Sources of AFDC caseload growth in Massachusetts

Author: Stephen Venti

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SOCIAL WELFARE REGIONAL RESEARCH INSTITUTE
BOSTON COLLEGE

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Steven Venti
SWRRI PUBLICATION #22
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PREFACE

The purpose of this working paper is to attempt to identify the major sources of growth in the AFDC caseload in Massachusetts between 1959 and 1974. A substantial portion of the theory underlying the model presented in this paper was developed in the construction of a model of the General Relief program in Massachusetts. In many respects the present paper is simply an application of the analysis undertaken in the General Relief study to the problems of AFDC caseload behavior. A more intensive discussion of the "employment structure" hypothesis used here is presented in the General Relief study. Similarly, a much more comprehensive analysis of alternative theories of AFDC behavior and a review of the literature on AFDC caseload modeling is available elsewhere.

Because of the specialized nature of this study, several potentially important aspects of caseload behavior have been ignored. One of these is an analysis of AFDC "error rates" and the efficiency of "quality control" programs in AFDC administration. Throughout this study it is assumed that all cases on AFDC are categorically eligible to receive payments. Significant deviations from this assumption would in many cases contaminate the

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dependent variable used in much of the statistical analysis and leave the already tentative results open to even more question.

The approach taken in this paper — explaining the caseload level directly — may be less informative than an analysis of AFDC caseload behavior obtained by breaking down changes in caseload levels into changes in openings, closings, application rates, acceptance rates, and eligibility rates. Such an analysis is currently being undertaken at the Social Welfare Regional Research Institute using estimation techniques which are more sophisticated than the ordinary least squares used here on pooled cross-section and time series data.

Lastly, because the purpose of this study is to develop a model that can be analyzed to evaluate the sources of AFDC growth, many of the interim results of the statistical procedure have not been presented. Only the regression results for the final reduced form of the model are given.

There are several persons without whose support this study would never have been completed. First and foremost, I wish to thank Professor Barry Bluestone, who guided this study from beginning to end, and Lynn Ware, who provided both substantial contributions to the text and valuable programming assistance. I am also indebted to both of the above persons for allowing me to use material from our forthcoming study of General Relief without specifically citing the source of this material in the text. I also wish to thank Martin Lowenthal, Director of the Social Welfare Regional Research Institute, for providing financial assistance, facilities, and encouragement throughout the period in which this study was undertaken;
the Department of Economics at Boston College for providing computer
time, and Allan Charney of the Department of Public Welfare for furnishing me with unpublished information and data.

Steven Venti
INTRODUCTION

In January of 1959, there were 14,092 families in Massachusetts receiving assistance through the Aid to Families with Dependent Children (AFDC) program. By December of 1973, the number of cases had grown to over 90,000. Caseload growth during these fifteen years has not been uniform. In some years, the growth rate has exceeded twenty-five percent; in other years, it has been as low as one percent. It has, however, expanded steadily upwards. The month-to-month change in the caseload has been negative in only seven of the 156 months in the period between January, 1961, and December, 1973. Unless changes are implemented in the welfare system or in the underlying economic system that feeds it, few people see an end to the upward caseload movement.

How to slow or reverse the rise in welfare caseloads has been—and is—a major political question in Massachusetts. Every policy enacted in the past decade to slow caseload growth has implicitly assumed some theory of the determinants of AFDC caseload growth, and disagreement among administrators and legislators on the causes of caseload growth has resulted in sharp disagreement on the policies that should be used to check the caseload trend.

By examining the determinants of the AFDC caseload in Massachusetts, this study attempts to provide some answers to questions that have
consistently plagued policy makers. Are people on welfare because they are lazy? Or are they on welfare due to a lack of jobs? If so, will retraining or education improve their chances of finding and keeping a job in the labor market? If welfare benefit levels are cut, will people be driven off the caseload?

It is probably beyond the scope of this (or any other) study to provide definitive answers to these questions, but better knowledge of why people are on public assistance will inevitably lead to a more coherent welfare policy. For example, should resources be allocated to improve the supply side of the labor market (job training for welfare recipients), or would it be more efficient to directly affect the demand for labor through job creation and public employment programs?

Until the late 1960's, little attention was paid to the economic study of welfare caseloads. It was then that AFDC caseloads began to rise at what some felt was an alarming rate. The concurrent influence of fiscal crisis in many states, along with a revival of the "Protestant ethic" in political debate, caused public attention to be drawn to the administration and financing of welfare programs.

Few people believe that welfare programs, especially AFDC, should be eliminated entirely. There are thousands of "legitimate" examples of families that would be unable to survive in the absence of welfare assistance. But many people feel that current caseloads are unnecessarily bloated by "free loaders" and other persons simply trying to avoid working. These same critics generally believe that if welfare benefit levels were
slashed all those persons able to find employment would be driven from the public dole. The legitimacy of these criticisms - the underlying assumptions about the availability of market employment to welfare recipients and the reasons people are on the caseload in the first place - will be raised in this study.

Another view of welfare recipients which became popular in the late 1960's addressed itself to the "human capital" characteristics of welfare recipients. According to this theory, caseloads were high because of the low training levels, poor health, and low educational attainment of a segment of American society. The people in this segment came upon hard times in the technology boom of the 1960's when they easily outnumbered the job "slots" in the labor market requiring low skill or minimum training. Much of this "residual" segment of the labor force had no alternative but to receive welfare payments. An outgrowth of this view was to emphasize the "human capital" inadequacies of the welfare recipient population. Training and manpower programs were implemented to retrain and educate welfare recipients to that they could find jobs in the labor market.

Another view, similar in many respects to the "human capital" perspective, has emerged in the early and mid 1970's. Rather than emphasizing the characteristics of individuals, this view emphasizes the characteristics of jobs. Low wages, short job tenure, and scarce job opportunities are often the result of labor market imperfections such as discrimination, poor information channels, or the lack of labor market
competition on the employer side of the labor market. Consequently, the
jobs available to the low trained, low educated segment of society fail
to support this segment of the population adequately, and these individ-
uals often must resort to public assistance as a means of survival. If
this view is accepted, primary policy emphasis is then placed on the
characteristics of jobs and fitting these jobs to the needs of people,
rather than on fitting people to the requirements of jobs. This view is
partially reflected by the recent resurgence of interest in public employ-
ment programs and job creation, but it goes a step further to suggest
that emphasis be placed on alleviating the low wage and high turnover
aspects of existing jobs.

Each of the above viewpoints implicitly assumes some theory of
labor market - welfare caseload interaction. It is hoped that the follow-
ing analysis will expose some of the links between caseload behavior and
labor market activity, thus bringing planners a step closer to the formula-
tion of uniform, effective welfare policy.
I. AFDC, WOMEN, AND THE MASSACHUSETTS ECONOMY

Administration of AFDC

Aid to Families with Dependent Children (AFDC) is a categorical public assistance program enacted in 1935 "to assist needy children under age 16 who were deprived of parental support because of death, incapacity, or absence from the home of a parent." In the 40 years following its inception, the program has changed dramatically in scope and in size. It has long been the largest categorical public assistance program in Massachusetts and in 1973 provided assistance to over 300,000 recipients monthly at a cost of almost $30,000,000 per month.

Originally (in 1935), AFDC provided benefits only to the children of broken families. Coverage was extended in 1950 to include the parent in a single-parent household. In 1962, legislation was enacted which allowed AFDC to assist families with more than one unemployed parent present in the home (the AFDC-UP segment of the AFDC caseload). No other major revisions in AFDC coverage have been implemented since 1962.

In Massachusetts, AFDC is administered by the State Department of Public Welfare in accordance with federal guidelines. Currently, most of the cost of the program is shared equally by the state and federal governments, with two minor exceptions: the federal government pays 67 percent of all emergency funds and 90 percent of all day care expenditures.

Over the period covered by this study (1959-1973) there was one major change in the administration of AFDC. This was the implementation
of the Work Incentive (WIN) program (July, 1968), the first federally supported manpower program designed specifically for welfare recipients. The primary purpose of the WIN program was to provide incentives and training to encourage AFDC recipients to find employment. The most notable aspect of the WIN program was the "thirty and one third" provision, which required states to disregard 1) the first $30 earned by an AFDC family in a month and 2) one third of the remainder, in computing benefits. Before this WIN provision, 100 percent of the working income of AFDC household heads was subtracted from the monthly AFDC grant. Beginning in 1968, an AFDC household head could earn up to $30 a month without a reduction in the grant. For monthly earnings greater than $30, the AFDC grant would be reduced by only two thirds of the amount of working income. Supporters of the WIN program believed that these earnings exemptions, combined with more training opportunities, would provide a financial incentive for AFDC recipients to seek employment.

The primary source of income to an AFDC family is the "basic" grant. The level of this grant is dependent upon several factors, the most important of which are size of family, receipt of non-assistance income, and the percentage of household expenses paid by the AFDC household head. The level of the "basic" grant is set by the state and must meet a federal minimum. It is intended to meet the "continuing" expenses (food, rent, utilities, etc.) of the recipient family. Recognition that many families are living without certain basic needs such as furniture, appliances, and clothing (especially at the time of applica-
tion for AFDC) has led to the institution of several other assistance grants designed to bring a family up to a standard at which they are able to subsist on the basic grant designed to cover "continuing" expenses. Prior to 1971, the main source of such funds was the "special needs" fund. Cost criticism, charges of mismanagement, and huge regional variations in "special needs" grants led to their replacement by several new programs during 1971 and 1972. In 1973, eligible families were receiving initial expenses from three remaining sources (in addition to the "basic" grant):

1) Thirty-Day Emergency Assistance Plan - a program independent of AFDC designed to cover the initial expenses of AFDC eligible families before they enroll in the AFDC program.

