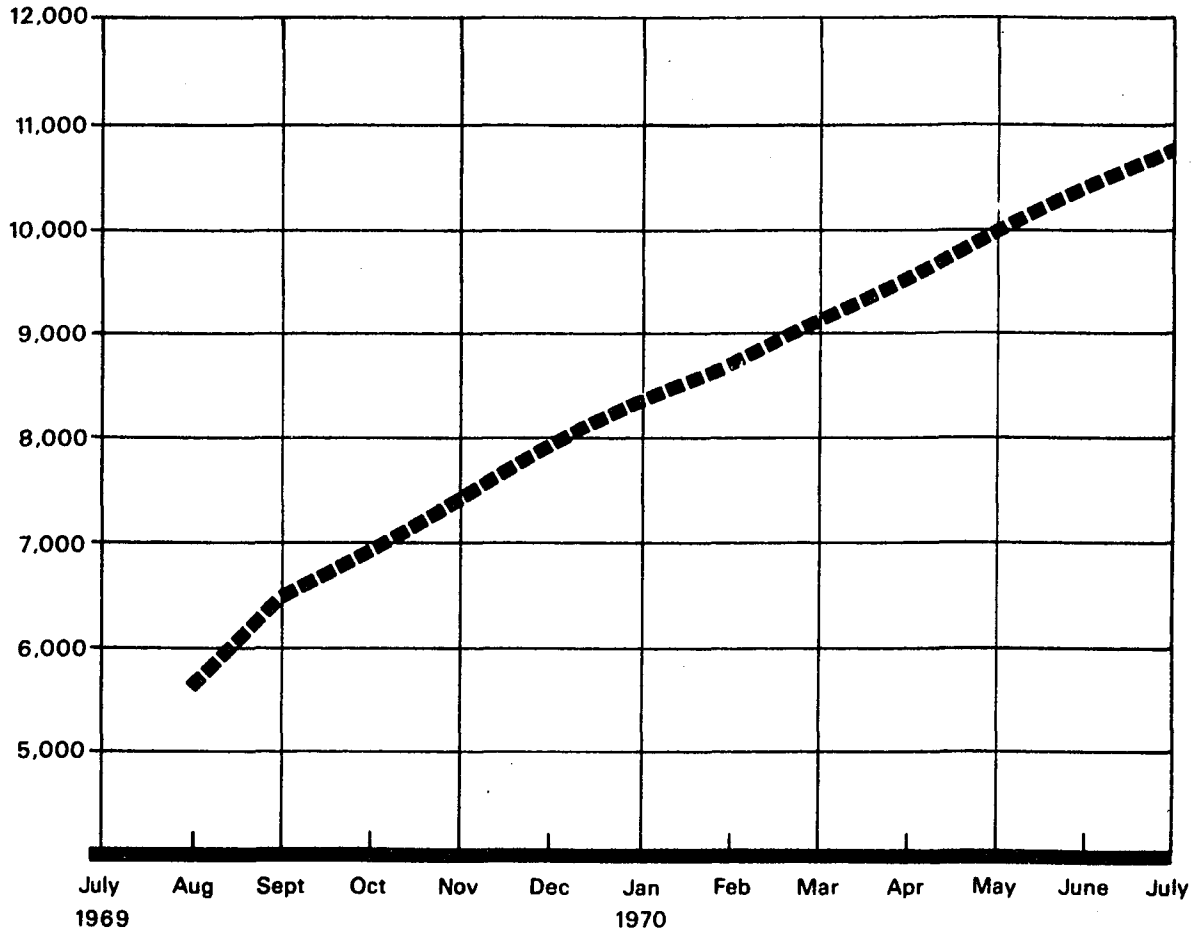
The remainder of the chapter provides a list of variables which have probably limited the effect of the work incentive. Poor health, lack of an ideal level of child care, and evidence of a severe lack of knowledge on the part of welfare recipients about the work provisions are all presented as limiting factors.

#### Employment and Earnings Changes for the Total AFDC Caseload

The first step in the empirical investigation was to plot AFDC employment for the total caseload (male-heads as well as female-heads) for each month of the first year under the work incentive. We do this in order to judge whether changes in AFDC employment fluctuate in a way that will cause problems in interpreting earnings and employment data taken only from July, 1969 (the first month of the incentive) and July, 1970 (one year later). If there are wide fluctuations, it would be more important to study employment data for intervening periods as well as for the one year interval.

Figure 5.1 shows that, between August, 1969 and July, 1970, the number of AFDC families with earned incomes almost doubled, rising steadily from 5,657 to 10,743. Part of this increase can, of course, be attributed to an increase in the AFDC caseload over the same time period. However, not only has the total number employed increased, but as shown in Figure 5.2, the employed cases as a percent of the total caseload have also increased. Between August, 1969 and July, 1970, the employed portion of the AFDC caseload increased from 10.0 to 13.5 percent, with most of the increase occurring within the first five months of the start of the work incentive provision.

Number of AFDC  
Cases with earnings

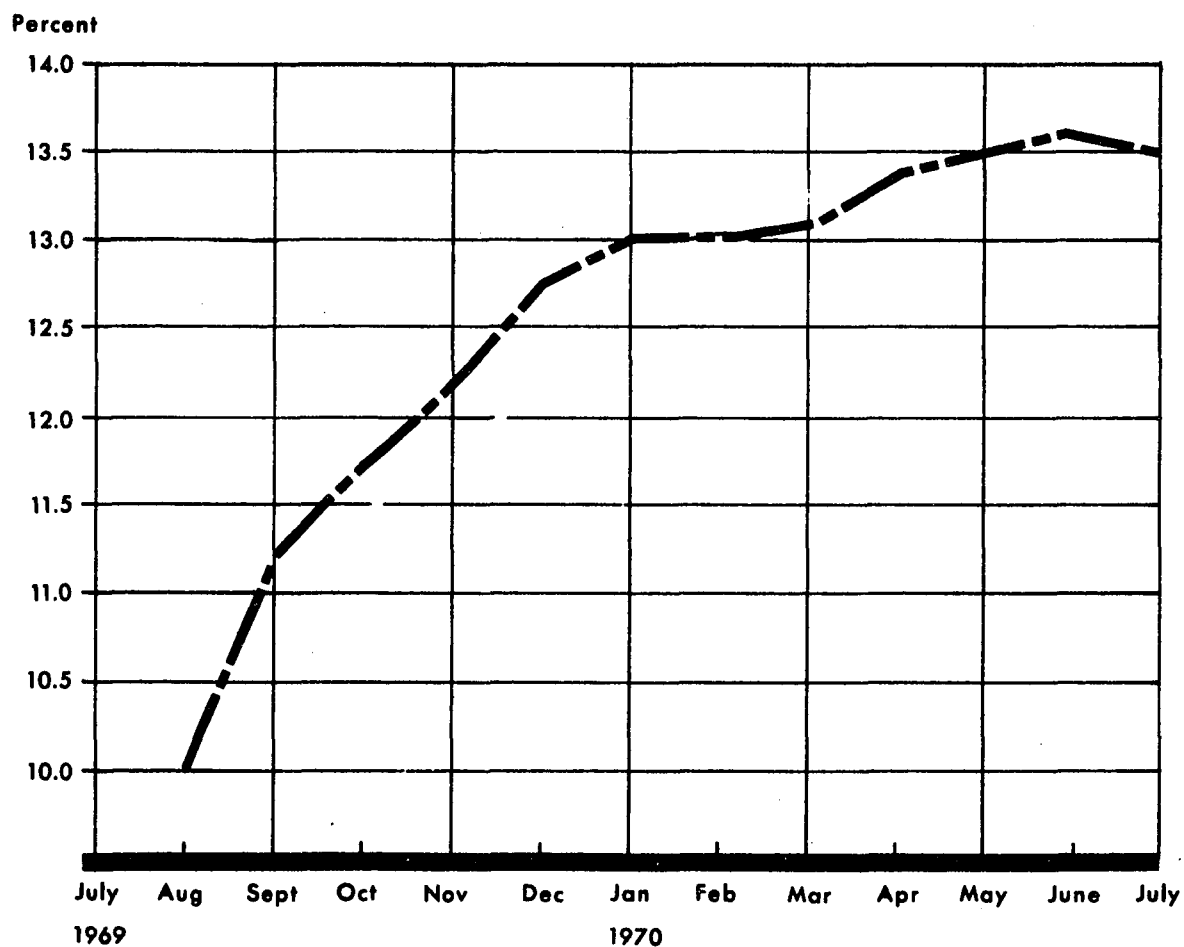


## Number of AFDC cases with earnings August 1969<sup>a</sup> to July 1970

<sup>a</sup> July 1969 data are not available

Source: Monthly reports AF - 001, State of Michigan, Department of Social Services

Figure 5.1



**Percent of the total Michigan AFDC caseload with earned income for the time period August 1969<sup>a</sup> to July 1970.**

<sup>a</sup> July 1969 data not available

Source : Statistical Reports Sections, Michigan Department of Social Services, Division of Research and Program Analysis

Figure 5.2

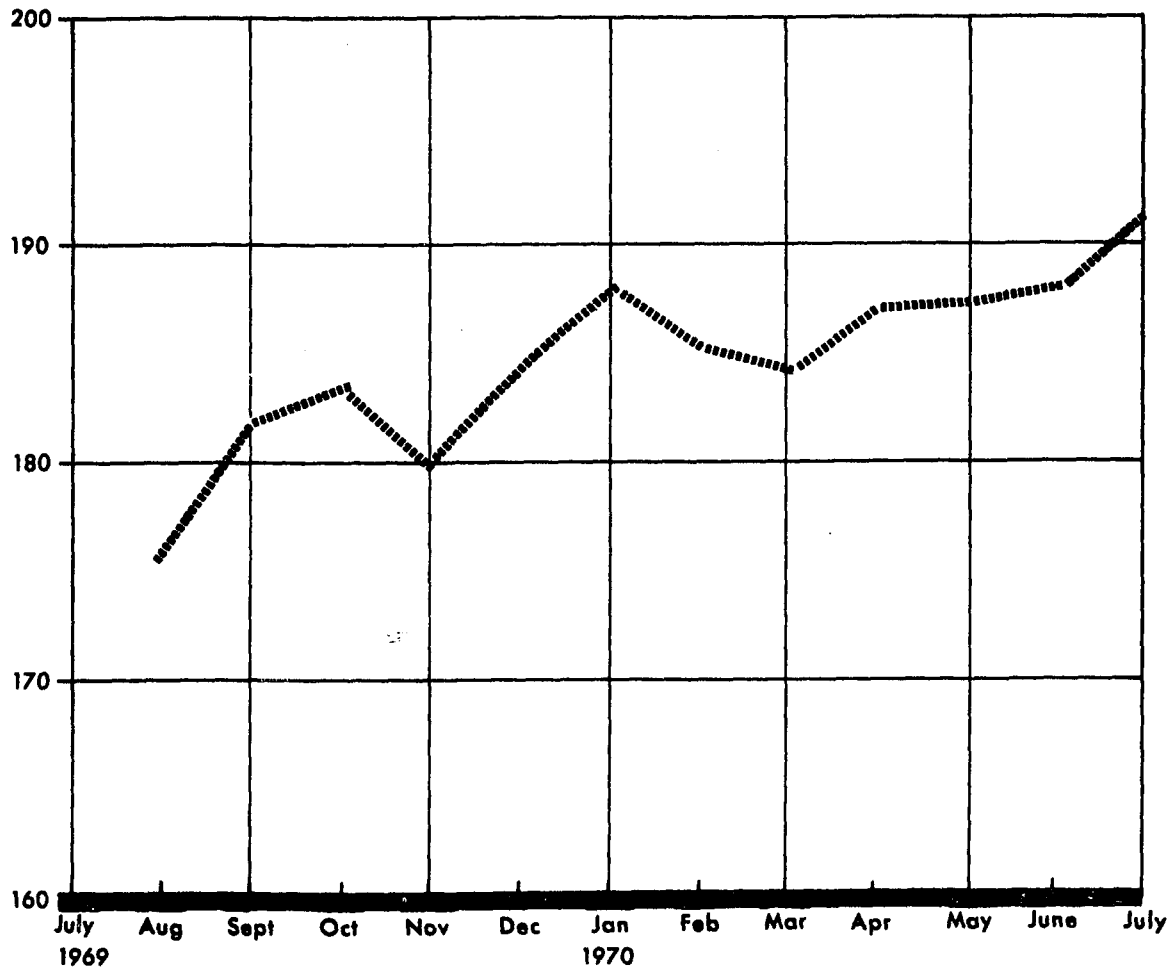
Figure 5.3 shows that average earnings of the employed AFDC cases increased over the same time period from about \$176 to \$191 per month.

The comparatively steady increase in AFDC employment and earnings for the entire AFDC caseload suggests that it is reasonable to examine data at only the end points in time -- July, 1969 and July, 1970.

Female AFDC Employment Rates by Geographic Area  
in July, 1969 and July, 1970

As indicated in Chapter 4, we selected two cross section samples and one longitudinal sample of the female-headed active AFDC families. One cross section sample was drawn for July, 1969 and another one for July, 1970; both were stratified over thirteen different geographic areas of the state. The longitudinal sample included all the July, 1969 sample families. We included both those families which were on AFDC in July, 1970 or which had left the welfare program between July, 1969 and July, 1970. The areas were selected to present as complete a picture as possible of the different geographic environments to which the AFDC program is applied. Four predominately rural areas were selected to represent rural Michigan -- Group 1 (areas I, II, III, and XIII), and three areas were selected to cover the heavily urban Detroit area -- Group 3 (areas X, XI, and XII). The remaining six areas -- Group 2 -- are partly urban and partly rural but include every remaining major metropolitan area of the state. The July, 1969 sample was intended to capture the AFDC employment situation immediately prior to the implementation of the work incentive; the July, 1970 sample was used to determine the situation one year later. Additionally, we made a cross section sample of closed and newly-opened welfare families for the

Average monthly  
gross earnings



**Average monthly gross earnings for employed AFDC cases  
between August 1969<sup>a</sup> and July 1970**

<sup>a</sup> July 1969 data not available

Source: Monthly report AF - 001, State of Michigan, Department of Social Services.

Figure 5.3

thirty day period prior to July, 1970. The combination of samples, therefore, provides a means of monitoring changes in female employment and earnings by geographic area as well as a means of measuring the differences in employment due to changes in the caseload itself.

Table 5.1 shows the AFDC employment rates by geographic area for the cross sections of cases in July, 1969 and July, 1970. The table reveals an increase in employment over the year in all thirteen areas despite probable differences in (1) labor market conditions, and (2) the kinds of families on AFDC. Although increases in percent employed varied greatly by area, all increases are statistically significant. A one-tailed test of significance based on differences in means was applied to changes in employment rates in each area (using a normal approximation to the binomial distribution). Areas II and III were not included since they were 100 percent samples. Of the remaining eleven areas, the difference in employment percentages is significant at the 95 percent confidence level in nine cases and at the 90 percent level in the remaining areas (areas VII and XIII).

The largest increase in the percent employed-- 9.6 to 19.5 percent-- occurred in Area I, the Upper Peninsula. This is an area in Group 1 which is rural, white, poor, has a low educational level relative to Group 2 and Group 3, and is generally considered to be economically depressed. The second largest increase-- 12.6 percent to 21.4 percent-- occurred in Area VIII which is in the intermediate Group 2. The third largest increase-- 6.5 percent to 14.1 percent-- occurred in Area X which is in Group 3. This group is the most urban, has the highest portion of nonwhites, a higher portion of manufacturing jobs, higher income, and higher educational levels than the other areas. The

Table 5.1

Percent of the Caseload Employed in July 1969 and  
July 1970 by Geographic Area

Geographic areas <sup>a</sup>	Percent of the caseload employed		Change in percent employed
	July 1969	July 1970	
I	9.6	19.5	+9.9
II      Group 1	18.2	21.9	+3.7
III	20.0	25.0	+5.0
IV	8.9	15.5	+6.6
V	8.6	14.2	+5.6
VI      Group 2	7.4	10.7	+3.3
VII	10.6	14.3	+3.7
VIII	12.6	21.4	+8.8
IX	11.5	17.1	+5.6
X	6.5	14.1	+7.6
XI      Group 3	9.3	14.6	+5.3
XII	4.7	9.1	+4.4
XIII    Group 1	11.1	14.9	+3.8

<sup>a</sup> These areas are grouped in terms of the geographic categorization outlined in Chapter 4 and Appendix A.

Source: Data obtained from 2 cross section samples of records of the Michigan Department of Social Services.

three geographic areas with the greatest increases in the percent of the AFDC caseload employed, therefore, range between the demographic extremes in the sample.

The three areas showing the smallest increases in the percent employed are II (in Group I) and VI and VII (both in the intermediate group). Once again, there is no clear pattern of difference in increases in percent employed over the groups of geographic areas.

So, there has been a statistically significant increase in the AFDC employment rates in every one of a widely divergent group of areas in Michigan. If this change could be attributed to the work incentive alone, our task would be nearly finished. But we speculate that any one, or combination, of the factors described in Chapter 4 may have caused such an increase. Now, we must try to isolate the effect of the work incentive in the most feasible way.

In this discussion of changes in employment rates, we will attempt to explain the increased employment rates through the variables found in Chapter 4. By isolating such effects and by showing that they are not likely to have caused the higher employment, we will try to determine the effect of the incentive itself.

#### Changes in AFDC Employment and the Labor Markets

Differences in labor markets can have an impact on the measured effects of the work incentive. By looking at various geographic areas and comparing the changes in earning and employment for each, together with differences in labor market conditions, we can ascertain whether the increase in AFDC employment can be explained through improved labor market conditions. The desired measurement of labor market conditions



is nonexistent. What we need is a measure of the excess supply or demand for specific types of labor and specific types of jobs -- that is, the portion of the entire labor market applicable to AFDC mothers. Only two measures are available: (1) the crude figure of measured unemployment, which has the shortcoming of including all persons in the labor force as well as all kinds of jobs, and (2) the estimate of the total number of females employed in jobs which are the kind AFDC mothers are likely to fill. Neither labor market measure is satisfactory, but because labor market conditions appear to be so important to AFDC employment, we present both measures in order to judge the effect of employment conditions on the change in AFDC employment rates.

Unemployment rates as a measure of  
labor market conditions

For all AFDC employment

Table 5.2 shows unemployment rates for June, 1969 and June, 1970 for eleven sample areas and AFDC employment rates for July, 1969 and July, 1970 for all thirteen sample areas. The unemployment rates for June were selected in preference to those of July on the premise that, because of a time lag, recorded changes in the labor market in June will register on the AFDC sample data in July. Unemployment rates are available for only eleven of the geographic areas under study. The unemployment rates, in most cases, are for SMSA's and include either the entire geographic area from which the samples were drawn or even larger areas. For example, unemployment data for the Detroit SMSA is used to represent the labor market conditions for all of Oakland, Macomb, and Wayne counties -- areas X, XI, and XII.

Table 5.2  
Unemployment Rates and AFDC Employment Rate  
by Geographic Area

Geographic areas	Unemp. rate June 1969	AFDC emp. rate July 1969	Unemp. rate June 1970	AFDC emp. rate July 1970
I	3.0	9.6	9.9	19.5
II	NA	NA	NA	NA
III	NA	NA	NA	NA
IV	6.4	8.9	8.5	15.5
V	5.7	8.6	8.1	14.2
VI	4.3	7.4	6.8	10.7
VII	3.3	10.6	6.0	14.3
VIII	4.5	12.6	6.7	21.4
IX	3.6	11.5	6.6	17.1
X	4.8	6.5	7.5	14.1
XI	4.8	9.3	7.5	14.6
XII	4.8	4.7	7.5	9.1
XIII	3.8	11.1	6.3	14.9

Source: Unemployment rates obtained from the appropriate issues of Michigan Manpower Review.

In all of the eleven areas for which there are unemployment data, there was a substantial increase in the rate of unemployment from June, 1969 to June, 1970. So, the AFDC employment rate increased in every area despite the increased unemployment between 1969 and 1970.

At any given point in time, however, there appears to be little relation between unemployment rates and AFDC employment across geographic areas. For example, the Upper Peninsula -- Area I -- had the highest area unemployment rate in both June, 1969 and June, 1970. Yet, it had the fifth highest AFDC employment rate in 1969; had the largest increase in AFDC rate of employment between July, 1969 and July, 1970; and was ranked second by AFDC rate of employment in 1970. Areas VII, IX, and XIII had the lowest unemployment rates in 1969 and were three of the four areas with the highest AFDC employment rates. The same areas still had the lowest rate of unemployment in 1970; however, only one of the areas ranked among the top four by AFDC employment rates.

In addition to comparing rates of AFDC employment to unemployment rates at a point in time, an attempt was made to relate the relative and absolute changes in unemployment rates to changes in the AFDC employment picture. This was without much success. It appears that, while the theoretical reasons for believing that the relative demand for labor will affect AFDC employment are too strong to reject the idea completely, the evidence from this study does not support this hypothesis. However, the fact remains that AFDC employment increased in spite of increased unemployment rates. Labor market conditions measured by unemployment rates cannot, therefore, explain the increase in AFDC employment.

### For full-time AFDC employment

One reason that unemployment rates cannot explain AFDC employment is that much AFDC employment is part-time casual labor. Demand for persons in these jobs may not change in the same way as the demand for full-time employees. In order to see the effects of unemployment rates on full-time AFDC employment, the unemployment rates were compared to the portions of the AFDC caseload earning over \$199 per month.

Because data on hours worked by AFDC mothers were not available, some proxy for full-time employment was needed. Earnings level was the best proxy available. It was assumed that anyone earning over \$199 per month was working full time (more than 35 hours per week). The rationale for the assumption is as follows: at the State of Michigan's minimum wage (as of July 1, 1970) of \$1.45 per hour,<sup>1</sup> full-time earnings are greater than \$199 per month. This means that those full-time employed mothers who are not included under the above definition of full time are those employed in very small firms and a few exempted industries. This may be an important source of error in the estimate of full-time employment because many mothers are employed in the domestic service industry and may be employed full time but earn under \$199. For this reason, the number defined as full-time employed by the \$199 earnings proxy tends to understate the actual number.

On the other hand, it is likely that there are some part-time employed mothers who earn more than \$199. For this reason, the number of mothers counted as employed full time tends to be overstated. Hopefully, the above two errors are offsetting. With this as an assumption, the number earning over \$199 per month becomes a reasonable estimate of the number of full-time employed.

A comparison of unemployment rates with full-time employment rates (i.e. full time as a percent of the total employed AFDC caseload in the area) is shown in Table 5.3. Area VII has the lowest rate of unemployment and, by far, the highest portion of the employed AFDC mothers working full time in 1969. Area I has the highest unemployment and, by far, the lowest portion of AFDC full-time employment in 1969. While this relationship does not hold perfectly for the rest of the geographic areas, high unemployment rates appear to be generally associated with a low estimated portion of full-time employment in 1969. In 1970, areas VII, IX, and XIII have the lowest unemployment rates and the highest portions of full-time employed cases. At the same time, Area I clearly had the highest unemployment rate and was the area with the lowest portion of full-time AFDC employment.

It appears that unemployment rates were related inversely to full-time AFDC employment, or at least to our earnings proxy. Because unemployment rates increased between June, 1969 and June, 1970 in all geographic areas, we see again that even if unemployment rates are related to full-time employment -- as Table 5.3 suggests -- this reinforces our earlier proposition that AFDC employment rates appear to have increased in spite of, not because of, labor market conditions.

Female employment in selected occupations  
as a measure of labor market conditions

For all AFDC employment

Questions about the appropriateness of using unemployment rates as a measure of labor market conditions led to an attempt to explain the increased AFDC employment with a different estimate of labor market conditions. A better measure of changes in the labor markets between

Table 5.3

Unemployment Rates and Estimated Full-Time AFDC Employment: By Geographic Area<sup>a</sup>

Geographic Areas	1969			1970		
	Unemployment rate	Estimated full-time AFDC employment		Unemployment rate	Estimated full-time AFDC employment	
		As percent of employed AFDC caseload	As percent of entire AFDC caseload		As percent of employed AFDC caseload	As percent of entire AFDC caseload
I	8.0	17.7	1.7	9.9	23.6	4.6
II	NA	NA	NA	NA	NA	NA
III	NA	NA	NA	NA	NA	NA
IV	6.4	29.3	2.6	8.5	38.2	5.9
V	5.7	22.1	2.0	8.1	37.8	5.4
VI	4.3	38.2	2.8	6.8	44.9	4.8
VII	3.3	50.1	5.3	6.0	49.3	7.1
VIII	4.5	34.3	4.3	6.7	43.1	9.2
IX	3.6	35.5	4.1	6.6	55.5	9.5
X	4.8	42.8	2.8	7.5	45.9	6.5
XI	4.8	37.0	3.5	7.5	33.3	4.9
XII	4.8	32.3	1.5	7.5	35.5	3.3
XIII	3.8	26.6	3.0	6.3	47.5	7.1

<sup>a</sup> Unemployment rates are for June while employment rates are for July (of the given year).Source: Unemployment rates obtained from Michigan Manpower Review.

June, 1969 and June, 1970 might be the change in the total number of females employed in those jobs which are likely to be filled by AFDC mothers (pertinent jobs). This, however, has the obvious disadvantage of not accounting for changes in the quantity of labor supplied but indicating only the number of persons actually employed.

Table 5.4 shows the estimates of the changes in pertinent female employment in eleven of the thirteen geographic areas where data were available. (The estimation procedure is described in Appendix C.)