2) Family Disaster Fund ("Hardship" fund) - a program covering the extraordinary expenses of families on AFDC. This fund primarily covers furniture and utility expenses.

3) Flat Grant - a quarterly grant to all AFDC families which is intended to cover all special needs that might arise.

Until 1974 there were no automatic increases in AFDC grant levels due to increases in the cost of living. However, there were eight administered increases in the basic grant effected through legislation during the 15 years between January, 1959, and January, 1974.
There is surprisingly little published information on the demographic composition of the AFDC caseload in Massachusetts. The caseload is predominantly urban, with about 43 percent of the cases in cities with a population greater than 100,000. The typical AFDC family has a white (74.7 percent) female head of the household of median age 31.1 years. The AFDC-UP segment, consisting of male-headed households, was about three percent of the total caseload in 1971.

The Massachusetts Economy

The past decade and a half have witnessed a dramatic change in the Massachusetts economy. The traditional backbone of the economy has been manufacturing, especially nondurables in the textile, apparel, and shoe industries. In the past 15 years these traditional leading industries have experienced significant employment declines. Other sectors of the economy have registered large employment gains to fill in the void left by the decline of manufacturing employment. Table 1 indicates that the largest employment gains are in service, government, wholesale and retail trade, finance, insurance, and real estate. The only declines have been in the manufacturing sector, with nondurable goods manufacturing employment declining by 21 percent between 1959 and 1972.

1 Findings of the 1971 AFDC Study, Part 1, Demographic and program characteristics, DHEW publication # (SRS) 72-03756 and NCSS report #AFDC-1 (71), Table 1. Hereafter cited as Findings of the 1971 AFDC Study.

Table 1

**Employment in Massachusetts**

<table>
<thead>
<tr>
<th>Industry</th>
<th>% change* 1959-1972</th>
<th>% of labor force in industry 1959</th>
<th>% of labor force in industry 1972</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Construction</td>
<td>27%</td>
<td>4.2%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Durable Goods Manufacturing</td>
<td>-5</td>
<td>16.9</td>
<td>13.3</td>
</tr>
<tr>
<td>Nondurable Goods Manufacturing</td>
<td>-21</td>
<td>20.1</td>
<td>13.2</td>
</tr>
<tr>
<td>Transportation and Public Utilities</td>
<td>13</td>
<td>5.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Wholesale and Retail Trade</td>
<td>32</td>
<td>20.1</td>
<td>22.0</td>
</tr>
<tr>
<td>Finance, Insurance, and Real Estate</td>
<td>33</td>
<td>5.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Services and Mining</td>
<td>68</td>
<td>15.1</td>
<td>21.1</td>
</tr>
<tr>
<td>Government</td>
<td>39</td>
<td>12.9</td>
<td>14.9</td>
</tr>
<tr>
<td>Total Labor Force</td>
<td>21%</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

* % change in employment within industry

The causes of this structural shift are generally attributed to three developments. First, since 1969, Massachusetts has experienced a steady decline in the once dominant labor-intensive textile, apparel, and shoe industries in Massachusetts due to a decreased demand for these products. Second, cutbacks in defense spending beginning in about 1970 seriously affected the electrical machinery, ordnance, and non-electrical machinery sectors of durable manufacturing. Lastly, Massachusetts has been faced with an increasingly unsuitable infrastructure for manufacturing: the costs of energy are among the highest in the nation, and the transportation network is deteriorating.

Clearly, as Table 1 indicates, Massachusetts is shifting rapidly towards a service-oriented economy. In 1959, nondurable goods manufacturing was the largest industrial sector in the Massachusetts economy. By 1972, it had dropped in rank to fifth. During this same period, wholesale and retail trade moved from second to first in employment, and the service sector jumped from fourth to second positions.

Women's Occupations

Examination of Table 2 reveals that women are "crowded" into four industrial sectors in the Massachusetts economy: the manufacturing sectors (durable and nondurable), professional and related services, and retail trade. The largest concentration of female employment is in professional and related services, where females make up 61 percent of

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3 A detailed explanation of this structural shift is The Economic Development of Massachusetts, Bennett Harrison, Report to the Joint Committee on Commerce and Labor, Massachusetts State Legislature, November, 1974, Ch. 1.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment</th>
<th>% of female labor force</th>
<th>% of industry</th>
<th>Employment</th>
<th>% of male labor force</th>
<th>% of industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Fishing</td>
<td>3,281</td>
<td>0.3%</td>
<td>14.8%</td>
<td>18,814</td>
<td>1.3%</td>
<td>85.2%</td>
</tr>
<tr>
<td>Mining</td>
<td>234</td>
<td>0.02</td>
<td>11.8</td>
<td>1,749</td>
<td>0.1</td>
<td>88.2</td>
</tr>
<tr>
<td>Construction</td>
<td>6,833</td>
<td>0.7</td>
<td>5.1</td>
<td>127,321</td>
<td>9.1</td>
<td>94.9</td>
</tr>
<tr>
<td>Manufacturing – Durable Goods</td>
<td>105,753</td>
<td>11.5</td>
<td>26.9</td>
<td>287,916</td>
<td>20.6</td>
<td>73.1</td>
</tr>
<tr>
<td>Manufacturing – Nondurable Goods</td>
<td>122,408</td>
<td>13.3</td>
<td>41.9</td>
<td>169,731</td>
<td>12.1</td>
<td>58.1</td>
</tr>
<tr>
<td>Transportation, Communications, Utilities</td>
<td>33,688</td>
<td>3.7</td>
<td>25.3</td>
<td>99,247</td>
<td>7.1</td>
<td>74.7</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>24,430</td>
<td>2.7</td>
<td>24.6</td>
<td>75,022</td>
<td>5.4</td>
<td>75.4</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>164,601</td>
<td>17.9</td>
<td>45.4</td>
<td>197,783</td>
<td>14.1</td>
<td>54.6</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>69,173</td>
<td>7.5</td>
<td>52.3</td>
<td>63,154</td>
<td>4.5</td>
<td>47.7</td>
</tr>
<tr>
<td>Business and Repair Services</td>
<td>19,086</td>
<td>2.1</td>
<td>27.2</td>
<td>51,091</td>
<td>3.7</td>
<td>72.8</td>
</tr>
<tr>
<td>Personal Services</td>
<td>46,009</td>
<td>5.0</td>
<td>62.3</td>
<td>27,805</td>
<td>2.0</td>
<td>37.7</td>
</tr>
<tr>
<td>Entertainment, Recreational Services</td>
<td>4,819</td>
<td>0.5</td>
<td>32.2</td>
<td>10,133</td>
<td>0.7</td>
<td>67.8</td>
</tr>
<tr>
<td>Professional and Related Services</td>
<td>288,032</td>
<td>31.3</td>
<td>61.1</td>
<td>183,127</td>
<td>13.1</td>
<td>38.9</td>
</tr>
<tr>
<td>Public Administration</td>
<td>31,096</td>
<td>3.4</td>
<td>26.1</td>
<td>88,028</td>
<td>6.3</td>
<td>73.9</td>
</tr>
</tbody>
</table>

total employment. A closer examination of this sector reveals that women are concentrated in the low paying, less skilled occupations within this industry. In fact, within the professional and related services sector, 50 percent of the women are in clerical and service occupations and only 46 percent are in professional and technical occupations (the corresponding percentage for men is 61). This occupational stratification is even more severe in the finance, insurance, and real estate sector, where over 80 percent of the females are in clerical and kindred occupations, but only 21 percent of the men are.

An examination of the occupational distribution of women in Massachusetts will yield more relevant information concerning female employment. Table 3 presents the twenty occupations with the largest female employment in Massachusetts in 1969. The extent of occupational crowding is clear; the first 10 occupations listed account for over 50 percent of the female labor force in Massachusetts.

AFDC Mothers and the Labor Market

Since 97 percent of the AFDC caseload is composed of female-headed families, this study is concerned with the interaction of AFDC mothers and the labor market. There is little information available on the types of jobs AFDC mothers occupy in the Massachusetts economy. However, the jobs they would be likely or unlikely to take can be inferred from the family and employment characteristics of AFDC mothers.

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4 1970 Census of the Population, Volume 1, Part 23 (Massachusetts), Table 177.