A slightly different picture of the area labor markets is obtained from the data in Table 5.4. While unemployment increased in every area, the estimated total numbers of females employed in pertinent jobs increased in five of the eleven areas. According to this measure, labor market conditions improved in five of the areas studied. But changes in total pertinent female employment do not appear to be positively related to changes in the AFDC employment rates. The areas with the largest increase in females employed in the pertinent jobs are generally not those with the largest increase in AFDC employment rates. Areas VII and XIII, for example, have the largest increase in pertinent female employment as a portion of the total female work force as of July, 1970. Those two areas, however, are among three areas with the lowest increase in the AFDC employment rates. Area I, on the other hand, had the third greatest proportional increase in pertinent female employment and also the largest increase in AFDC employment rates. A similarly ambiguous situation occurred in areas X, XI, and XII which had the greatest proportional drop in pertinent female employment, although not one of the areas was among the lowest in terms of increased AFDC employment.

Table 5.4

Estimated Changes in Female Employment  
in Jobs Pertinent to AFDC Mothers and the  
Change in Percent of AFDC Employment from 1969 to 1970<sup>a</sup>

Geographic areas	Estimated change in female employment		Change in percent of ADC employment from 1969 to 1970
	Change in number	Change as percent of total female work force in July 1970	
I	+651	+2.8	+9.9
II	---	---	---
III	---	---	---
IV	-1,094	-1.7	+6.6
V	-492	-1.8	+5.6
VI	-494	-1.3	+3.3
VII	+1,639	+4.7	+3.7
VIII	+537	+1.6	+8.8
IX	+191	---	+5.6
X	-9,680	-2.5	+7.6
XI	-9,680	-2.5	+5.3
XII	-9,680	-2.5	+4.4
XIII	+450	+3.4	+3.8

<sup>a</sup> See Appendix C for a detailed description of the derivation of these figures and source of data.



### For full-time AFDC employment

Somewhat more conclusive results were obtained by using changes in pertinent female employment to explain changes in the portion of the AFDC caseload estimated to be employed full time (earning over \$199 per month). However, Table 5.5 shows that the estimated change in the pertinent female employment is not strongly related to changes in the rates of AFDC full-time employment.

All of the three areas with the greatest increase in the portion of AFDC mothers estimated to work full time (VIII, IX, and XIII) showed increased total female employment in pertinent jobs. Two of the three areas with the least increase in the AFDC full-time employment rate (XI and XII) had decreased total employment in pertinent jobs. The third, however, Area VII, had the largest relative increase in total pertinent employment (as measured in the middle column of the table).

The conclusion drawn from the labor market measures is that the relationship between the rate of AFDC employment and the measurements of the labor market are ambiguous at best. If anything, tighter labor markets, as measured in this study, may be related to higher AFDC earnings which can be used as a proxy for full-time employment. However, neither measure of the labor markets can adequately explain the increased AFDC employment rate. In general, the measures indicate a decline in labor market conditions; and therefore, it appears reasonable to reiterate the claim that the increase in AFDC employment rates occurred in spite of, not because of, changes in the labor market conditions.

Table 5.5

Estimated Changes in Female Employment in Jobs Pertinent to AFDC  
 Mothers and the Change in the Percent of the Caseload Earning  
 \$200 or more Per Month Between July, 1969 and July, 1970

Geographic area	Change in the total number of females employed in pertinent jobs	Changes in pertinent jobs as percent of total female work force	Change in percent of employed AFDC cases with earnings $\geq$ 200 per month
I	+651	+2.0	2.9
II	---	---	---
III	---	---	---
IV	-1,094	-1.7	3.3
V	-492	-1.8	3.4
VI	-494	-1.3	2.0
VII	+1,639	+4.7	1.8
VIII	+537	+1.6	4.9
IX	+191	---	5.4
X	-9,680	-2.5	2.7
XI	-9,680	-2.5	1.4
XII	-9,680	-2.5	1.8
XIII	+450	+3.4	4.1

Source: Data obtained from the records of the Michigan Department of Social Services.

Work Attitudes, Attitudes toward  
Welfare and AFDC Employment

It is possible that an increased preference for work or a decreased desire to be on welfare could account for the increased AFDC employment between July, 1969 and July, 1970. This, however, is quite unlikely. The net employment effects of new AFDC families -- the most likely place for the effects of changes in attitudes to appear -- can be treated separately. (See the following section on case openings.) However, the possibility of any changes in the attitudes of the mothers who were already on AFDC must be considered. There is no apparent reason why the attitudes of the existing caseload should have undergone a pronounced change in favor of work between July, 1969 and July, 1970. In fact, it is more likely that any stigma attached to receiving AFDC decreased over the year because of changes in the procedures of the Michigan Department of Social Services and because of public relations work by groups such as the Welfare Rights Organization. Self-support, therefore, may have become relatively less desirable.

But no specific information about a possible change in employment attitudes exists. Obtaining such information would have involved costly interviews before and after the work incentive began. This was not attempted for two reasons. First, this study was started too late to get attitudinal data prior to July, 1969. Second, no resources were available to make such a study. Despite a lack of evidence, we do not think it unreasonable to assume that changes in work attitudes and attitudes toward welfare are not likely to change appreciably in one year. Therefore, it is unlikely that this variable contributed to the increased AFDC employment between July, 1969 and July, 1970.

### Turnover in the AFDC Caseload and AFDC Employment

The AFDC caseload can change in three ways: through case openings, case closings, and changes in the active caseload itself. In this section, we will discuss the effects on employment of welfare families which enter and leave AFDC. Later, we will consider the welfare program variables which have the potential to change some of the characteristics of those in the existing AFDC caseload, and therefore, their rate of employment.

#### Families entering welfare and AFDC employment rates

New welfare families and AFDC  
employment rates (state-wide  
figures)

Our concern in this section is the manner in which a large number of new families could affect the AFDC employment rates. Recalling Chapter 4, there were an estimated 41,500 new AFDC families in Michigan between July, 1969 and July, 1970. This represents nearly half of the approximately 80,000 total families on AFDC in July, 1970. It is therefore quite possible that this relatively large number of new families could cause significant changes in the AFDC employment rates over the first year of the work incentive.

The first place to look for the effect of new families on measured AFDC employment is the employment rates of families according to length of time on AFDC. Table 5.6 -- based on all families which were in the July, 1970 sample of active female-headed AFDC families -- shows that the AFDC employment rate tends to rise for the first year the mothers are on AFDC. Mothers who have been on AFDC for periods of time between one and four years have an almost constant employment rate. For

Table 5.6  
 Percent of the Michigan AFDC Caseload Employed:  
 By Length of Time on Welfare<sup>a</sup>

Length of time on AFDC in months	Percent of the caseload employed	Sample size
0 - 7	8.6	2,244
7 - 13	11.8	1,332
13 - 25	12.9	1,464
25 - 37	12.7	848
37 - 49	12.9	313
		6,201

<sup>a</sup> This table is based upon data obtained on 6,201 clients out of a total of 7,656 in our sample. The discrepancy in sample size is due to the fact that some cases, mainly those on welfare for a longer time, do not have an opening date recorded. Because of this, the figures do not give a good picture of the distribution of the caseload by length of time on welfare. However, since we know of no reason why the remaining cases should be biased in favor of more or less employment, we feel the rates of employment are reasonable estimates.

Source: Data obtained from records of the Michigan Department of Social Services.

lengths of time on AFDC longer than four years, the data have some error and therefore are not presented here.

The data in Table 5.6 imply that those mothers who came on AFDC during the period of the work incentive had a lower rate of employment than the general caseload. Because the number of new families is relatively large, it seems reasonable to assert that the new families tended to decrease the AFDC employment rates during the first year of the work incentive and that the actual increases in those rates occurred in spite of the increased number of new families on AFDC.

Employment rates of new AFDC mothers  
(by geographic area)

Table 5.7 compares the rate of employment for all active AFDC mothers with that of those who were new within the 30 day period prior to July, 1970. In twelve of the thirteen geographic areas, the employment rate for new mothers was less than that of all active mothers. In Area VII, the employment rate was greater. Conclusions drawn from these data are generally consistent with our earlier conclusion based on a sample of all mothers by length of time on AFDC. But it does add more support to the contention that the employment rates of AFDC mothers increased in spite of, not because of, the high rate of new openings.

In order to complete the analysis of the work incentive and new AFDC families, it should be mentioned that the incentive itself could cause a drop in the measured AFDC employment rates. If the incentive caused non-welfare mothers to quit their jobs and then enter AFDC with the intent of working (a possibility noted in Chapter 2), they

Table 5.7

AFDC Employment Rates for All Active and for Newly  
Opened Cases, July 1970<sup>a</sup>

Geographic area	Percent Employed		Sample sizes, newly opened cases
	Active cases	Newly opened cases	
I	19.5	14.8	61
II	21.9	20.0	20
III	25.0	9.1	11
IV	17.5	8.2	208
V	14.2	8.3	204
VI	10.7	6.4	313
VII	14.3	15.2	244
VIII	21.4	11.4	114
IX	17.1	11.0	73
X	14.1	9.0	368
XI	14.6	7.2	83
XII	9.1	1.6	124
XIII	14.9	9.5	116

<sup>a</sup> Rates for the active cases are from the July 1970 cross section sample; rates for the newly opened cases are from special samples of cases opened in June 1970. (100% samples for all areas except Area XII, when a 20% sample was drawn).

Source: Data obtained from records of the Michigan Department of Social Services.

may be picked up in the sample as unemployed. Unfortunately, there is no evidence to determine whether this occurred.

The employment effect of new families --  
evidence from a longitudinal samples

Our claim that new families had an adverse effect on changes in AFDC employment can be checked through the use of a longitudinal sample. If the same group of families is followed between July, 1969 and July, 1970, the effect of new case openings is eliminated. If the conclusions of the previous section are valid, a greater increase in employment should be detected in the longitudinal sample than between the two cross section samples.

Table 5.8 compares the employment rates for the sample of 4,660 female-headed families by area, in July, 1969, and of 3,831 of those recipients who remained on AFDC through July, 1970. It also shows the employment rates for the 1970 cross section sample of active female-headed families.

The employment rates for both the longitudinal and cross section samples in 1970 increased from that in July, 1969 for every one of the thirteen geographic areas. In all but three areas, the rate of employment was higher for the longitudinal sample than the July, 1970 active sample. This is consistent with expectations and gives added support to the assertion that the large number of new recipients reduced the effect of the work incentive as measured by employment rates of cross sections of the female-headed AFDC caseload.

The effect of the work incentive on those who were on AFDC at the start of the work incentive can be looked at another way. Of the 3,831 sample mothers who were on AFDC in both July, 1969 and July, 1970,



Table 5.8

Comparison of the Employment Rates of the July 1969 Sample  
 With the Same Cases in July 1970 and a New Cross  
 Section Sample of Active Cases in July 1970

Geographic area	Percent employed July 1969 active, July 1970 longitudinal and July 1970 active		
	July 1969 active	July 1970 longitudinal	July 1970 active
I	9.6	22.7	19.5
II	18.2	26.5	21.9
III	20.0	30.8	25.0
IV	8.9	14.7	15.5
V	8.6	14.8	14.2
VI	7.4	14.2	10.7
VII	10.6	17.1	14.3
VIII	12.6	25.3	21.4
IX	11.5	19.6	17.1
X	6.5	14.6	14.1
XI	9.3	13.3	14.6
XII	4.7	10.6	9.1
XIII	11.1	14.2	14.9

Source: Data obtained from records of the Michigan Department of  
 Social Services.

372 were employed in July, 1969, while substantially more -- 635 -- were employed in July, 1970. The overall changes in employment are summarized in Figure 5.4.

Let us consider the families which were active in July, 1969 and a year later. Of those who were employed in July, 1969, about 60 percent, or 215 families, were employed in July, 1970. In addition to this, 420 of those families who were unemployed in July, 1969 were employed in July, 1970. The employment increases outweigh the decreases by 263 families for a 70 percent net increase in the number of families employed.