5 1970 Census of the Population, Volume 1, Part 23 (Massachusetts), Table 177.
Table 3
Twenty Largest Female Occupations in Massachusetts (1969)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Clerical and kindred workers</td>
<td>90,841</td>
</tr>
<tr>
<td>Secretaries</td>
<td>86,594</td>
</tr>
<tr>
<td>Teachers</td>
<td>62,347</td>
</tr>
<tr>
<td>Food service workers</td>
<td>52,106</td>
</tr>
<tr>
<td>Sales clerks - retail trade</td>
<td>47,104</td>
</tr>
<tr>
<td>Bookkeepers</td>
<td>39,122</td>
</tr>
<tr>
<td>Registered nurses, dieticians, and therapists</td>
<td>38,546</td>
</tr>
<tr>
<td>Health service workers</td>
<td>35,923</td>
</tr>
<tr>
<td>Typists</td>
<td>33,341</td>
</tr>
<tr>
<td>Sewers and stitchers</td>
<td>33,295</td>
</tr>
<tr>
<td>Miscellaneous and not specified operatives</td>
<td>32,116</td>
</tr>
<tr>
<td>Other specified operatives</td>
<td>28,835</td>
</tr>
<tr>
<td>Cashiers</td>
<td>20,263</td>
</tr>
<tr>
<td>Personal service workers</td>
<td>19,473</td>
</tr>
<tr>
<td>Assemblers</td>
<td>19,392</td>
</tr>
<tr>
<td>Packers and wrappers - exc. produce</td>
<td>16,595</td>
</tr>
<tr>
<td>Office machine operators</td>
<td>14,806</td>
</tr>
<tr>
<td>Checkers, examiners and inspectors - manufacturing</td>
<td>13,990</td>
</tr>
<tr>
<td>Telephone operators</td>
<td>13,973</td>
</tr>
<tr>
<td>Cleaning service workers</td>
<td>12,823</td>
</tr>
</tbody>
</table>

* census classifications

Probably the greatest barrier to the employment of AFDC mothers is the presence of children. In 1967, 24 percent of the Massachusetts AFDC families had one child, 27.4 percent had two children, 20.4 percent had three children, 12.1 percent had four children, and the remaining percentage of families had five or more children.\(^6\) The median number of children per family was 2.9 percent.\(^7\) By 1969, the median number of children per family had dropped slightly to 2.8, and it dropped even further to 2.7 in 1971.\(^8\) In 1971, over 46 percent of the Massachusetts AFDC mothers were classified as "needed in the home full time as homemaker."\(^9\) The most often mentioned means of overcoming this barrier is the use of day care. This approach has not been heavily utilized in Massachusetts. In 1971, only 4.6 percent of the AFDC mothers were provided with day care services.\(^10\) The importance of the presence of children at home as a barrier to employment of AFDC mothers is indicated in a 1969 national study which cited the lack of child care as the major obstacle to the employment of AFDC women.\(^11\)

\(^6\) Findings of the 1967 AFDC Study, Part 1, Demographic and Program Characteristics, NCSS report #AFDC-3 (67), Table 5.
\(^7\) Ibid., Table 5.
\(^8\) Findings of the 1969 AFDC Study, Part 1, Demographic and Program Characteristics, NCSS report #AFDC-3 (69), Table 4 and Findings of the 1971 AFDC Study, Part 1, Table 6.
\(^10\) Ibid., Table 37.
There are other barriers to the employment of AFDC mothers in Massachusetts. From a human capital perspective, AFDC women are relatively disadvantaged in the labor market, partly because being women limits the number of occupations to which they are likely to gain entry, and partly because their education is relatively deficient. The 1971 and 1975 studies of AFDC women in Massachusetts revealed that only about 45 percent completed high school, and only 0.7 percent were college graduates. AFDC mothers have, however, considerable experience in the job market. A 1975 study reported that 90 percent of the Massachusetts AFDC women had worked at some time in the past.

II THEORIES OF WELFARE CASELOAD CHANGES

Traditional Neoclassical Theory

Traditionally, neoclassical economic theory has viewed changes in welfare caseloads as a special case of the demand for leisure. The seminal work in this area is "The Demand for General Assistance


The authors constructed a theoretical model of the demand for general assistance payments (G.A.P.) based on the assumption that individuals faced a free choice between work and leisure (welfare). Facing the market wage rate (price of leisure) and a given level of G.A.P., a utility-maximizing individual is confronted with alternative means of maximizing his utility. Brehm and Saving theorized that certain combinations of wage rates and general assistance benefits would lead to a rational choice to "specialize" in leisure (welfare). Using "indifference curve analysis," they showed that higher benefit levels would tend to increase the number of recipients, and higher market wage rates would tend to decrease the number of recipients. Their analysis implied that the problem of rising caseloads could be ameliorated by either raising market wage rates or reducing the payment level of welfare programs.

Empirical verification of this theory by its authors was weak and has been widely criticized. Brehm and Saving attempted to verify the theory by regressing the number of recipients on a set of variables including payments, wages, and a payment-wage ratio using pooled cross-section and time series data for 45 states for the years 1951 through 1959.

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14 C. T. Brehm and T. R. Saving, "The Demand for General Assistance Payments," *American Economic Review*, December, 1964, pp. 1002-1018. Although this study concerned a non-categorical welfare program (general assistance), the results and analysis are relevant to the study of AFDC.

They found the coefficients on the payment and payment-wage ratio variables to be positive (as expected) and significant in most cases, but contrary to their expectations, they could find no significant relationship between the wage rate and the caseload. Further doubt has been cast on these results by Albin and Stein, who re-estimated Brehm and Saving's equation using "corrected" data. They concluded that the Brehm and Saving results were probably the consequence of an error, either in the data or in model construction. Reestimation of the original equation revealed that when the number of recipients was regressed against either payment levels or payment-wage ratios, the coefficients were invariably negative. Thus, Albin and Stein concluded that "since empirical evidence does not support the BS (Brehm and Saving) hypothesis, their 'demand for leisure' approach and its theoretical underpinnings must be questioned."

Further research has since been undertaken to test the validity of the traditional work-leisure model expressed by Brehm and Saving. Hirschel Kasper later attempted to test the effect of payment levels on both cases and recipients and found no significant relationship between

16 Brehm and Saving, op. cit., pp. 1012 and 1013.
17 Albin and Stein, op. cit., pp. 576 and 577.
18 Ibid., p. 582 and 583.
19 Ibid., p. 584.
the two. He concluded that the results of Brehm and Saving were probably due to specification error in their model, and that labor market conditions were probably more important than payment levels in determining caseloads.

Two other empirical studies of welfare dependency were conducted by Daniel Saks and Hugh Spall and Edward McGoughran using time series data for the state of Michigan. The former study yielded significant regression coefficients contradictory to those expected by the traditional work-leisure model. These results include a negative coefficient on an average payments per case variable and a positive relationship between average female unskilled earnings and the caseload. The latter study included a variable composed of the average wage in the service industries divided by the average AFDC grant per family. Although the authors found the expected (negative) sign on this variable, the results of their calculations are questionable due to the specification of their model.

21 Ibid., p. 102.
24 Saks, op. cit., p. 18.
25 Spall and McGoughran, op. cit., p. 83. The wage-payment ratio was the only trend variable in their model, and so the relationship between AFDC and this variable might have been spurious.
Structure of Employment Theory

There is an alternative theory to the traditional work-leisure model. This theory relies on a structural analysis of employment opportunities in a given labor market.

Massachusetts is experiencing an increase in employment in the service, government, and wholesale and retail trade sectors at the same time that employment is declining in the manufacturing sector (especially nondurable goods manufacturing). What are the implications of this structural shift for the AFDC population? Traditionally, many "female" jobs have been in the low training, nondurable goods manufacturing industry in Massachusetts. This industry has generally afforded stable (non-seasonal) low wage employment for women, but employment in this female-dominated sector has been steadily declining over the last fifteen years.26 Women displaced from these industries generally lack the training to find jobs in the growing high skill sectors and often find that the only jobs available to them are in the lower skilled service and retail trade sectors. A look at the characteristics of persons displaced by the employment decline in the nondurable manufacturing sector suggests a strong likelihood of structural unemployment. For instance, the geographic areas most affected by the loss of low skill "female" jobs in nondurable manufacturing differ from those regions benefiting most from the service and retail job

---

26 These industries include the traditional mill-based firms (apparel, textiles) and the leather goods industry, which together once formed the backbone of Massachusetts industry.
expansion. Currently, the most economically depressed regions in the state are the Fall River, Lowell, and New Bedford Standard Metropolitan Statistical Areas (SMSA's), the former locations of the mill-based textile industries.

On the other hand, employment in the growing service and retail trade sectors tends to be concentrated in the more economically prosperous regions of the state. Services and retail trade, by their very nature, grow and decline with the economic fortunes of the areas in which they are located. For example, tourist-related industries are concentrated primarily in the Cape Cod and Boston metropolitan regions, and the retail trades show their greatest employment strength in the relatively prosperous Boston and Worcester SMSA's. These regional differences in the growing and declining sectors within the Massachusetts economy suggest that a lack of perfect geographic mobility might result in a significant number of structurally unemployed individuals.

A possibly more important cause of structural unemployment is the skill "mismatch" attributable to the employment shift. Persons displaced by the declining sectors (in specific occupations such as sewers and stitchers, assemblers, packers, and operatives) might not fit smoothly into the new openings in the growing service and retail trade sectors (positions including waitresses, sales clerks, and food, health, and cleaning service workers). The result, in this case, is that even in a labor market in which many jobs are available, displaced persons will often be unable to move into open jobs because some of their labor market characteristics do not fit those of existing vacancies. The result is
that some of the workers displaced from the low training manufacturing sector are absorbed into the service and retail trade sectors, and the remainder are victims of structural unemployment, making them potential AFDC recipients.

Even if the growing service and retail trade sectors could absorb all the workers displaced from low training manufacturing jobs, that structural shift would still have a positive impact on the AFDC caseload, since the new jobs created in the service and retail trade sectors are not as stable as jobs in the low training manufacturing industries. Jobs in the service and retail trade sectors are generally characterized by low wages, low skill levels, high turnover, and a high degree of seasonality in employment. Some service jobs, especially those in the tourist-related industries\(^{27}\) have high employment during the summer months but remain dormant throughout the remainder of the year. Other female-dominated industries also tend to reach their peak employment during the summer months.\(^{28}\) Retail trade, on the other hand, generally reaches its peak employment in the months of November and December. Both the service and retail trade sectors are also characterized by low numbers of weeks worked per year and low numbers of hours worked per week.

The full impact on the AFDC caseload of high turnover and seasonal employment can be understood by examining the structure of income generated by seasonal and nonseasonal industries. A recent study has shown that in

\(^{27}\)Eating and drinking establishments, motels, hotels, etc.

\(^{28}\)Household services, laundry and dry cleaning establishments, and other personal services.
1970 (under the WIN program) the household head of a Massachusetts AFDC family must earn a full time (40 hours per week), full year (50 weeks per year) hourly wage of $2.77 to remove his or her family completely from the AFDC caseload. 29 Recent evidence indicates, however, that a woman is likely to face from 1.7 to 7.5 weeks of unemployment during the year. 30

This unemployment situation is exacerbated by the characteristics of jobs in the service or retail trade sectors, which due to seasonality and high turnover probably have a shorter duration of steady work per employee than other industrial sectors. It is, therefore, a very realistic possibility that jobs in the service and retail trade sectors do not provide a consistent income source to keep workers who are categorically eligible for AFDC off the relief rolls. It is also possible that employment in the service and retail sectors actually increases the caseload by expanding the pool of potential AFDC recipients that may require income supplementation, especially during periods of low seasonal employment in the service and retail trade sectors.

The structural shift in employment in the Massachusetts economy is, then, relevant to an analysis of the caseload through two independent effects: the structural unemployment caused by the steady decline of the


traditional nondurable goods manufacturing sector, and the inadequacy of the jobs that are available - low wage, high turnover, seasonal jobs - to support families categorically eligible for AFDC.

III THE EFFECTS OF STATE TAKEOVER AND WIN ON CASELOADS

Several administrative changes have also had an impact on the AFDC caseload.

State Takeover

Prior to July 1, 1968, AFDC was nominally administered by the State Department of Public Welfare through localities which admitted persons to the caseload and determined payments (loosely) on the basis of state and federal guidelines. Theoretically, AFDC was to be administered uniformly throughout the state, with each locality following the same rules and procedures. Actually, enforcement of state guidelines differed among localities. Disparity was especially evident in the disbursement of "special needs" grants, which were intended to meet the extraordinary expenses of families new to the caseload. Some localities were very "liberal" in giving these grants; others were not. Ostensibly in an effort to make the system more uniform and more efficient, the State Department of Public Welfare took over the administration of all welfare programs on July 1, 1968.

It is generally conceded that this centralization did streamline the administrative process and lower administrative costs, but it probably had a positive effect on the caseload, because the guideline enforcement policy
adopted by the state tended to parallel that of the more "liberal" localities. The result was that for a short period following the state takeover, many of the new families entering the welfare rolls were those taking advantage of the new "liberal" state interpretation of the guidelines, especially those dealing with eligibility requirements. Statistical analysis suggests that this "start-up" period of rapid caseload expansion lasted about twenty months. Following this initial period, the caseload trend continues upward, albeit at a much slower rate, because new applicants are screened on the basis of state interpretation of the eligibility guidelines.

Work Incentive Program (WIN)

An investigation into the total effect of the WIN program on the AFDC caseload is beyond the scope of this paper. The impact of the WIN program has been well documented elsewhere. Past studies will be used in an attempt to estimate the impact of the WIN program in Massachusetts. Most of these studies are in general agreement concerning one result: the WIN program failed to reduce the AFDC caseload. Vernon Smith estimated that the WIN program increased the average monthly Michigan caseload by 2.7 percent in the year following its implementation. Many other studies have confirmed this positive impact of WIN with respect to AFDC due to


-24-
broadened eligibility requirements and training opportunities made available to AFDC recipients through the WIN program.\textsuperscript{33} The overall effect of the WIN program has been to increase AFDC caseloads but at different rates at different times. Holding the program administration constant, an initial surge of families enter the AFDC caseload when the program is implemented in 1968 (the WIN program in effect broadened eligibility requirements).\textsuperscript{34} After this pool of initial applicants is admitted to the caseload, the rate of increase in caseload growth tapers off, although remaining at a level higher than that which existed before the program was implemented.

\textsuperscript{33}See Schiller, \textit{op. cit.} for citations.

IV THE MODEL

We will now attempt to construct a model of AFDC caseload behavior encompassing the economic and institutional factors discussed in the previous two sections. The reduced form AFDC model will assume the following functional relationship:

\[
\text{AFDC cases} = f(X_1, X_2, X_3, X_4, X_5)
\]

where:

- \(X_1\) = Variables suggested by the traditional work-leisure model.
- \(X_2\) = Variables suggested by the alternative "employment structure" hypothesis.
- \(X_3\) = Variables proxying population growth.
- \(X_4\) = Variables measuring the impact of the business cycle and aggregate labor market conditions.
- \(X_5\) = Variables controlling for the supply of AFDC "slots."

Dependent Variable

The dependent variable to be explained is the number of AFDC cases in Massachusetts in a given month. For present purposes, this excludes the relatively small three percent AFDC-UP segment of the caseload in 1973. There is some controversy concerning which is a better measure of welfare: cases or recipients. Most studies agree that, theoretically, the number of cases is a better measure because it more closely represents the individual decision-making unit. The number of recipients, of course, is primarily a function of family size. When doing empirical work, many authors nevertheless resort to using
the number of recipients as the relevant variable in spite of its theoretical shortcomings. This is because state-to-state variance in the definition of a case unit prohibits against the use of "case units" in cross-sectional analysis among states. Since this study concerns AFDC within a single state over time, during a period in which no important change was made in the definition of a case unit, the theoretically preferred caseload measure may be used. The number of recipients per case has probably remained relatively stable throughout the duration of this study: there were about 3.5 recipients per case in December, 1962 (the earliest period for which recipient data is available), and there were 3.4 recipients per case in December, 1973.

Work-Leisure Model Variables

Constructing variables to test the work-leisure model of caseload determination is a relatively simple task. The traditional theory suggests that payments levels will have a positive impact on the caseload. An alternative market wage (in this case, nondurable manufacturing weekly earnings) should have an inverse relationship with the caseload. The ratio of payment levels to wages is used to give the best measure of alternative income opportunities.

Because the above variables have often been ineffective in previous studies, the traditional work-leisure model is also specified, conditional upon the existence of tight labor markets. It is possible that in periods of high unemployment ("loose" labor markets) individuals do not have the work alternative to welfare that the traditional theory
assumes exists. If this is the case, the traditional work-leisure model should effectively explain caseload behavior only during periods of tight labor market activity. Several specifications are suggested to capture this effect. The first specification involves a payment-wage ratio weighted by the employment rate (one minus the unemployment rate). This will give more weight to the work-leisure model during periods of tight labor markets (high unemployment rates). A second specification dummies the payments-wage ratio so that it is effective only during periods of low unemployment. 35

Employment Structure Variables

The process by which the shifting structure of employment in Massachusetts might affect the AFDC caseload is empirically tested using employment samples that proxy the sectors of the economy suggested by the theory.

In this process, a variable was constructed to proxy the traditional low training, mill-based manufacturing sector whose decline was indicated as an important factor in caseload growth. To construct an employment sample for this sector, all three-digit (Standard Industrial Classification) industries that meet the following criteria have been used:

35 Unemployment rates 4, 5, and 6 percent were used to proxy "low unemployment."
1) The industry must be predominately (50 percent or greater) female because the AFDC caseload consists almost entirely of female-headed households.

2) The industry must be in the nondurable manufacturing sector of the Massachusetts economy.

3) Employment in the industry must be characterized by low levels of training. A low training industry is defined to be any industry which had an average "specific vocational preparation" score lower than one standard deviation below the mean for all industries. 36

From this analysis 18 three-digit (SIC) industries were derived that fit the above criteria. A nineteenth industry, electronic components and accessories, was added to this sample on the basis of the findings of a recent study of the welfare caseload in Massachusetts. 37 This sample (Table 4) will hereafter be referred to as the LT (low training) sample.

Theoretically, an improved employment sample could be constructed using occupational breakdowns, but such data are unavailable on a monthly basis. Consequently, an industrial breakdown must be used which


<table>
<thead>
<tr>
<th>SIC</th>
<th>Industry Title</th>
<th>Employment</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>207</td>
<td>Confectionery and Related Products</td>
<td>7,847</td>
<td>4,215</td>
</tr>
<tr>
<td>225</td>
<td>Knitting Mills</td>
<td>6,432</td>
<td>6,343</td>
</tr>
<tr>
<td>231</td>
<td>Men's and Boys' Suits and Clothes</td>
<td>7,139</td>
<td>4,036</td>
</tr>
<tr>
<td>232</td>
<td>Men's and Boys' Furnishings</td>
<td>5,986</td>
<td>6,567</td>
</tr>
<tr>
<td>233</td>
<td>Women's and Misses' Outerwear</td>
<td>22,747</td>
<td>18,001</td>
</tr>
<tr>
<td>234</td>
<td>Women's and Children's Undergarments</td>
<td>5,786</td>
<td>3,046</td>
</tr>
<tr>
<td>235</td>
<td>Hats, Caps, and Millinery</td>
<td>3,218</td>
<td>473</td>
</tr>
<tr>
<td>236</td>
<td>Children's Outerwear</td>
<td>1,773</td>
<td>1,603</td>
</tr>
<tr>
<td>237</td>
<td>Fur Goods</td>
<td>34</td>
<td>7</td>
</tr>
<tr>
<td>238</td>
<td>Misc. Apparel and Accessories</td>
<td>3,889</td>
<td>3,288</td>
</tr>
<tr>
<td>239</td>
<td>Misc. Fabricated Textile Products</td>
<td>8,811</td>
<td>8,756</td>
</tr>
<tr>
<td>311</td>
<td>Leather Tanning and Finishing</td>
<td>7,422</td>
<td>3,125</td>
</tr>
<tr>
<td>312</td>
<td>Industrial Leather Belting</td>
<td>282</td>
<td>134</td>
</tr>
<tr>
<td>313</td>
<td>Footwear Cut Stock</td>
<td>7,983</td>
<td>3,911</td>
</tr>
<tr>
<td>314</td>
<td>Footwear, except Rubber</td>
<td>41,691</td>
<td>15,815</td>
</tr>
<tr>
<td>316</td>
<td>Luggage</td>
<td>568</td>
<td>397</td>
</tr>
<tr>
<td>317</td>
<td>Handbags and Personal Leather Goods</td>
<td>3,523</td>
<td>2,257</td>
</tr>
<tr>
<td>319</td>
<td>Leather Goods n.e.c.</td>
<td>269</td>
<td>137</td>
</tr>
<tr>
<td>367</td>
<td>Electronic Components and Accessories</td>
<td>35,574</td>
<td>35,035</td>
</tr>
<tr>
<td></td>
<td>Total LT Series</td>
<td>170,974</td>
<td>117,146</td>
</tr>
</tbody>
</table>
fails to measure the **exact** number of workers possessing the attributes
the model hopes to isolate. The industrial breakdown will, however,
equately proxy the number of these workers. Table 4 indicates that most
of the LT industries have experienced a downward trend in employment over
the period covered by this study.