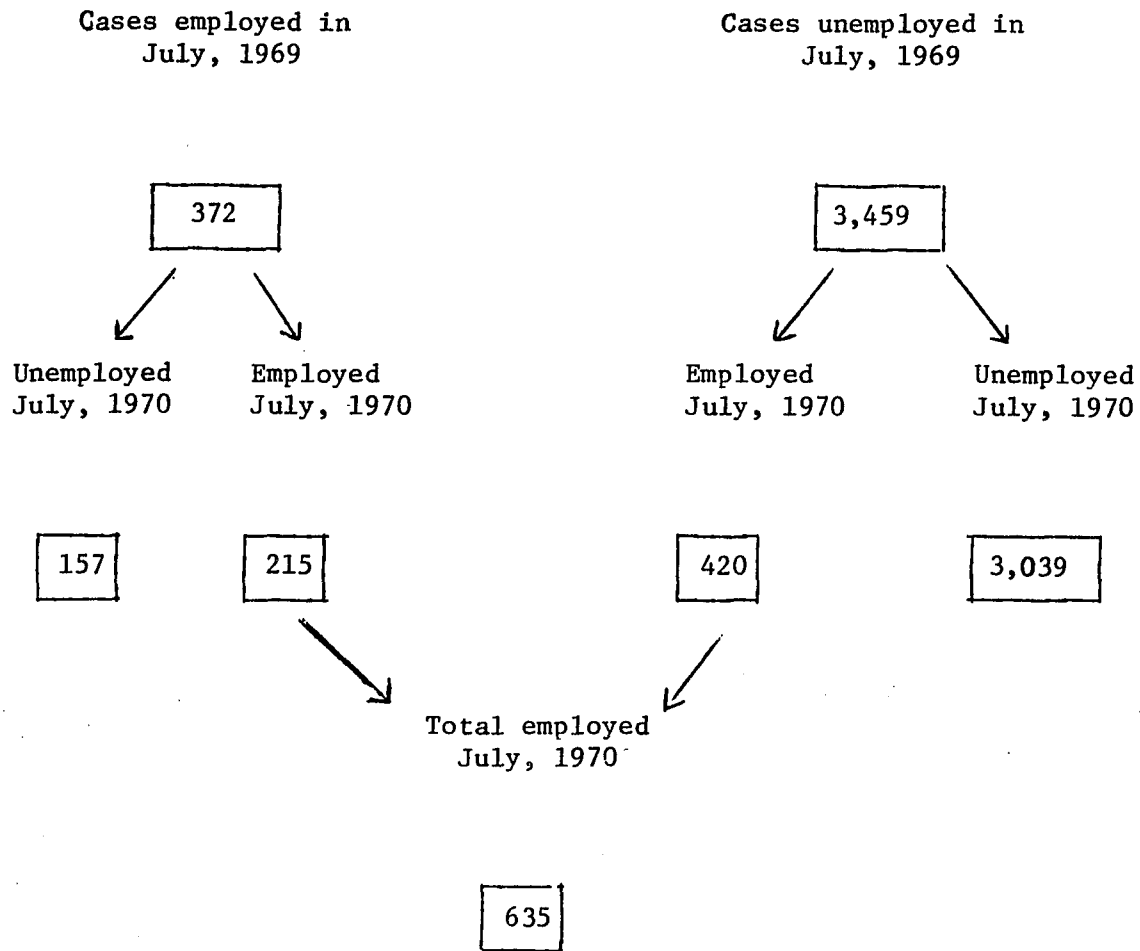
Thus, a majority of the active mothers employed in July, 1969, when the work incentive went into effect, were still employed in July, 1970, while a still greater number of mothers moved from an unemployed status in 1969 to employment in 1970. It is apparent that employment and earnings increased considerably for those who were on AFDC prior to the implementation of the work incentive.

#### Families leaving welfare and AFDC employment rates

##### Changes in total AFDC closings

As shown by Figure 5.5, the increase in the Michigan AFDC case-load between July, 1968 and July, 1970 has been primarily due to a large increase in new families.

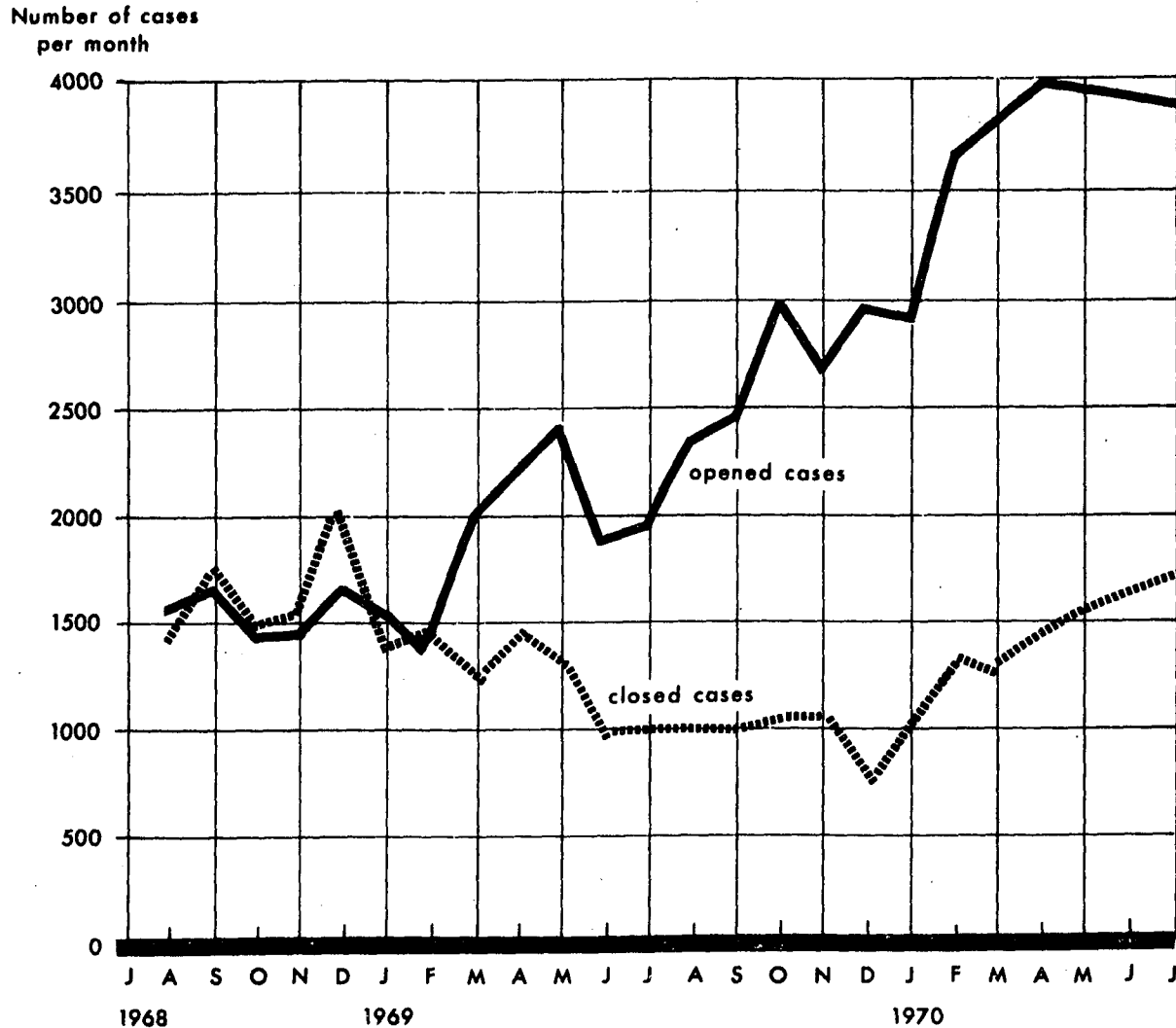
During the July, 1969 to July, 1970 period, the monthly closings remained above 1,000 families in all but one month and climbed over 1,700 in July, 1970. It appears that the work incentive has not decreased the number of families leaving AFDC as could be expected from the analysis in Chapter 2; however, the rate of closings has fallen



Number of AFDC Cases Employed in 1969 and 1970:  
A Longitudinal Sample

Source: Figure 5.4 was prepared from data obtained from the records of the Michigan Department of Social Services.

Figure 5.4



**Michigan AFDC case openings and closings between July 1968  
and July 1970.**

Source: Statistical Reports Section, Michigan Department of Social Services, Division of Research  
and Program Analysis

Figure 5.5

because the caseload moved sharply higher. Furthermore, the average portion of those closings which were reported -- as closed because of employment reasons -- fell from about 33 percent for the period of July, 1968 to June, 1969 to about 23 percent for the period of September, 1969 to July, 1970. (Data for June and July, 1969 are not available.)

Isolating the employment effect  
of a reduction in closings

The important question here is as follows. Has the work incentive encouraged families, who might otherwise have left AFDC to seek employment, to remain? In other words, has the work incentive, by encouraging employed mothers to remain on welfare, caused part of the measured increase in AFDC employment? Our analysis of Chapter 2 implies that it would. To answer this, we must isolate this effect which we shall call the negative effect of the incentive.

While there is no way of accurately determining the number of persons who would have earned enough to leave welfare in the absence of the work incentive (adequate pre-work incentive data with which to generate projections are unavailable), the following rough estimate has been developed.<sup>2</sup>

For the entire July, 1970 sample, a computation was made of the number of mothers who had earnings net of work expenses which were at least equal to the grant the mother would have received if no one in the family were working at all. This is the number of recipients who were earning enough to have been forced off of welfare if it had not been for the work incentive. In the absence of the work incentive, all of these mothers would have lost up to the total of child care, Medicaid, and Food Stamps by earning this much. An additional computation

was made of the number with net earnings equal to an arbitrarily selected amount of at least fifty dollars greater than the non-work grant. These mothers would lose child care, Medicaid and the Food Stamp bonus, less the amount by which fifty dollars exceeds work expenses, which makes leaving AFDC somewhat more reasonable since their economic loss is less.

The simplistic assumption was then made that persons with earnings above these two critical points were the ones who would have earned enough to leave welfare voluntarily in the absence of the work incentive. We feel that this procedure provides conservative estimates of the number of people that the work incentive encouraged to remain on welfare. The number of recipients in each estimate was then subtracted from both the total sample and the number employed in each area in July, 1970. In other words, all those who earned enough to have been forced off AFDC without the work incentive and those earning at least fifty dollars per month more than that amount were omitted. This assumption probably overstates the negative effects of the work incentive, since some of those earning these higher amounts probably did so because of the positive effects of the incentive. The result is that the estimation procedure is likely to understate the positive effects of the incentive. Table 5.9 shows the resulting conservative estimate of the positive employment effect of the work incentive. This is expressed in terms of employment rates which have been adjusted for the expected negative effect of the incentive (which is a reduction in AFDC closings).

The basic conclusion drawn from the table is that while adjustments naturally reduce the increases in employment percentages in all

Table 5.9

Portion of the AFDC Caseload Which Was Employed in July 1969 and  
July 1970 (1970 Figures Adjusted to Account for Possible  
Negative Effects of the Work Incentive)

Geographic area	AFDC employment rate July 1969	July 1970 AFDC em- ployment rate assuming those with net earnings at least equal to the non-work grant leave AFDC	July 1970 AFDC employment rate assuming those with net earnings at least equal to \$50 <u>more</u> than the non-work grant leave AFDC
		Adjusted percent employed	Adjusted percent employed
I	9.6	17.3 <sup>a</sup>	18.8 <sup>a</sup>
II	18.2	19.1 <sup>c</sup>	22.6 <sup>c</sup>
III	20.0	20.8 <sup>c</sup>	22.2 <sup>c</sup>
IV	8.9	13.1 <sup>a</sup>	14.9 <sup>a</sup>
V	8.6	12.5 <sup>a</sup>	13.3 <sup>a</sup>
VI	7.4	9.3	9.9 <sup>b</sup>
VII	10.6	13.0	13.5
VIII	12.6	18.4 <sup>a</sup>	20.6 <sup>a</sup>
IX	11.5	13.0	14.8 <sup>a</sup>
X	6.5	12.4 <sup>a</sup>	13.1 <sup>a</sup>
XI	9.3	12.4 <sup>b</sup>	13.1 <sup>b</sup>
XII	4.7	7.7 <sup>a</sup>	8.3 <sup>a</sup>
XIII	11.1	13.0	14.3

<sup>a</sup> The change from July 1969 is significant at 95% level.

<sup>b</sup> The change from July 1969 is significant at 90% level.

<sup>c</sup> 100% sample; therefore, any difference is meaningful.

Source: Data obtained from records of Michigan Department of Social Services.

areas, even the adjusted percentages are, in most geographic areas, considerably higher than the July, 1969 figures. Many of the increases are still statistically significant.

It therefore appears that, despite the estimated effect of the work incentive on reduced numbers of persons leaving welfare, it remains reasonable to believe that the work incentive may have also accounted for a positive increase in AFDC employment by encouraging mothers, who would otherwise not have worked, to find employment.

#### AFDC Grant Change and AFDC Employment

In July, 1969, the AFDC benefit level in Michigan increased by about three dollars per person per month. In other words, a family of four gained twelve dollars per month. Under normal assumptions, an application of economic theory would suggest that this increase in welfare payments would tend to decrease AFDC employment because of an income effect leading to the consumption of more leisure.<sup>3</sup> But while even a twelve dollar per month change in income would not be likely to appreciably affect employment, the size of that increase was actually less in real terms. Between July, 1969 and July, 1970, the grant size for a family of four with no non-welfare income fell by roughly sixteen dollars per month in real terms due to rising prices, as measured by the Detroit Consumer Price Index.<sup>4</sup> The net effect is a loss of about four dollars per month in real income for the family of four on AFDC, which can be assumed to have had a negligible effect on employment. Similarly, all AFDC families had a small decline in real welfare income. The actual amount depends principally on the grant size which is a function of family size and non-welfare income. It is not felt, however,



that these changes in AFDC real income are large enough to explain a significant portion of the increase in AFDC employment.

#### The WIN Training Program and AFDC Employment

The 1967 Social Security Amendments attempted to encourage AFDC employment, first, through work incentives and, second, by providing training and other support services (referred to as WIN in this thesis). What part, if any, of the increase in the measured AFDC employment rates over the first year, under the work incentive, is due to the training and support services is extremely difficult to answer due, partially, to unsatisfactory criteria available to measure the effects of WIN. The only way WIN can increase the AFDC employment rates is if those who get jobs through WIN remain on AFDC. The tough job is to identify those who find jobs because of the program. One estimate of these persons assumes that only those who graduate from WIN can be claimed as successes by the program. If it is assumed that a WIN graduate is a person who has found a job through WIN and is employed at least ninety days (the Michigan Employment Security Commission definition of those completing an employability plan), then it is estimated that there were about ninety-five graduates who were female-heads of households in July, 1969 and about 515 in July, 1970.<sup>5</sup> We will assume that all these people stayed on welfare, which is highly unlikely, and that all were employed in July, 1970, which is also unlikely; then we can estimate that roughly nine WIN graduates may have been included in the July, 1969 sample of 449 employed AFDC mothers, and 56 may have been included in the July, 1970 sample of 1,168. While this measure of the possible effect of WIN cannot entirely be ignored, it hardly explains the total

increase in measured female AFDC employment.

The WIN program could have affected our measure of AFDC employment other than through its graduates. Some WIN enrollees assigned to Phase I training (on the job training) may have received earned income obtained through some WIN related work. In July, 1969, according to the State of Michigan Department of Social Services records, four mothers in this study's AFDC sample were determined to be employed and, at the same time, enrolled in Phase I training. Sixteen people were enrolled in Phase I and employed in July, 1970. Even if the employment of all these mothers was attributed exclusively to WIN, the number is not large relative to the total numbers of employed AFDC mothers in the sample.

WIN could have had other positive influences on AFDC employment. WIN enrollees who did not graduate from WIN may have been placed in jobs by WIN, or their training may have been helpful in finding employment despite the fact that it was not completed. The mere fact that many mothers were forced to enroll in WIN may have influenced some of them to find employment.

The negative aspects of WIN which would tend to decrease AFDC employment have to be weighed against the positive contributions. It is possible that some AFDC mothers did not seek employment because they were busy participating in the WIN program. Some of the thousands of AFDC families throughout Michigan, who were put in a holding status (enrolled in WIN but not receiving services) during the first year of the work incentive (5,315 cases or 88.6 percent of all WIN enrollees in July, 1970),<sup>6</sup> might have found work except for the WIN training program.

We consider the mothers who are actively involved in training but not employed as unemployed. So, at a point in time near the beginning of a manpower program, such as WIN, the program may actually have a temporary negative influence on employment measured through a cross section sample of cases. If this were the case, WIN would have had a negative influence on our measure of AFDC employment, and therefore, it would understate the effect of the work incentive.

Conclusions about the effect of WIN must be ambiguous. Our estimate, however, is that WIN contributed at best only in a minor way to the measured increases in AFDC female employment over the first year of the work incentive.

#### Reasons Why the Measured Effect of the Work Incentive is a Possible Understatement

##### Health-Medicaid and AFDC employment

For the purposes of this study, we want to determine if the health of the AFDC population appreciably changed and thus possibly affected the rate of AFDC employment.

There is no reason for us to believe that the health of the established AFDC population would have changed over the year, except for the possible effect of the Medicaid program or some other outside factor. But since the Medicaid program was established in the fall of 1966, we would not expect its effect on the health of the AFDC population to differentially affect AFDC employment in fiscal 1969-70, but rather in 1967-68. (We assume no sizable barrier to communication about the program.) Since the effects of Medicaid do not fall in our period of study, we will omit it and a differential health level as an explanatory

variable for changed AFDC employment.

While there is no reason to believe that there has been an appreciable change in AFDC health, it is possible that poor health may have hindered AFDC reaction to the work incentive.<sup>7</sup> To the extent that it has, the measured increase in AFDC employment has understated the effects of a financial incentive to work. This may be important to incentives applied to income maintenance programs which are designed for all families -- not only those on AFDC.

#### Day care

There is no evidence of substantially improved day care provisions for mothers between July, 1969 and July, 1970. Therefore, the day care variable is likely to have tended to reduce the potential impact of the work incentive. Most mothers must make their own child care arrangements. There are few day care centers, and many mothers are unaware that child care will be paid for by the state. About 20 percent of a special sample of 255 AFDC recipients in geographic Area XIII were unaware that day care would be paid for by the state.<sup>8</sup>

#### Knowledge of the work incentive and AFDC employment

We have only incomplete information of what Michigan AFDC mothers know about the work incentive provisions. To the extent that AFDC mothers do not know what the incentive means, misunderstand it, or underestimate its benefits, the measured effect of the incentive on employment will be understated.

There is evidence that AFDC mothers do not, generally, know much about the incentive provisions. A study, made by the Research Division

of Michigan's Department of Social Services of AFDC recipients in Berrien County in September and October of 1970 (over one year after the start of the work incentive), provides an idea of the degree to which this is true. For example, of a sample of about 225 mothers -- including about 185 receiving intensive social services on an experimental basis -- more than 15 percent did not know that they could work and receive a welfare check at the same time. The effects of this lack of knowledge on the measured impact of the work incentive are obvious. Of those who knew that they could work and still receive welfare checks, most did not know that there was no longer a 100 percent tax on earnings. Only 33.5 percent knew that the size of the welfare check would not change if they earned thirty dollars per month. Three of the recipients actually thought the grant would increase; about 31.0 percent "did not know"; and about 25.0 percent said that the size of the welfare check would fall. They obviously did not know that the first thirty dollars of monthly earnings were exempt from any welfare tax.

Similarly, many persons interviewed in the sample felt that they would have no more money to spend if they earned one-hundred dollars. Almost half of those who knew they could work and remain on welfare believed that after the required grant reduction had been made, they would have no more money to spend than they would had they earned nothing. About another 15.0 percent "did not know." Only 38.0 percent of those recipients who knew they could work and still receive an AFDC payment realized that they would gain financially from earning one-hundred dollars. So of all the 255 people interviewed, only about one-third knew that they could stay on welfare, earn money, and gain financially through those earnings.

There appears to be general ignorance of the work incentive provisions. Certainly, this must have affected the measured results of the work incentive. Another finding of this study emphasizes the effect of ignorance on the actual effect of the incentive. Almost 80 percent of those to whom the interviewer explained the work incentive said that they felt it would cause more AFDC recipients to work. And of those who already knew about the incentive, over 50 percent said that it had already caused them to work more or seek more training.

In general then, if the mothers answered accurately, and if it is possible to generalize from one Michigan county to all counties, it is easy to believe that lack of information substantially reduced the measured impact of the work incentive program relative to its potential impact.

There is one possible exception to this. The work incentive reduces the financial cost to the welfare mother of reporting earned income. If there were employed AFDC mothers who did not report earnings prior to the incentive, and if they knew about the reduced cost of reporting earnings, the incentive may lead to an increase in reported earnings. In this case, our data would reflect this change in reporting an increase in employment.

It is virtually impossible to determine how much of the measured increase in AFDC unemployment was caused by an increase in the reporting of previously undeclared earnings. However, an impression gained from caseworkers throughout Michigan is that an increase in the reporting of earnings was not significant. This is the best available evidence that a change in reporting is not responsible for a significant portion of the increase in measured AFDC employment.

### Concluding Remarks about the Employment Effect of the Work Incentive

There has been a statistically significant increase in AFDC employment rates in each of the thirteen areas sampled between July, 1969 and July, 1970, the first year of the work incentive. The difficult problem is in attributing that increase to any one factor or group of factors. In this section, we have attempted to isolate the effect of the work incentive on AFDC employment from that of the variables introduced in Chapter 4. After accounting for the other factors, it appears that the work incentive has caused an increased AFDC employment rate.

AFDC employment rates increased despite a falling demand for labor, as measured in this study; this would tend to reduce the welfare employment rate. Similarly, it increased despite the large increase in new AFDC families during the year; this tended to reduce the employment rate for the caseload as a whole. Despite the problems of poor health and limited child care, both likely factors tending to limit the positive effects of the incentive, AFDC employment rates increased. Further, since it appears that the majority of AFDC recipients do not know about the work incentive provisions, the measured effect of incentive is quite likely an understatement of the potential effect. It is, in fact, remarkable that AFDC employment rates increased at all given all of the above.

On the other hand, the work incentive appears to have had a negative effect on AFDC closings; this may explain part of the increased rate of AFDC employment. The total increase in AFDC employment can still be attributed to the incentive, but it cannot be claimed that this increase was all due to a positive incentive to work. Rather,

part of it may have been due to an increased incentive to stay on welfare once employed rather than leave, as was the case before the incentive.

The WIN training program may or may not have caused an increase in our measured AFDC employment rates. However, even if we assume the greatest possible positive employment effect of WIN, this can only explain a minor portion of the increased employment rates.

The remaining variables of AFDC grant size and work and welfare attitudes are, in our judgment, neutral, or have had no perceptible effect on AFDC employment over the first year of the work incentive.



## FOOTNOTES

<sup>1</sup>Act No. 36, amending the Michigan Minimum Wage Law, Act 154 of Public Acts of 1964.

<sup>2</sup>The estimation procedure was devised by Dr. Robert Schlenker, Supervisor, Income Maintenance and Employment Research Group, Michigan Department of Social Services.

<sup>3</sup>Christopher Green, "Negative Taxes and Monetary Incentives to Work: The Static Theory," Journal of Human Resources, III (Summer, 1968), 280-288.

<sup>4</sup>The Detroit CPI was 127.6 in July, 1960 and 135.5 in July, 1970.

<sup>5</sup>Estimates made in this way. Total female WIN graduates =  $\frac{2}{3}$  total graduates. (The  $\frac{2}{3}$  figure is an estimate obtained from the Michigan Employment Security Commission Research and Statistics Division.) Total female-headed AFDC cases = 90% of total cases (an estimate from State of Michigan's Department of Social Services). Total female WIN graduates/total female-headed AFDC cases = a high estimate of the portion of all active AFDC cases in July, 1969 or 1970, which may have been graduated from WIN. This portion times the sample size of our AFDC study (which comes mainly from WIN areas) yields a reasonable maximum effect of WIN graduates on our measured employment.

<sup>6</sup>Nancy Felder, The Work Incentive Program July, 1970, Michigan Employment Security Commission (Research and Statistics Division Management Release No. 40, August 20, 1970).

<sup>7</sup>This is an impression gained by the writer from an incomplete employment study being done by the State of Michigan Department of Social Services, Division of Research, in Area XIII. This is one of the few sources of health data on specific Michigan AFDC cases.

<sup>8</sup>Data obtained from the State of Michigan's Department of Social Services Berrien County Work Demonstration Project, 1970.

## Chapter 6

### Earnings Effect of the Work Incentive

The study of the effects of the work incentive cannot be confined to employment rates but must include changes in earnings levels as well; unfortunately, this is even more difficult to measure. We found in Chapter 2 that the expected effect of the incentive on average AFDC earnings is ambiguous. The work incentive is, however, expected to increase the portion of cases earning low and high earnings with a reduced portion in the intermediate earnings range. In this chapter, we will first consider average earnings and earnings distributions. We will then use the earnings data to determine the financial benefits and costs to taxpayers and to those on welfare.

#### Empirical Problems

There are virtually no data on changes in average earnings for non-welfare female employees in Michigan over the first year of the work incentive. This lack precludes an effective accounting of earnings changes caused by changes in labor market conditions.

In spite of this problem, some interesting information can be obtained from the earnings data collected in our study. First, the earnings data obtained from the cross section samples will be presented. Then the changes in earnings for the longitudinal sample will be shown.

## Earnings -- Cross Section Samples

### Average earnings

Average earnings by geographic area for the cross section samples in July, 1969 and July, 1970 are shown in Table 6.1.

The changes in average earnings provide a different picture of AFDC employment than do those changes in rates of employment which we considered in Chapter 5. Areas II, VI, and IX had the greatest increase in average earnings. It is interesting that not one of these had a large increase in rates of employment.<sup>1</sup> (This employment-earnings relationship does not appear to hold for areas with the smallest increases in earnings since they also had comparatively small increases in employment.) In general, however, high increases in employment rates are associated with relatively small increases in average earnings which may indicate that the incentive causes more mothers to be employed but at low earnings or in part-time employment. The following section explores this possibility further.

### Earning distribution

A more detailed look at earnings is useful to further interpret the average earnings differences by geographic area. Table 6.2 shows the distributions of AFDC earnings for each geographic area for July, 1969 and July, 1970. Some substantial geographic differences show up in the table and provide insight into why the average earnings changed. For example, Area II had the greatest increase in average earnings over the year because of a large decline in the portion of working mothers earning under \$100 and a large increase in the portion earning over \$100. The most important reason for the increase in average earnings was due

Table 6.1

Average Earnings of Cross Section Samples of Female-Headed  
AFDC Cases by Geographic Area in July 1969 and July 1970

Geographic areas	Number with earnings	Average earnings of those employed in July 1969	Number with earnings	Average earnings of those employed in July 1970	Change in average earnings <sup>a</sup>
I	17	\$112	51	\$127	\$+15
II	47	91	94	160	+69
III	12	127	28	127	0
IV	41	141	115	176	+35
V	52	130	145	168	+38
VI	21	144	49	205	+61
VII	28	195	75	204	+9
VIII	64	163	160	192	+29
IX	62	183	162	229	+46
X	14	201	61	216	+15
XI	27	203	63	185	-18
XII	34	150	104	166	+16
XIII	30	150	61	176	+26

<sup>a</sup> We did not report the significance tests which were applied to these differences since the earnings distributions for each area were so peculiar. The changes in earnings are not large in relation to the variance in earnings and we make no claim that the changes are statistically significant except for Areas II and III which were 100 percent samples.