The second employment sector is the service and retail trade in-
dustries. These industries are characterized by strong employment growth
over the past decade, low training levels, and most importantly, high
employee turnover and weak job attachment. Unfortunately, SVP scores are
calculated for very few of these industries at the three-digit level, and
so other sources must be relied on to suggest the required skill levels
in these industries. Some assistance in selecting this employment sample
is offered by two studies which in part deal with the work experience of
AFDC household heads. The first was a study of the occupational experi-
ence of employed AFDC recipients in counties in Florida, Michigan, and
Minnesota. This study indicated that the food and beverage services and
private household services were of major importance.\(^38\) A more recent
Massachusetts study cited eating and drinking places, retail trades, and
medical care services (excluding hospitals) as important sources of work
experience for the current AFDC caseload.\(^39\) On the basis of this infor-

\(^{38}\)AFDC Employment and Referral Guidelines: Final Report, Welfare Policy
Division, Institute for Interdisciplinary Studies, June 30, 1972, p. 25.

\(^{39}\)Unpublished AFDC Study, Department of Public Welfare, Commonwealth of
Massachusetts, January, 1975.
mation, the employment sample in Table 5 was constructed using the three-digit (SIC) retail trades with 50 percent or greater female employment, and other predominantly female service industries were added. This sample will be referred to as the SER-RT (service-retail trade) industries. Again, the sample does not represent actual employment in all the relevant sectors, but instead serves as a proxy for the number of jobs (workers) we are interested in. 40

Employment in both the LT and SER-RT samples will enter into the model as explanatory variables. Another variable composed of the product of LT and SER-RT will be used to capture any non-proportional effects of the structural shift in employment. As the Massachusetts economy becomes more dominated by SER-RT type industries, the loss of, for example, 1,000 LT jobs can be expected to have an increasingly greater impact on the AFDC caseload. A product term will be used to capture this non-proportional effect.

In the course of estimating this model a problem was encountered with the use of the SER-RT variable. Because this variable contains

40 A further problem arises in the type of employment data used. The only monthly data available are for workers covered by unemployment insurance. This data generally underestimates actual employment. For example, the "private households" industry has a mean employment of 125 persons, probably because employers of household workers traditionally do not report employment to the Division of Employment security in Massachusetts. Fortunately we are dealing with samples of employment rather than actual employment so the trend in actual employment should be picked up with our sample. Findings might be biased in terms of the magnitude of the regression coefficients if the ratio of insured to uninsured workers within a given industry has changed over time, but the extent of this bias is not ascertainable.
<table>
<thead>
<tr>
<th>SIC</th>
<th>Industry Title</th>
<th>Employment</th>
<th></th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>531</td>
<td>Department Stores</td>
<td>46,314</td>
<td>65,720</td>
<td>41.9%</td>
</tr>
<tr>
<td>532</td>
<td>Mail Order Houses</td>
<td>2,997</td>
<td>4,075</td>
<td>36.0</td>
</tr>
<tr>
<td>533</td>
<td>Variety Stores</td>
<td>13,277</td>
<td>9,527</td>
<td>-27.9</td>
</tr>
<tr>
<td>581</td>
<td>Eating and Drinking Places</td>
<td>57,307</td>
<td>102,352</td>
<td>78.6</td>
</tr>
<tr>
<td>701</td>
<td>Hotels, Tourist Courts, and Motels</td>
<td>11,087</td>
<td>15,562</td>
<td>40.4</td>
</tr>
<tr>
<td>702</td>
<td>Rooming and Boarding Houses</td>
<td>810</td>
<td>446</td>
<td>-44.9</td>
</tr>
<tr>
<td>721</td>
<td>Laundry and Dry Cleaning Plants</td>
<td>16,128</td>
<td>10,586</td>
<td>-34.4</td>
</tr>
<tr>
<td>809</td>
<td>Health and Allied Services n.e.c.</td>
<td>8,611</td>
<td>43,349</td>
<td>403.4</td>
</tr>
<tr>
<td>881</td>
<td>Private Households</td>
<td>117</td>
<td>47</td>
<td>-59.8</td>
</tr>
<tr>
<td></td>
<td>Total SER-RT Series</td>
<td>156,648</td>
<td>251,664</td>
<td>60.7%</td>
</tr>
</tbody>
</table>
the retail trade, employment in this sample skyrocketed during the month of December. Since these very short term Christmas season jobs do not materially affect the AFDC caseload, a seasonal dummy variable has been entered in the month of December to counteract this effect.

Population Growth

In addition to these employment variables, a factor is included to measure general population growth. As the population grows, the pool of potential recipients will expand *ceteris paribus*. Unfortunately, there is no way of taking into account changes within the population in terms of skills, education levels, or the proportion of female-headed households. Since population data are unavailable on a monthly basis, the total labor force in Massachusetts is used to proxy the secular trend of population growth.

An additional demographic variable will be included to reflect the presence of school-age children at home during the summer months. Some potential AFDC household heads with school-age children can be expected not to be able to take jobs during the summer months and will consequently be forced to rely on welfare benefits. This effect is proxied by a weighted dummy variable taking on the value of one in June, July, and August (0 otherwise). The weight assigned to this dummy variable is the total labor force in Massachusetts (the proxy for population growth).

Business Cycles and Aggregate Labor Market Conditions

Beyond secular growth trends, cycles in the economy and aggregate labor market conditions can be expected to play some role in explaining
variations in the AFDC caseload. The aggregate unemployment rate is generally used as the appropriate measure of these effects. Ideally (if data permitted), the unemployment rate of female heads of households would be used to measure conditions in the more narrowly defined female labor market. Even though these data do not exist, a female unemployment rate for Massachusetts can be indirectly estimated if the relationship existing between total and female unemployment rates at the national level can be assumed to be applicable in Massachusetts. Female unemployment rates can then be regressed on total unemployment rates using national data. The best fit equation is the following:

\[
\text{FUNR} = 1.7946 + 1.0975 \times \text{TOTUNR} - 0.8671 \times \text{DJAN} - 0.6707 \times \text{DFEB} - 0.3825 \times \text{DAPR} + 1.5822 \times \text{DJUN} + 0.6793 \times \text{DJUL} - 0.7320 \times \text{DDEC}
\]

where:

- **FUNR** = Female unemployment rate,
- **TOTUNR** = Total unemployment rate,
- **DJAN, DFEB, etc.** = 0-1 dummy variables for the respective months.

41 The female unemployment rate used includes the categories of "single women" and "women widowed, divorced, or separated," but not "women married, husband present."


43 T-statistics in parentheses, \( R^2 = 0.93 \), F-statistics = 111.5 with 7 and 52 d.f. Data were for five years (1967-1972), N=60. Dummy variables for other months were insignificant at the 10 percent level.
Using the above coefficients, the Massachusetts total unemployment rate can be plugged in, and monthly estimates can be generated of the female unemployment rate in Massachusetts. Although the above estimation procedure is admittedly crude, results are an improvement on the only monthly published rate which combines both sexes. These estimates are sensitive to the high seasonality in the female labor market, which is less evident in the aggregate unemployment rates.

As the unemployment rate rises ("looser" labor markets), the caseload can be expected to rise ceteris paribus as more persons are forced to turn to welfare as their only means of support. The female unemployment rate is, therefore, included as a variable in the model. The unemployment rate can also be expected to have a greater effect on the caseload when it is high than when it is low. Low unemployment rates generally indicate short-duration "frictional" unemployment, but persistently high unemployment rates suggest "structural" unemployment and longer term unemployment, which have a greater impact on the caseload than lower frictional levels. A one percentage point increase in the unemployment rate at seven percent would, therefore, be expected to have a larger impact on the caseload than an identical change at three or four percent. A pair of variables has been constructed that hopefully will capture this effect. The first is a dummy variable that takes on a value of 1 when the estimated female

---

44 Uninsured workers will most likely move directly to the welfare caseload. Workers covered by unemployment insurance must exhaust their unemployment benefits before entering the caseload, but in some cases, AFDC is used as a means of supplementing inadequate unemployment benefits.
unemployment rate equals or exceeds six percent, and is 0 otherwise. The second variable is the product of the above dummy variable and the estimated female unemployment rate.

Supply of Slots

One of the most frequently encountered problems in economic analysis is that of separating the effects of supply and demand (the "identification" problem). In seeking the determinants of the AFDC caseload, the demand for AFDC payments must be measured by controlling for legal and administrative changes which have (over the period covered by this study) altered the "supply" of AFDC "slots" available to potential recipients. The following variables attempt to control for changes in the supply of "slots" in order to isolate the demand effect. The implementation of the WIN program and the state takeover of welfare administration are the major factors in the "supply side" of this model. Chapter III described the expected effect of the WIN program and the state takeover on the AFDC caseload: that both had similar impacts with respect to time. Both took effect in July, 1968, and rapidly increased the AFDC caseload ("start-up" period in the state takeover and the initial surge of applicants following the broadened eligibility requirements due to the WIN program). The effect in July, 1968, and rapidly increased the AFDC caseload ("start-up" period in the state takeover and the initial surge of applicants following the broadened eligibility requirements due to the WIN program). Following this period of rapid increase, the impact on the caseload tapered off somewhat but still remained at a higher rate than that previous to

45 This effect (increased applications) is observed in the data on new case openings. Case openings after 1968 were without failure higher than pre-1968 levels.
July, 1968. Separating the impact of these two similar events through regression procedures is virtually impossible due to the obvious collinearity problem that exists. Instead, the two events are treated as one administrative change in the program, requiring the assumption that the initial surge in caseloads was the same length in both events. The impact of this administrative variable (ADMIN) is described graphically in Figure 1.

This effect has been specified by constructing the following slope dummy variable. Let TIME be a classical time vector. Our variable

Figure 1

![Figure 1 Diagram](image)

where TIME = 1 to 180 (180 months between January, 1959, and December, 1973).
ADMIN is equal to $d_t \times \text{TIME}$ where:

\[
\begin{align*}
    d_t &= 0 - \text{January, 1959 through June, 1968} \\
    d_t &= 0.05 + d_{t-1} - \text{July, 1968 through February, 1970} \quad (\text{where, after} \\
    &\quad \quad \quad \quad \quad \text{20 months } d_{t-1} = d_t') \\
    d_t &= 1 - \text{March, 1970 through December, 1973}
\end{align*}
\]

Through the above specification, ADMIN equals 0 until July, 1968, is a slope dummy with a rapidly rising value throughout the adjustment period, and then has a slope against time equal to one following March, 1970. This specification can be expected to pick up the impact of the state takeover and the WIN program on the AFDC caseload.

One other variable will be necessary to control for another administrative change. In May, 1973, the Department of Public Welfare adopted a new computerized procedure which artificially added 1,000 to 2,000 new cases to the AFDC rolls. A dummy variable (DACCT) taking on the value of 1 for the months of May through December, 1973, will be entered to pick up the impact of the new accounting procedure.

The parameters of this model will be estimated using ordinary least squares multiple regression on monthly data from January, 1959, through December, 1973 (15 years).

V RESULTS

The most striking result of the estimation procedure was the inability of the work-leisure model to perform according to traditional theory. Neither payment levels, wage levels, nor payment wage ratios yielded statistically significant coefficients of the expected sign in any of the
equations. Inability to confirm the traditional hypothesis followed literally dozens of attempts to specify the model, identify the system, and define the relevant traditional hypothesis variables. Regardless of what form was tried or how much the model was biased in favor of the traditional hypothesis, it was impossible to generate significant coefficients of the "correct" sign. The present time series analysis thus comes to a conclusion similar to that found in many of the earlier cross-section studies. The alternative specification of the traditional model, that the work-leisure model is relevant only in "tight" labor markets, also failed to yield the expected results. On the basis of these findings the ability of the work-leisure model to explain AFDC caseload behavior must be questioned at least in the Commonwealth of Massachusetts.

There are several probable causes for the failure of the traditional model. First, AFDC is a categorical welfare program. Therefore institutional factors often limit any work-welfare choice on the part of individual recipients. For example, the absence of adequate day care facilities would, in many cases, leave a single parent with children no alternative but to enter the welfare caseload.

Possibly more important is the relative position of the "typical" AFDC household head in the labor market. If all workers were ranked according to their human capital, most AFDC household heads would fall in the lower reaches of this ranking. Only about 45 percent of AFDC mothers have completed high school, and only about 0.7 percent are college graduates. This severely limits the number of occupations

into which they might gain entry. A further limitation on occupational entry is imposed on females by virtue of their sex. Over 50 percent of all female workers in Massachusetts are "crowded" into ten narrowly defined occupational categories. All of the above factors combine to suggest that AFDC females are one of the most disadvantaged groups in the labor market. As a result, unemployment is likely to affect them earlier and more severely than most other labor groups.

As a consequence, AFDC household heads have very limited work opportunities in the labor market. The traditional work-leisure model requires that individuals face a choice between work and welfare and then decide how best to maximize their utility. What the traditional theory neglects is the possibility that there is no meaningful alternative to welfare for some members of the population. For this reason the work-leisure model might be too general a hypothesis to be appropriate in explaining AFDC caseload behavior.

The Final Reduced Form

After fruitless attempts at specifying the traditional hypothesis, the model was discarded, and construction was begun of an alternative

48 They are crowded into the following occupations: other clerical and kindred workers, secretaries, teachers, food service workers, sales clerks (retail trade), bookkeepers, nurses, health service workers, typists, and sewers and stitchers. Source: 1970 Census of the Population, Characteristics of the Population, Volume I, Part 23 (Massachusetts), Table 207.
model based on the structural theories discussed earlier in this text. Results were vastly more encouraging. After much careful research, the reduced form equation found in Table 6 was formulated.

This reduced form model explains over 99.8 percent of the variance in the AFDC caseload. The standard error of the estimate (adjusted for degrees of freedom) of the equation is less than 2.4 percent of the mean AFDC caseload. The actual caseload and the regression estimates are presented in Figure 2. As this plot indicates, the model has not only explained the secular trend, but it also appears to pick up the turning points in the AFDC caseload.

**Employment Structure**

In an earlier section of this paper it was hypothesized that the structural shift in employment in Massachusetts might have two independent effects on AFDC caseload size. First, the steady decline in employment in the nondurable manufacturing (LT) sector was expected to cause a structural unemployment problem among women possessing low training levels. Secondly, the increase in service and retail trade jobs (SER-RT) was not expected to offset the decline in manufacturing because of the high turnover associated with these new jobs. Regression results from the model appear to verify the original hypotheses.

Due to the interaction term between the low training manufacturing sector variable and the high turnover service and retail trade variable, each of the coefficients alone cannot be interpreted. However, the effect of structural shifts in employment on the AFDC caseload can be estimated
Table 6

Regression Results

\[ AFDC = -161.9^* + 45.5 \text{ M6UNR}^# + 128.8 \text{ D6ZUNVL}^* - 7.849 \text{ D}-6\text{ZUN}^* + 0.023 \text{ M6LF}^* \]
\[ (8.25) \quad (23.9) \quad (30.6) \quad (1.94) \quad (0.003) \]

\[ + 0.058 \text{ DADMIN}^* + 0.578 \text{ M6LT}^* + 0.983 \text{ M6SER-RT-3}^* - 0.0046 \text{ LT}^*\text{SER-RT}^* \]
\[ (0.004) \quad (0.054) \quad (0.051) \quad (0.37) \]

\[-0.005 \text{ RTDEC}^* + 0.0003 \text{ LFSEAS}^* + 0.780 \text{ DACCT}^# \]
\[ (0.001) \quad (0.0001) \quad (0.47) \]

* Significant at the 0.01 level

# Significant at the 0.1 level

Standard errors of the coefficients are in parentheses

\[ R^2 \text{ (coefficient of determination adjusted for d.o.f.)} = 0.9985 \]

Standard error of the estimate (adjusted for d.o.f.) = 0.955

Mean of the dependent variable = 39.919

F-statistic for the regression = 10,120. with 11 and 160 d.o.f.
Variables in the Model

AFDC - monthly AFDC caseload

M6UNR - a six-month moving average of the estimated female unemployment rate

D-6%UN - a dummy variable taking on a value of one when M6UNR exceeds 6%; zero otherwise

D-6%UNVL - the product of M6UNR and D-6%UN

M6LF - a six-month moving average of the labor force in Massachusetts

DADMIN - a variable constructed to proxy the Work Incentive program and the state takeover of welfare administration

M6LT - a six-month moving average of employment in a series of low training predominately female nondurable manufacturing industries

M6SER-RT-3 - a six-month moving average lagged three months of employment in a series of low training predominately female service and retail trade industries

LT*SER-RT - the product of M6LT and M6SER-RT-3

RTDEC - a dummy variable (one in December; 0 otherwise) weighted by M6SER-RT-3

LFSEAS - a dummy variable (one in June, July, and August; 0 otherwise) weighted by M6LF

DACCT - a dummy variable taking on the value of one for the months of May through December, 1973; 0 otherwise
Figure 2

Actual Caseload and Regression Estimates
(1959-1974)
by taking the discrete partial derivative of AFDC with respect to the LT sector. This partial is negative; that is, as employment in the LT sector declines (as it has over the past 15 years), there will be an increase in the AFDC caseload. The size of the increase is dependent upon the level of SER-RT employment. In December, 1959, a loss of 1,000 jobs in the LT sample resulted in an additional 88 AFDC cases. By December of 1973 the identical loss of jobs in the LT sector yielded about 537 additional AFDC cases. Apparently, the increasing impact of the loss of LT jobs on the caseload reflects a lessening of opportunities open to LT workers in the Massachusetts economy. Employment in the LT sector in 1959 was about 40 percent larger than its level in 1973. In 1959, a worker displaced from an LT industry had many more job opportunities within that sector than in 1973. By 1973, the chances of getting another job in the LT sector were considerably less. This phenomenon has had an especially severe impact on female workers who had invested many years in the same occupation (sewers and stitchers, assemblers, packers, etc.). Now, most of the opportunities available are in the growing service and retail trade sectors (waitresses, sales clerks, and service workers). On the basis of these regression results, it appears that an increasing number of displaced LT workers have not been able to move in the expanding sectors of the economy and have consequently ended up on the welfare rolls.