Source: Data obtained from the records of the Michigan Department of Social Services.

Table 6.2

Portion of the Employed in Different Gross Earnings Intervals  
of Each Geographic Area for July 1969 and July 1970

Geographic areas	\$1-99 per month		\$100-299 per month		\$300+ per month	
	July 1969	July 1970	July 1969	July 1970	July 1969	July 1970
I	58.8%	47.0%	35.3%	49.0%	5.9%	4.0%
II	68.6	38.3	27.5	53.1	4.1	8.6
III	33.3	39.3	58.3	53.6	8.3	7.1
IV	51.2	28.7	36.6	39.1	12.2	12.2
V	46.4	39.3	48.0	45.4	5.7	15.1
VI	52.4	26.4	38.1	42.9	9.6	30.6
VII	28.6	26.7	46.4	49.3	24.9	24.0
VIII	45.3	30.6	40.6	47.4	14.0	21.9
IX	32.2	22.8	51.5	43.2	16.1	33.9
X	42.8	24.6	28.6	44.2	28.5	31.1
XI	22.2	33.3	51.8	46.0	25.9	20.7
XII	41.2	49.0	50.0	27.9	8.8	23.0
XIII	36.7	36.1	56.7	49.2	6.6	14.7

Source: Data obtained from the records of the Michigan Department of Social Services.

to the substantial increase in the portion of mothers earning between \$100-\$299 per month. In Area VI, which had the second largest increase in average earnings, there also was a large drop in the portion of working mothers earning less than \$100. But in this case the portion earning between \$100-\$299 was almost constant while the portion in the over \$300 category more than tripled to almost 31 percent.

There was also a decline in the portion of working mothers earning under \$100 in Area IX, the area with the third highest increase in average earnings. This decline was less than in the two previous areas. But contrary to the situation in Area II and Area VI, there was a decline in the portion earning between \$100-\$299. The reason for the increased average earnings was mainly due to the large increase in the portion of mothers earning over \$300.

So it appears that in the three areas with relatively large increases in average earnings that the increase came through a combination of a reduced portion of employed mothers with low earnings and either a large increase in the portion earning between \$100-\$299 (Area II) or the portion earning over \$300 (areas VI and IX).

Contrary to the areas with relatively large increases in earnings, areas XI, III, and VII -- which had the least increase in average earnings (Area XI actually fell and Area III had no change) -- all had a decline in the portion of mothers earning over \$300 per month. In two of these areas, the portion of working mothers earning under \$100 per month increased while in the third it fell slightly. Areas III and XI were the only areas besides Wayne County (Area XII) which had an increased portion of the employed mothers earning under \$100. In Area XII, which had only a slight increase in average earnings, the

portion of mothers in the high earnings category almost tripled, but the portion earning under \$100 increased at the same time.

#### Further analysis of earning distribution

The most interesting differences in earning distribution among geographic areas are the under \$100 or over \$299 earning categories. As we showed in Footnote 14 in Chapter 2, the work incentive eliminates any welfare tax for approximately the first forty-eight dollars of gross earnings. In terms of marginal financial returns to work, there is a greater incentive to work part time and earn under \$100 than to earn above that amount. The different changes, by geographic area, in the portion of the mothers earning under \$100 may reflect different reactions to the work incentive. It is possible that the incentive encouraged enough part-time employment in some areas to reduce average earnings. However, the contention developed in Chapter 2 that the incentive encourages part-time employment most is not generally supported by the data.

The shift upward in the portion of the mothers earning \$300 or more will tend to reduce welfare costs because these mothers are most likely to become more self-sufficient in the sense of reducing the total amount of welfare subsidy they receive. In six of the thirteen geographic areas, the portion of working mothers earning over \$299 doubled, and only three areas showed a decline in high earners. Only one area had more than a two percentage point drop in the portion of mothers in the high earnings category. As we suggest in Chapter 2, this increase in the portion of mothers with high earnings may in part be a reflection of the fact that higher earnings are possible for welfare

families because of the incentive. This possibility is analyzed below.

Table 6.3 shows the number of families in the July, 1970 cross section sample which had earnings high enough to have caused their removal from AFDC prior to the work incentive. This is important because it gives a crude estimate of the increased AFDC employment rates caused by the negative aspects of the incentive. These figures were obtained by first calculating the size of the non-work AFDC grant for each AFDC family in the sample and then comparing this figure to earnings net of actual work expenses, as reported to the Michigan Department of Social Services. The figures, therefore, reflect both high earnings as well as low non-work grants. Small grants could occur if the family received income in the form of alimony, child support payments, or other outside income. The figures are only approximations of the number of families which would have had earnings high enough to remove them from AFDC without the work incentive, since it is not known what they would have earned in the absence of the incentive.

Table 6.4 shows the same families as in Table 6.3 but as a percent of all employed AFDC families in each of the geographic areas in July, 1970.

It appears that in July, 1970, a relatively high portion of the employed mothers were earning enough to have forced them off AFDC prior to the work incentive. There also is a considerable variation in the portion of families, by area, earning enough to be put in this category. Areas IX and III have by far the highest portion of such families with 27.8 and 21.4 percent, respectively. Area IX had one of the largest increases in that portion of AFDC families earning \$300, which may be partly explained by the higher earnings eligibility caused by the



Table 6.3

Number of AFDC Cases in our July, 1970 Cross Section Sample Which Would Have  
Been Ineligible for AFDC Without the Work Incentive

Areas	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
	7	15	6	20	20	7	8	28	45	8	11	18	9

Source: Data obtained from records of the Michigan Department of Social Services.

Table 6.4

Portion of the Employed AFDC Cases in our July 1970 Cross  
Section Sample Which Would Have Been Ineligible  
for AFDC Without the Work Incentive

Areas	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
	13.7%	15.9	21.4	17.4	13.8	14.9	10.7	17.5	27.8	13.1	17.5	17.3	14.7

Source: Data obtained from records of the Michigan Department of Social Services.

incentive. Area III, on the other hand, began with a relatively low portion of high earning people, had a decline in that portion during the work incentive, and yet had a large portion of families earning enough to have been forced off AFDC prior to the work incentive. This suggests that there are low AFDC grant sizes in Area III due, possibly, to alimony, child support, or other outside income.

We are convinced that the raised earnings maximums and the consequent reduction in employed families who leave welfare because of the work incentive have contributed to the rise in the number of AFDC families with high earnings; nonetheless, the above data do not prove that the higher maximums alone were the cause of the higher earnings. It may be that many of these mothers would not have earned this much prior to the incentive.

#### Earnings of the Longitudinal Sample

We can examine the changes in the earnings of AFDC recipients since the implementation of the work incentive program by following a sample of recipients over time. In this way, we can eliminate the effects which new families may have had on aggregate data for the entire caseload.

Therefore, as we mentioned in our earlier discussion of AFDC employment rates (Chapter 5), a sample of AFDC mothers was drawn for July, 1969 and data obtained on them as of July, 1970. There were 4,660 female-headed AFDC families in the July, 1969 sample. Only 4,588 of these families were in the sample as of July, 1970; 757 families had left AFDC; and 3,831 remained as active cases. The 72 families lost from the sample moved to areas outside of the study. For

convenience the data which were obtained for each of the thirteen geographic areas have been combined into a single group of data for the following presentation.

Table 6.5 summarizes the earnings changes between July, 1969 and July, 1970 for the 3,831 mothers who were on AFDC at both times. This table shows all the changes in employment and earnings for the longitudinal sample. The table is read by comparing figures in the rows and columns. All the rows show the earnings distribution for July, 1969. The columns show the same for July, 1970. Take row one for example: reading from left to right, 3,039 mothers were unemployed (zero earnings) in July, 1969 and July, 1970; there were 170 mothers who had zero earnings in July, 1969 and \$1-99 earnings in July, 1970; there were 91 mothers who had no earnings in July, 1969 but who earned between \$100 and \$199 in July, 1970, and so on.

The table also can be read by taking a particular column and working back to the appropriate row. This will give the number of mothers with certain July, 1970 earnings which can be compared to the July, 1969 earnings. For example, taking the \$300 to \$399 column, 56 persons earned between \$300 and \$399 in July, 1970 but had zero earnings in July, 1969.

The number of families between the diagonal lines are those which had no change in earnings. Those above the diagonal lines increased earnings from July, 1969 to July, 1970, while there was a drop in earnings for those below the diagonal. In using the table in this fashion, notice that the number of mothers who increased their earnings (490, including 420 newly employed) far outweighs the number with earnings decreases -- (179, including 157 who stopped working).

Table 6.5

Earnings of the Female-Headed AFDC Families on  
Welfare in both July, 1969 and July, 1970

Earnings in 1969	Earnings in 1970						
	\$0	1-99	100-199	200-299	300-399	400 & above	Total
\$0	3,039	170	91	75	56	28	3,459
1-99	69	66	17	13	4	1	170
100-199	34	8	28	13	8	2	93
200-299	28	2	6	21	4	3	64
300-399	17	0	2	2	5	5	31
400 and above	9	0	0	1	1	3	14
Total	3,196	246	144	125	78	42	3,831

Source: Data obtained from records of the Michigan Department of Social Services.

The earnings categories in Table 6.5 are quite broad, allowing for as much as a hundred dollar shift in monthly earnings before changing the earnings category. A more detailed picture of the earnings changes for the active cases can be obtained by forming twenty-dollar categories of earnings, and examining increases and decreases measured in terms of these smaller categories.

With this procedure, we find that of the 372 mothers employed in July, 1969, 112 had higher earnings (moved into a higher twenty dollar earning category), 59 had about the same earnings, 44 had lower earnings but were still employed, and 157 had no earnings in July, 1970. In addition, as noted above, there were another 420 cases that had no earnings in July, 1969 but had earnings in July, 1970. Therefore, the total cases which had sufficient increased earnings to move to a higher \$20 earnings category number 532 ( $420 + 112$ ), while those with decreases number only 201 ( $157 + 44$ ).

#### Concluding Comments about Changes in AFDC Earnings

We cannot predict through reason alone what will likely happen to average AFDC earnings under a work incentive. Higher maximum earnings are possible which would tend to increase the average. But there is an incentive to work part time which will tend to decrease the average.

Empirically, average earnings have increased in ten of the thirteen geographic areas of the sample, but it is unclear whether this is a significant increase caused by the work incentive. A more detailed look at AFDC earnings by earnings category shows that the portion of the employed AFDC mothers earning under \$100 per month fell in most areas, and therefore, it does appear that part-time employment is not

encouraged strongly by the work incentive.

In most areas the portion of the employed caseload earning over \$300 per month increased between July, 1969 and July, 1970. It is unclear whether this was due to the increased earnings maximum or the positive effect of the work incentive. It is interesting, however, to observe that in three of the thirteen areas 30 percent or more of the employed mothers earn over \$300 per month, and in seven of the thirteen areas 20 percent or more earn over \$300 per month.

In most geographic areas, there is a substantial portion of the employed AFDC mothers who earn enough to have been forced off AFDC if there were no work incentive. In one area, almost 28 percent fit this category, while the portion ranged from about 11 percent to 21 percent in the remaining areas.

The earnings data obtained from the longitudinal sample show that earnings of some of the mothers employed in both July, 1969 and July, 1970 increased, while the earnings of about half as many fell.

#### Benefits and Costs of AFDC Employment to Recipients and Taxpayers

According to the work incentive provisions of the AFDC program, if an AFDC mother works, the earnings result in an increased disposable income for her, as well as a return to the non-welfare taxpayer<sup>2</sup> in the form of a reduction in the grant paid to the AFDC family. However, the AFDC program also provides for fully paid child care for the working mother, and the tax costs of such care may outweigh the financial gains from the grant reduction.<sup>3</sup>

Using the data obtained from the July, 1970 cross section sample, we determined the magnitude of the monetary benefits and costs of AFDC

employment to the non-welfare taxpayer. For each of the thirteen areas in the state included in the sample, the working mothers have been grouped into two categories -- those receiving and those not receiving payments for child care. For the two groups in each area, averages have been obtained for: (1) recipient increases in incomes net of work expenses and grant reductions (the recipient gain from employment), and (2) the net benefit (if positive) or cost (if negative) to the non-welfare taxpayer, measured here as simply grant reductions minus child care costs. This measure of taxpayer gain is a conservative figure in the sense that it ignores the taxes paid by the employed welfare mother, so the actual financial gain to the non-welfare taxpayer is probably greater than indicated below.

#### Average AFDC grant reduction

Table 6.6 presents the average AFDC grant reduction in each area caused by recipient earnings. In terms of short-run financial benefits to the taxpayer, the grant reductions are offset by the amount paid by the state to cover child care. The last column of Table 6.6 accounts for the child care costs and therefore provides an indication of the net average gain or cost of each employed AFDC mother to the non-welfare taxpayer. In eleven geographic areas, the non-welfare taxpayer received an average net gain per working AFDC mother; in the remaining two areas, there was a small net cost.

#### Benefits and costs -- for families receiving child care

Table 6.6 mixes employed AFDC mothers who receive child care subsidies with those who do not. A more revealing picture of the

Table 6.6  
Earnings, Grant Reductions and Taxpayer Gain or Loss:  
Averages by Area for the Month  
of July 1970

Areas	Average earnings (same as in Table 5.1)	Average grant reduction	Average taxpayer gain (or cost if negative) per employed AFDC case <sup>a</sup>
I	\$127	\$33	-\$10
II	160	57	+27
III	127	66	+37
IV	176	49	-6
V	168	45	+3
VI	205	63	+21
VII	204	57	+9
VIII	192	58	+12
IX	229	75	+14
X	216	64	+44
XI	185	58	+19
XII	166	62	+2
XIII	176	51	+16

<sup>a</sup> Defined as all grant reductions minus all child care costs, averaged for all those working.

Source: Data obtained from records of the Michigan Department of Social Services.



benefits and costs of employment is obtained when these two groups are separated. Table 6.7 presents data for those receiving child care payments while Table 6.8 presents similar data for those who do not. The first three columns of the two tables present the same information on the two groups. Column 4 of Table 6.7 provides the additional data on child care costs, while column 5 of that table shows the average taxpayer gain or loss. Column 5 of Table 6.7 and column 3 of Table 6.8 provide similar information on non-welfare taxpayer gain or loss for families with and without child care, respectively.

Column 6 in Table 6.7 shows that the portion of the working mothers who receive child care support varies considerably over geographic area -- from 20 to 50 percent. Why this variation occurs is not known. It may be a reflection of the degree of full-time versus part-time employment in the areas.

Column 7 of Table 6.7 and column 4 of Table 6.8 show the estimated average work expenses.<sup>4</sup>

Benefits and costs -- families with  
and without child care compared

A comparison of tables 6.6 and 6.8 reveals several interesting points. First, the average earnings of those receiving child care are higher in all but one area than are the average earnings of those without child care. This is consistent with the idea that day care and full-time employment may be positively related. Both the increase in disposable income (defined here as net of employment expenses and grant reductions) obtained by the recipient and the reduced cost caused by the grant reduction obtained by the non-welfare taxpayer are, on the average, substantially higher for those with child care. The one

Table 6.7

AFDC Employment Costs and Benefits For  
Those Receiving Child Care Subsidies

Areas	(1) Average earnings	(2) Average client net income in- crease	(3) Average grant reduction	(4) Average child care cost	(5) Average tax- payer gain (or cost if negative) Column 3 minus Column 4	(6) Percent of those work- ing receiv- ing child care pay- ments	(7) Average es- timated expenses of employment
I	\$174	\$77	\$56	\$123	-\$67	35.3%	\$41
II	199	83	77	98	-21	30.9	39
III	170	76	94	117	-23	25.0	0
IV	204	85	58	111	-53	49.6	61
V	222	91	64	101	-37	41.4	67
VI	263	108	80	98	-18	42.9	75
VII	227	92	63	133	-70	36.0	72
VIII	218	90	66	112	-46	40.6	62
IV	266	108	84	137	-53	44.4	74
X	246	102	85	100	-15	19.7	59
XI	186	77	47	102	-55	38.1	62
XII	212	90	73	133	-60	37.5	49
XIII	213	86	62	112	-50	31.1	65

Source: Data obtained from records of the Michigan Department of Social Services.

Table 6.8

AFDC Employment Costs and Benefits for  
Those Without Child Care Subsidies

Areas	(1) Average earnings	(2) Average client net income increase	(3) Average grant reduction, taxpayer gain	(4) Average estimated expenses of employment
I	\$99	\$46	\$21	\$32
II	139	63	49	27
III	113	55	57	1
IV	148	64	40	44
V	129	55	31	43
VI	174	75	51	48
VII	188	79	54	55
VIII	172	72	52	48
IX	200	84	68	48
X	208	87	59	62
XI	185	78	65	42
XII	136	61	39	36
XIII	160	67	46	47

Source: Data obtained from records of the Michigan Department of Social Services.

exception is Area XI in which average earnings are almost the same for both groups.

Higher grant reductions for those with child care are reflected in column 3 in tables 6.7 and 6.8. The reason for this difference in grant reduction is that working recipients who receive child care payments have higher average earnings and therefore "pay back" a larger portion of their grant than do those recipients who receive no child care payments. However, for those receiving child care, the taxpayer's gain, which shows up as a grant reduction, is offset by the additional tax cost incurred in the form of child care. Columns 4 and 5 of Table 6.7 show the impact of this fact. Average child care costs are high enough to offset more than the average grant reductions in all thirteen areas. The result is a net cost to the taxpayer (over the tax cost which would be incurred if the recipient were not working at all) per working recipient of from fifteen to seventy dollars per month. It must be noted that these are point-of-time or short-run costs; the data tell nothing about the longer-run dynamics involved. Child care may be considered an investment in children and in the increased employability of the mother. Such an investment may yield not only present but future returns. This facet of human capital is in no way reflected in the data.

We should also note that, in each of the thirteen areas, the increased average taxpayer cost is less than the increased net income of the mother. (Compare columns 2 and 5 of Table 6.7.) Thus, if one objective of a work incentive system is to increase welfare recipient incomes in a comparatively low cost manner, the work incentive appears to be a step in that direction. Each added taxpayer dollar spent on

child care yields increased net income to the recipient of from \$1.15 (\$77/\$67) in geographic Area I, to \$6.80 (\$102/\$15) in Area X. So even though the non-welfare taxpayer's short-run cost increased for employed AFDC families with child care, the work incentive may be considered successful, if the objective is to increase recipient income in a comparatively low cost manner.

The last columns of tables 6.7 and 6.8 indicate the average work expenses of employed recipients in each area. A case can be made that a significant portion of these expenses represent a benefit to the non-welfare taxpayer. This is because the bulk of employment expenses represent various federal and state income and social security taxes. If it is assumed that the additional taxes represent a net increase in tax revenues, which will ultimately benefit the non-welfare taxpayer in the form of either more services or reduced tax payments, then these employment expenses are, in part, a net gain to the taxpayer. In this case, we should consider that they partially offset the tax costs shown in Table 6.7 or augment the tax gains shown in Table 6.8.

In terms of average recipient benefits net of grant reduction and work expense costs, the relevant columns of tables 6.7 and 6.8 show that these benefits are generally well under one-half of earnings. This means that, on the average, the employed AFDC recipient's earnings are at such a level that the average total tax rate is about 50 percent (where total tax rate is here defined to include both grant reduction and work expenses), a high rate but still well under the 67 percent marginal rate written into the work incentive program. This is because earnings are low enough that the higher tax rate applies to only a small portion of total earnings.

Concluding remarks about benefits  
and costs of AFDC employment

In general, the benefit-cost results indicate that for those receiving the child care subsidy in July, 1970 a net transfer takes place from the non-welfare taxpayer to the AFDC families.<sup>5</sup> The transfer is not to the entire AFDC group but to a small segment of the group which both works and receives child care. Assuming a budget constraint for the AFDC program as a whole, the working AFDC recipient who receives child care gains at the expense of both the non-working recipients and the working recipient who does not receive child care. This should be considered before further AFDC employment is encouraged.

While child care payments represent primarily an in-kind transfer, in some instances the transfer can take the form of a direct income increase to the family. For example, there is no reason why an otherwise unemployed grandmother, aunt, or other member of the family could not provide the child care and receive payment for it. The mother's employment gains not only her net income for the family but may create a paid job for another member of the family; therefore, the family gains financially in two ways. As a matter of fact, the child care income would exceed the mother's net earnings in many situations. The taxpayer expenditure on child care for AFDC employment therefore has an added gain of creating one more job for wages.

The role of child subsidy is interesting from yet another point of view. When an AFDC mother obtains employment and pays someone else for the care of her children, the child care activity in which she formerly engaged has simply shifted from a non-market to a market activity. Ignoring differences in quality of the child care, leisure

has become productive effort, in terms of the traditional economic model. Few mothers would support the idea that child care is synonymous with leisure; however, non-market work is not even included in the GNP accounts and therefore tends to be thought of as unproductive. Regardless of this problem of definition, it is not clear that the employment of a female head of household, in a wage paying job, yields an economic gain in the true sense of the word. That is, the shift of an AFDC mother from providing child care for her own children to paid employment may be counterbalanced by the shift of some other person from another activity to providing care for the children. The net direction and magnitude of the change in total "production" is indeterminate unless the person who provides the child care for the welfare mother was doing nothing productive before.

## FOOTNOTES

<sup>1</sup>The areas which ranked one, two, and three in changes in average earnings ranked 11.5, 13, and 5.5 by relative increase in rates of employment (see Table 5.1).

<sup>2</sup>The need for the term non-welfare taxpayer as opposed to taxpayer was developed in Chapter 2.

<sup>3</sup>It should be noted that such care is not limited to preschool children but is available to children under fourteen years of age.

<sup>4</sup>The earnings are split between the recipient, the grant reduction, and work expenses. The grant reduction equals all income in excess of \$20 plus 1/3 income, plus work expenses. The case data included earnings and the grant reduction, so the amount which work expenses must have been can be calculated.

<sup>5</sup>It should be emphasized that these benefit-cost figures are quite narrow in their focus. For example, no time horizon is included. In addition, no consideration is given to the possibility that increased AFDC employment may mean decreased employment for someone else (this is especially relevant in a situation of overall excess supply in the labor market, as was the case during the year of this study). Costs and benefits may be considerably different in this broader context.



## Chapter 7

### Success of the Work Incentive Program and Concluding Comments

#### Determining Whether the Incentive is a Success

The success of any program must be measured in terms of the objectives of that program. The ostensible objective of a work incentive applied to welfare recipients is to encourage employment. But for what specific purpose and at what cost?

The possible objectives of a work incentive program which we have considered in this study are: (1) a reduction in AFDC caseload, (2) a reduced welfare cost per employed family, (3) lower total welfare costs, and (4) increased AFDC incomes with a given taxpayer expense. In this chapter, we will evaluate the work incentive in terms of each of these objectives. The conclusion provides a general analysis of employment for welfare recipients and its cost implications.

#### Objective of reducing the AFDC caseload

The analysis in Chapter 2 provides a strong case for believing that the incentive will increase, not decrease, the AFDC caseload. If it is assumed that anything which makes welfare relatively more attractive will increase the number of AFDC recipients, then the work incentive will undoubtedly increase the size of the caseload. Non-AFDC families will be more apt to come on welfare and welfare families will be more likely to stay on because it is financially more beneficial to do so, at least for those who work. Therefore, the work incentive is inconsistent with the

objective of a lower caseload. In fact, the inconsistency is so obvious that a question arises: Would anyone ever consider it a goal of the work incentive provision? Possibly some may feel that if the program could induce mothers to work at all it would increase the likelihood of their working more and eventually leaving welfare voluntarily. This could happen, but it would require an inconsistent reaction on the part of AFDC mothers; to leave welfare, they would have to disregard their original motive for beginning work -- financial gain.

There are other, less direct reasons why the work incentive may tend to increase the AFDC caseload. If the work incentive causes mothers to work, this implies that the incentive has stimulated those mothers to work for wages which were previously unacceptable (wages too low to be a reasonable alternative to welfare). While all the mothers in this study were not asked why they did not work prior to the incentive, it is reasonable to believe that some did not because the available jobs paid too little relative to welfare benefits. Thus, the mother chose welfare in preference to work, and once on welfare, there was no financial incentive to seek a similar low paying job.

With the incentive, however, the welfare mother may feel that the low paying job pays enough to supplement her AFDC income; it now becomes acceptable. The incentive is thus a means of subsidizing low wage employers and, in this sense, is a latter-day Speenhamland system. To the extent that AFDC mothers do work at low paying jobs, they will tend to drive down already low wages; therefore, they will contribute to a reduction in the earnings capacity of non-welfare mothers who work in similar jobs. This will make welfare financially more attractive to these non-welfare mothers and, indirectly, lead to an increase in the welfare caseload.

Objective of reducing the per case welfare costs

The work incentive can cause the welfare cost per employed case to fall, if the mothers earn a sizable amount. (See Chapter 2 for the specific amounts.) If the objective is to reduce per case costs, then the incentive should encourage earnings high enough to yield a net financial return to the taxpayer. Yet, the incentive is designed to encourage part-time employment and low earnings, since it places a zero welfare tax on low earnings. Such an incentive might encourage employment if there is some inertia which must be overcome in order to induce the mother to work at all and if, thereafter, a smaller financial incentive is required to increase the amount of work for wages. However, as Perlman<sup>1</sup> points out, it is also possible to develop an incentive plan which will provide added financial incentives as more hours are worked. This may yield a greater per case return to the taxpayer. Certainly, going the other direction by destroying the marginal financial incentive to earn more makes no sense, if the objective is to reduce per case costs.