49The magnitude of these partial derivatives must be interpreted with caution. As was pointed out earlier, the number of jobs in the economy a loss of 1,000 LT jobs proxies is unknown.
Examination of the discrete partial derivative of AFDC with respect to the SER-RT sector also yields results consistent with earlier expectations. In this case, the partial derivative is positive; that is, as the number of jobs in the service and retail trade sectors increases, the AFDC caseload actually increases. In December of 1959, an increase of 1,000 jobs in the SER-RT sample resulted in 194 new AFDC cases. By December, 1973, the identical increase in jobs was associated with about 450 additional AFDC cases. The instability and high turnover associated with the SER-RT sector jobs is probably the cause of this phenomenon. Most of the increase in AFDC cases due to increased employment in this sector probably does not consist of "full payment" cases, but rather cases in which AFDC is used to supplement working income. After the 1968 implementation of the "$30 and 1/3" provisions of the WIN program, supplementation became a much more viable alternative for many AFDC mothers. The increase in the size of the partial derivative may tend to reflect this fact. This supplementation might be occurring in either of two ways: low wages and insufficient hours worked might necessitate supplementation of weekly earnings, especially among large families, or the high turnover associated with SER-RT jobs might require AFDC household heads to use welfare payments as a back-up for repeat spells of unemployment.50

50Because of the short duration of employment in the SER-RT sector, many workers do not qualify for unemployment compensation, receipt of which requires a minimum of six months of consecutive full-time employment. AFDC payments often replace unemployment benefits in these cases.
Through either method, the AFDC caseload can be expected to rise as the number of service and retail trade jobs increase in the economy, because increasing numbers of workers would be forced to rely on this unstable sector as a source of working income.

The RTDEC variable controlling for short term Christmas season employment in the retail trades had the correct negative sign and had a surprisingly large magnitude (suggesting about 900 fewer AFDC cases). These 900 cases represent the increase in AFDC that would have occurred had the Christmas season increase of employment in the retail trades been of longer duration jobs. Since most of the Christmas season employment is known beforehand to be of very short duration, we do not expect these jobs to draw upon the AFDC population in the same manner in which other retail trade jobs do.

Population Growth

The population growth variable M6LF has the expected positive coefficient. The coefficient can be interpreted as meaning that each increase in the labor force of 1,000 results in about 23 new AFDC cases, confirming the hypothesis that the AFDC caseload will rise as the population (proxied by the labor force) rises ceteris paribus, because the pool of potential welfare recipients is also expanding. This secular increase due to population growth is augmented by an additional three AFDC cases per 1,000 increase in the labor force during the summer months (LFSEAS). The additional summer increase is probably related to the inability of mothers to work due to the presence of school-age children at home during the summer months.
There were 7.1 AFDC cases per 1,000 labor force participants in 1959. By December of 1973 this increased to 34.0 AFDC cases per 1,000 labor force participants. But the coefficient on the labor force variable yields a "marginal" increase of 23 AFDC cases per 1,000 labor force participants. This indicates that the average number of AFDC cases per 1,000 labor force participants was increasing in 1959 but is presently declining. In other words, the potential "pool" of AFDC recipients within the labor force was, for a time, expanding. This phenomenon might reflect a number of socio-economic factors not explicitly entered into the model. It might account for a general increase in educational and training requirements in the state economy, thus forcing an increasing number of less skilled workers onto the welfare rolls. Another probable explanation might be found in the secular increase in female-headed households with children within the population, which might have leveled off in recent years. Still another alternative may be a gradual "liberalization" in the enforcement of existing welfare legislation which has since been reversed.

Supply of "Slots"

Evaluation of the coefficient on the supply of "slots" variable yields a rash estimate of the impact of the WIN program and the state takeover of welfare administration on the caseload. In the twenty-month period following July, 1968 (the "adjustment" period), this factor added a total of about 7,700 AFDC cases, or about 390 additional cases per month. For the months following March, 1970, broadened eligibility standards increased the caseload by an average of 58 cases per month.

-49-
The variable measuring the impact of the change in accounting procedures (DACCT) yields about 780 additional AFDC cases per month beginning in May, 1973. This is slightly below the rough estimate of "1,000 to 2,000" cases offered by the Department of Public Welfare.

Business Cycles and Aggregate Labor Market Conditions

The set of variables measuring the impact of business cycles and changes in aggregate labor market conditions yielded coefficients of the expected sign. The coefficient on the estimated female unemployment rate (M6UNR) was 45.5, indicating that a one percent increase in unemployment yields 455 additional AFDC cases at levels of unemployment below six percent. At levels above six percent, the impact of AFDC is the combination of the effects of M6UNR and the two dummy variables that become effective at six percent unemployment rates (D-6%UN: a 0-1 dummy variable taking on a value of 1 when the unemployment rate exceeds six percent, and D6%UNVL: the product of D-6%UN and M6UNR). Evaluation of these variables as a unit yields the following discrete partial derivatives of AFDC with respect to a one percent change in the estimated female unemployment rate:

\[
\frac{\Delta AFDC}{\Delta UNR=1\%} = 455 \text{ cases when } UNR < 6\%
\]

\[
\frac{AFDC}{UNR=1\%} = 1,743 \text{ cases when } UNR \geq 6\%
\]

The cumulative effect of unemployment levels on the AFDC caseload is presented graphically in Figure 3. The impact of unemployment is as expected: \( \frac{\delta AFDC}{\delta UNR} \) is smaller when the unemployment rate is low ("tight"
Figure 3

AFDC Cases

Unemployment Rate

0 1% 2% 3% 4% 5% 6% 7% 8% 9%

7000 6000 5000 4000 3000 2000 1000 0
labor markets) and AFDC is greater during periods of high unemployment.  

One feature of Figure 3 not anticipated earlier is the small drop in AFDC that occurs when the unemployment rate reaches six percent. Two factors might account for this phenomenon. First, the dummy variable that takes effect might have been more effective if set at an unemployment rate greater than six percent. The choice of six percent was an arbitrary measure of the presence of "structural" unemployment, and so a rate of 6.5 percent or even 7 percent might have been more appropriate. Secondly, this small drop in cases might reflect the extension of unemployment benefits from 26 to 39 weeks that occurs when the unemployment rate reaches six percent. If this is the case, some persons on AFDC who had previously exhausted unemployment benefits would then become re-eligible for extended benefits and might drop off of the caseload to receive them.

Overall, the results support the original theory that the effect of unemployment would differ between periods of high ("structural") and low ("frictional") levels of unemployment. A one percent increase in unemployment at levels below six percent results in 455 additional AFDC cases. At higher levels of unemployment the impact of AFDC is over three times as great. A one percent increase in the unemployment rate at levels above six percent yields 1,743 additional AFDC cases. These results suggest that more persons must rely on AFDC in the absence of

---

51 The actual process by which extended benefits are instituted is actually more complex but the 6% unemployment rate level approximates the process.
"tight" aggregate labor market conditions. Apparently also, unemployment rates affect the caseload in a nonproportional manner, indicating that AFDC household heads are more vulnerable during periods of high unemployment.

Inspection of the regression coefficients will not directly yield the answer to the original question concerning what factors have been the major determinants of the AFDC caseload in the past 15 years. The relative impact of groups of variables on the total change in AFDC may be ascertained by computing the discrete total differential for the regression equation. The total change in AFDC (between periods t - 1 and t) due to certain groups of variables within the model can be isolated by using the following algorithms. First, the regression equation can be restated in general form:

\[
\text{AFDC} = a_0 + a_1 M6UNR + a_2 D6%UNVL + a_3 D-6%UN + a_4 M6LF + a_5 DADMIN + a_6 M6LT + a_7 M6SER-RT + a_8 LT*SER-RT + a_9 RTDEC + a_{10} LFSEAS + a_{11} DACCT
\]

The algorithms for the change in AFDC due to certain groups of variables are:

1) Employment Structure

The change in AFDC between periods t-1 and t due to changes in the structure of employment is:

\[
\begin{align*}
\Delta M6LT_t &+ \Delta M6SER-RT_t + \Delta M66LT_t \cdot \Delta M6SER-RT_{t-1} + \Delta M6LT_{t-1} \cdot \Delta M6SER-RT_t + \\
&+ \Delta M6LT_t \cdot \Delta M6SER-RT_t + \Delta M6SER-RT_t \cdot \Delta DEC_t + \Delta M6SER-RT_{t-1} \cdot \Delta DEC_t + \\
&+ \Delta M6SER-RT_t \cdot \Delta DEC_t
\end{align*}
\]

(Note: \( \Delta \text{Variable}_t = \text{Variable}_t - \text{Variable}_{t-1} \))
2) **Population Growth**