The empirical evidence presented in this study shows that low earnings have, in general, become less prevalent among employed AFDC recipients despite the zero welfare tax on low earnings. This increase in earnings was not enough, however, for most of the employed mothers' grants to fall by an amount equal to their increased average cost of child care. This led to an increased welfare cost for those employed mothers. For those who worked and did not receive child care, there was a slight reduction in welfare costs. For employed recipients as a whole, there was also a small reduction in financial welfare costs because comparatively few families received child care.

The point is, however, that the incentive can reduce per case

costs significantly only if the mothers earn more. In fact, it will increase welfare costs per case if more families take advantage of the child care provisions of the AFDC program. The incentive can, at best, encourage AFDC mothers to work. But, in order to reduce per case welfare costs because of employment, it is necessary to provide AFDC mothers with job training or some other means of raising their earnings power, as the earnings data in this study show.

Objective of a reduced total welfare cost

Based on the above, we conclude that the work incentive has probably caused an increase in the total caseload while at the same time welfare cost per employed recipient fell only slightly. Thus, the work incentive, as presently constructed, did not fulfill the objective of a reduced total welfare cost over the first year of its operation in Michigan. In fact, the opposite seems true. This higher cost will probably continue unless the earnings of the AFDC mothers can be substantially increased.

Objective of raising AFDC income at low taxpayer costs

If the objective is to raise average AFDC family incomes at a low additional per case cost, then the work incentive has been effective. The evidence presented in this paper shows that the working AFDC recipient's financial gain is greater than the added taxpayer cost. In other words, the taxpayer can purchase more than a dollars increase in AFDC income for a dollars increase in his tax cost. The more the mothers earn the greater the relative taxpayer gain, which again suggests that -- from the crude financial point of view -- it may be wise to invest in

AFDC training in order to obtain a financial return from both lower welfare costs and higher AFDC incomes.

### Concluding Comments

This study was intended to provide evidence about the effect of work incentives on welfare employment and earnings. We feel that the data and analysis in this study provide a reasonably convincing argument that the incentive has contributed to increased employment of AFDC mothers in Michigan, and led to higher incomes for those employed. It appears, however, that these two results were gained through higher short-run welfare costs.

There are immense empirical problems associated with attempts such as ours to isolate the effects of specific changes in existing welfare programs; the work incentive is no exception. But the results of these studies are useful and the subject is of such great importance to welfare reform that further research is warranted.

Added studies on work incentives could be made in other states to reinforce or contradict the Michigan experience. But in addition to replicating this study, we feel that more refined work should be done in an attempt to identify why some welfare mothers work more because of the incentive while others do not. More research is needed to judge the effectiveness of work incentives under different labor market conditions, with different incentive formulas, with different welfare program administration, and over longer periods of time. Further work is also needed to see how various manpower programs, such as training, affect the success of using work incentives. We hope that this study stimulates further research in these areas.

## FOOTNOTES

<sup>1</sup>Richard Perlman, "A Negative Income Tax Plan for Maintaining Work Incentives," Journal of Human Resources, III (Summer, 1968), 289-299.

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## APPENDICES

# APPENDIX A

## SAMPLE SIZES AND PORTION OF THE STATEWIDE AFDC CASELOAD FOUND IN EACH GEOGRAPHIC AREA

Area	Cross section active samples sample sizes by region 1969 and 1970		Percent of actual caseload in each region in July 1970	Longitudinal sample of active cases in July 1970 by region
	July 1969	July 1970		
I	177	262	2.3%	141
II	258	429	.7	170
III	60	112	.3	39
IV	461	744	7.2	388
V	604	1023	5.1	481
VI	283	459	6.8	246
VII	263	523	3.9	216
VIII	509	747	3.8	399
IX	540	945	2.8	448
X	215	434	5.5	164
XI	289	431	2.6	195
XII	731	1138	45.0	672
XIII	270	409	3.0	233
Total	4660	7656	89.0% <sup>a</sup>	3792

<sup>a</sup> The remaining 11% of the total caseload is in areas which were not sampled. The omissions are generally rural areas, similar to areas I-III and XIII.

# APPENDIX B

## SAMPLE FRACTION AND SAMPLE SIZES FOR EACH GEOGRAPHIC AREA

Area	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	Total
Sample fraction	1/5	1/1	1/1	1/7	1/4	1/10	1/5	1/3	1/2	1/8	1/4	1/25	1/5	
Sample Sizes														
1969 active	177	258	60	461	604	283	263	509	540	215	289	731	270	4660
1970 active	262	429	112	744	1023	459	523	747	945	434	431	1138	409	7656
1970 longitudinal*	141	170	39	388	481	246	216	399	448	164	195	672	233	3792
1970 opening**	61	20	11	208	204	313	244	114	73	368	83	124	116	1939
1970 closing	119	26	13	241	142	264	140	148	85	221	113	681	102	2295

\* We had data on 39 additional cases which were active in July 1969 and July 1970 but had moved out of one the 13 study areas over the year.

\*\* This is a 100% sample of all the cases which we could tell were recent openings. Many of the newly opened cases had no data reported on opening dates.

## APPENDIX C

### Estimation Procedures Used to Determine Changes in the Number of Persons Employed in Jobs Likely to be Filled by AFDC Mothers

The estimation was started by using the detailed population-characteristic data from the 1960 census for Michigan. Using the tables on occupation by sex and industry, a calculation was made of the portion of females employed in certain jobs which AFDC mothers are likely to hold. Clerical, operative, and sales and service jobs were chosen as pertinent because a study, done by the Michigan Department of Social Services in 1968, indicates that these categories cover the usual occupations of roughly 80 percent of the AFDC clients. (See Research Paper No.2, "Profile of Michigan AFDC Caseload," Michigan Department of Social Services, October 1969.)

A calculation was then made of the ratios of pertinent female employment to total employment by the industrial breakdown -- durable, non-durable, private, and governmental jobs. The categories were used exactly as they appear in the census tables, except medical and educational services were placed in the governmental sector. It was possible to make these calculations for the state as a whole and for the specific SMSAs of Detroit, Lansing, Flint, and Grand Rapids. This covered the six areas of our study -- X, XI, XII; VII; VI; and IV; respectively.

The next step was to estimate the changes in total employment for each of the areas for the four industrial categories. Labor force and employment estimates for eleven of the thirteen areas in our study were obtained from the Michigan Employment Security Commission (MESC) B/M series 3-69 for June of 1969 and 1970. It was felt that the June figures would be better for the purposes of this study than the July

Table C1

Estimated Ratios of Females Employed in Clerical, Sales  
Operative, and Service Jobs Compared to  
Total Employment by Industry

<hr/>					
Area					
Job	Michigan	Detroit	Lansing	Flint	Grand Rapids
Mfg.-Durable	13.56	12.72	10.93	14.88	18.55
Mfg. Non-Durable	21.08	20.23	17.00	15.65	25.05
Private Non-Mfg.	31.68	32.78	33.34	34.05	30.90
Government	29.10	28.76	32.43	31.34	26.88

Source: Figures derived from data obtained from the 1960 U.S. Census detailed population characteristics for Michigan.

data, since the July AFDC data more accurately reflects the June employment experience. Table C2 gives the raw employment figures used from the MESC report.

All that remained to do to get an estimate of the change in pertinent female employment, by area, was to multiply each appropriate employment figure by the predetermined ratio obtained from the census data. For the areas with no specific rates (five of eleven), the Lansing ratio was applied. We felt it would, if anything, weight the figures in favor of a larger than actual increase in female employment because it would weight governmental employment more heavily; governmental employment in Michigan increased between July, 1969 and July, 1970. Thus, this gives a conservative bias in the sense that it inflates any increase or deflates any decrease in our measured change in AFDC type employment. This provides the more favorable picture of the labor market changes.



Table C2

Total Number of Persons Employed in Certain Industries in  
June 1969 and June 1970 for Specific SMSAs

	Michigan	X,XI,XII Detroit	VIII Kalamazoo	Battle Creek	VII Lansing	IV Muskegon	Grand Rapids
June 1970							
MFG durable	909,200	485,200	13,100	15,400	36,200	22,200	55,100
MFG Non-durable	213,400	90,900	15,200	9,700	3,800	3,500	18,400
Non-MFG	1382,400	718,300	31,100	25,000	51,300	18,800	95,200
Government	521,700	215,800	13,100	10,700	46,200	6,900	20,800
June 1969							
Durable	977,000	520,600	14,100	17,000	37,100	23,900	59,200
Non-durable	223,200	95,300	15,700	9,700	3,500	3,300	18,800
Private	1397,000	733,600	29,700	25,100	50,800	19,100	97,300
Government	503,100	213,500	12,000	10,600	42,000	6,100	19,000
	VI Flint	V Saginaw	XIII Bay City	Benton Harbor	I Upper Peninsula	IX Jackson	Ann Arbor
June 1970							
MFG durable	80,900	29,000	8,000	20,200	8,500	14,500	31,200
MFG Non-durable	4,100	3,200	2,000	7,300	4,600	3,100	3,600
Non-MFG	53,800	32,000	13,900	23,900	44,100	21,100	32,700
Government	27,700	9,200	4,900	7,200	23,700	7,800	36,300
June 1969							
Durable	86,300	29,900	10,800	23,900	9,300	16,000	34,200
Non-durable	4,400	3,200	2,000	7,200	4,700	3,200	3,500
Private	56,800	33,500	14,500	22,300	43,500	20,600	31,100
Government	23,700	7,900	4,300	6,500	22,200	7,300	33,700

Source: Michigan Employment Security Commission B/M Series 3-69

The resulting figure should provide a reasonably accurate estimate of changes in female employment in the pertinent jobs, if the 1960 census ratios are valid for 1970. An attempt was made to account for possible changes in these ratios by looking at trends in job type as a portion of total jobs by industry. For example, the portion of clerical workers is projected to fall between 1960 and 1975 in the governmental sector.

(Occupation Employment Patterns for 1960 and 1975, U.S. Department of Labor, Bureau of Labor Statistics Bulletin #1599, December, 1968, p. 177.) The problem with this was that changes in the portion of males to females could not be accounted for in the same occupations.

Therefore, in order to come up with a conservative AFDC labor market estimate (one that would likely make the AFDC labor market look better than it actually was), the ratios developed from the census figures were increased by 10 percent whenever there was a substantial increase in total employment over the year (200 or more jobs) and left unchanged for no change or employment decreases. It is felt that this understates the actual number of females employed in the selected jobs in industries and areas with falling employment, and overstates the same employment in industries and areas with rising employment. The final estimate of the changes in employment -- in jobs likely to be filled by AFDC mothers -- would therefore show more of an actual increase, if it exists, or less of a decrease, if it exists. In this way, the data reflect a highly optimistic view of the labor market picture, which can be used to explain increases in AFDC employment over the July, 1969 to July, 1970 period. Table C3 shows the resulting estimates.

The portion of the total pertinent female employment (represented by the numbers in Table C3) was determined by dividing each of the

figures by the estimates of total female employment in July, 1969 -- obtained by multiplying the ratios from the 1960 census data by the total employment figures from MESC.

Table C3

Difference of 1969 and 1970 Estimates of the Female  
Employed in the Job Clerical, Operative, Sales, and Services

	X,XI,XII		VII	VIII		XIII	I
	Michigan	Detroit	Lansing	Kalamazoo	Battle Creek	Benton Harbor	Upper Peninsula
Durable	-9,194	-4,503	-98	-109	-175	-404	-87
Non-durable	-2,066	-890	56	-85	0	17	-17
Private Non-MFG	-4,625	-5,015	183	513	-33	587	220
Government	5,954	728	1,498	392	32	250	535
Total	-9,931	-9,680	1,639	711	-174	450	651

Source: Tables C1 and C2.

	IX		VI	V		IV	
	Jackson	Ann Arbor	Flint	Saginaw	Bay City	Grand Rapids	Muskegon
Durable	-164	-328	-804	-134	-298	-761	-315
Non-durable	-17	17	-47	0	0	-100	55
Private Non-MFG	183	587	-1022	-511	-204	-649	-93
Government	178	927	1379	448	207	532	237
Total	191	1203	-494	-197	-295	-978	-116

Source: Tables C1 and C2.

## APPENDIX D

### DESCRIPTION OF THE DATA AVAILABLE FOR EACH AFDC CASE IN THE SAMPLE

The basic data source was the central payroll data kept on each case by the Michigan Department of Social Services. The AFDC case data allowed an identification of each case by geographic area (county), sex of the grantee or head of household, and whether or not the case was recently opened or closed. In addition, the following information was available for each AFDC case as reported to the Department of Social Services by caseworkers:

1. Race
2. Number of persons in the family (in the grant)
3. Age of children
4. Age of the grantee
5. Gross earned income of the grantee
6. OASDI and other income received by the AFDC family
7. Net income -- which equals the OASDI, plus other income, plus the amount by which the grant is reduced as the result of earnings
8. The total amount of grant the family would receive in the absence of any earnings or other outside income
9. Actual grant payment
10. Expenses of employment -- allowed expenses plus the twenty-dollar minimum
11. Employment code -- which a caseworker assigns in an attempt to judge barriers to participation in the training aspects of the WIN program.