The change in AFDC between periods \(t-1\) and \(t\) due to population growth is:

\[ a_4 \Delta M6LF_t + a_{10} \Delta M6LF_t \cdot \Delta SEAS_{t-1} + a_{10} \Delta M6LF_t \cdot \Delta SEAS_t + a_{10} \Delta M6LF_t \cdot \Delta SEAS_t \]

3) **Business Cycles and Aggregate Labor Market Conditions**

The change in AFDC between periods \(t-1\) and \(t\) due to this group of variables is:

\[ a_1 \Delta M6UNR_t + a_2 \Delta D-6\%UN_t \cdot \Delta M6UNR_{t-1} + a_2 \Delta D-6\%UN_t \cdot \Delta M6UNR_t + a_2 \Delta D-6\%UN_t \cdot \Delta M6UNR_t + a_3 \Delta D-6\%UN_t \]

4) **Supply of "Slots"**

The change in AFDC between periods \(t-1\) and \(t\) due to legal and administrative changes is:

\[ a_5 \Delta DADMIN_t + a_{11} \Delta DACCT_t \]

By choosing the appropriate values of \(t - 1\) and \(t\), the total discrete differential of the regression equation may be evaluated over any period of time. For this analysis, three time intervals have been selected over which AFDC has been evaluated. The first is from December, 1959, through June, 1968. \(^52\) This period covers the growth in AFDC up to the time of the

\(^{52}\) Because of the smoothing of data and the lag structure, December, 1959, is the earliest relevant date for which the differential can be calculated.
state takeover of welfare administration and the implementation of the work incentive program. The second time interval to be evaluated begins in July, 1968, and continues through December, 1973. The last time interval covers the entire duration of the model: December, 1959, through December, 1973. The results of this analysis are presented in Table 7.

Table 7 shows that the changing employment structure in Massachusetts is the single most important factor accounting for caseload growth throughout the past decade and a half. Overall, the structural shift in employment is responsible for almost 64 percent of the caseload increase between December, 1959, and December, 1973. The next most important factor (over the same period) is population growth which contributed nearly 18 percent of the rise in AFDC. Changes in the supply of AFDC "slots" accounted for 14.6 percent of the total change in AFDC and the remaining 3.8 percent is attributed to a somewhat higher level of unemployment in 1973 and 1959.

Comparison of the mean monthly contribution of each of the above groups of variables to the mean monthly change in AFDC indicates that the impact of the structural change in employment is becoming more severe over time. On average, changes in the employment structure contributed about 172 AFDC cases per month during the period preceding the state takeover and the implementation of the WIN program in 1968. But in the last four and a half years covered by the model, changes in the employment structure have accounted for an average of 467 additional AFDC cases monthly. This in-
Table 7

% of AFDC caseload explained by each group of factors

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<tbody>
<tr>
<td>Population Growth</td>
<td>25.9%</td>
<td>14.2%</td>
<td>17.8%</td>
<td>60</td>
<td>113</td>
<td>80</td>
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<tr>
<td>Business Cycles and Aggregate</td>
<td>-1.3</td>
<td>6.0</td>
<td>3.8</td>
<td>-3</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td>Labor Market Conditions</td>
<td>75.4</td>
<td>58.6</td>
<td>63.8</td>
<td>172</td>
<td>467</td>
<td>288</td>
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<tr>
<td>Employment Structure</td>
<td>0.0</td>
<td>21.2</td>
<td>14.6</td>
<td>0</td>
<td>169</td>
<td>66</td>
</tr>
<tr>
<td>Legal &amp; Administrative</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFDC Cases</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>229</td>
<td>797</td>
<td>451</td>
</tr>
</tbody>
</table>

Mean monthly contribution of each group of factors to AFDC caseload

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</tr>
</tbody>
</table>

* Number of cases per month
creasingly severe impact in recent years has been supplemented by broadened eligibility policies (legal and administrative changes) which have contributed an average of 169 cases per month over the same time period. Together, these two factors explain almost 80 percent of the caseload increase in the past four and a half years.

Further analysis of the results presented in Table 7 reveals several other interesting features. Between December, 1959, and June, 1968, changes in the business cycle and aggregate labor market conditions actually had a negative impact on the AFDC caseload due principally to the existence of lower unemployment rates in 1968 than in 1959. Also, the mean impact of population growth has increased over time, contributing an average of 60 cases per month before June, 1968, and 113 cases per month afterwards.

A widely accepted method for testing the specification of an econometric model and gauging its overall power as an explanatory device is forecasting beyond the time period under which the model was estimated. We have undertaken this procedure for the 15 month period beginning January, 1974 and ending March, 1975. Using actual data for the exogenous variables, we have estimated the "conditional" forecasts of the monthly AFDC caseload. These are presented in Table 8. The results indicate that the model has captured the major changes in the caseload. All but two of the monthly errors were less than three percent of the actual caseload. Overall, the model forecasted all but 255 cases of the 17,507 case change in the caseload between January, 1974 and March, 1975.\textsuperscript{53}
Forecasts beyond March 1975 would probably be subject to larger forecast errors for two reasons. First, exogenous variables that enter into the AFDC model would have to be independently forecasted, and therefore would be subject to forecast errors of their own. Second, because the levels of exogenous and endogenous variables have risen with few interruptions since December, 1973, the reliability of forecasts will decrease as we move farther away from the variable levels used in the original estimates of the model.
Table 8

Conditional Forecast with the Massachusetts AFDC Caseload Model

<table>
<thead>
<tr>
<th>Date</th>
<th>Actual Caseload</th>
<th>Predicted Caseload</th>
<th>% Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/74</td>
<td>90,065</td>
<td>92,025</td>
<td>2.18%</td>
</tr>
<tr>
<td>2/74</td>
<td>90,749</td>
<td>92,692</td>
<td>2.14%</td>
</tr>
<tr>
<td>3/74</td>
<td>91,339</td>
<td>93,663</td>
<td>2.54%</td>
</tr>
<tr>
<td>4/74</td>
<td>92,333</td>
<td>94,088</td>
<td>1.90%</td>
</tr>
<tr>
<td>5/74</td>
<td>93,171</td>
<td>94,134</td>
<td>1.03%</td>
</tr>
<tr>
<td>6/74</td>
<td>93,742</td>
<td>96,231</td>
<td>2.66%</td>
</tr>
<tr>
<td>7/74</td>
<td>94,936</td>
<td>97,530</td>
<td>2.73%</td>
</tr>
<tr>
<td>8/74</td>
<td>96,253</td>
<td>98,015</td>
<td>1.83%</td>
</tr>
<tr>
<td>9/74</td>
<td>97,423</td>
<td>96,742</td>
<td>-0.70%</td>
</tr>
<tr>
<td>10/74</td>
<td>101,778</td>
<td>96,922</td>
<td>-4.77%</td>
</tr>
<tr>
<td>11/74</td>
<td>101,162</td>
<td>97,646</td>
<td>-3.48%</td>
</tr>
<tr>
<td>12/74</td>
<td>102,674</td>
<td>99,892</td>
<td>-2.71%</td>
</tr>
<tr>
<td>1/75</td>
<td>NA</td>
<td>101,101</td>
<td>—</td>
</tr>
<tr>
<td>2/75</td>
<td>104,306</td>
<td>105,320</td>
<td>0.97%</td>
</tr>
<tr>
<td>3/75</td>
<td>107,572</td>
<td>109,277</td>
<td>1.58%</td>
</tr>
</tbody>
</table>

Change in Actual AFDC Caseload (1/74 - 3/75): 17,507
Change in Predicted AFDC Caseload (1/74 - 3/75): 17,252
Total AFDC Caseload Error: 255
Mean Monthly AFDC Caseload Error: 17
VI CONCLUSIONS

What implications do these results bear on welfare policy? One of the most significant findings reported earlier was the inability of marginal changes in benefit and wage levels to have a significant impact on caseload behavior. This finding mitigates against adopting an "individual choice" theory of caseload determination. According to the results, marginal reductions in benefit levels do not appear to lead to a reduction of the caseload. Such a finding runs counter, of course, to the view that persons are on the caseload due to a distaste for working (or a preference for leisure). The legitimacy of the "meat cleaver" approach suggested by many welfare policy makers is thus questioned. Most persons are on the welfare caseload due to a lack of alternatives, and an elimination of welfare support for many of these persons is probably taking away their only means of subsistence. A reduction in benefit levels will obviously result in a decrease in total expenditures for the welfare program, but it will not reduce the caseload. Given that benefit levels are currently below the level deemed necessary to maintain a decent standard of living (as judged by the Bureau of Labor Statistic), such a policy should be considered misguided (in terms of the theory of caseload behavior it implicitly assumes), and also highly inequitable.

Due to the inadequacy of existing benefit levels, the only efficient and equitable means of reducing welfare expenditures will be to reduce caseload size. The findings of this study give clear cut direction to welfare policy in this area. There are people on welfare without jobs, and there are jobs without people. Retraining and educating people to
take these jobs (in the growing service and retail trade sectors) will apparently be useless unless some type of action is taken to change the characteristics of these jobs. This might, in part, explain the apparent failure of manpower and training programs of the recent past. These programs "fit" persons to take jobs, but do nothing about the characteristics of the jobs, which are probably more important in determining caseload size.

In the case of Massachusetts, this study's findings suggest the most efficient welfare policy should address itself to the following problems:

1) The decline of stable low training jobs in the manufacturing sector should be reversed. The ability of these jobs to employ "AFDC potential" persons has been demonstrated, and so the existence of these jobs is crucial to any policy designed to slow welfare caseload growth.

2) Most importantly, welfare policy should focus on the characteristics of the new jobs being created in the service and retail trade sectors of the Massachusetts economy. If this is not accomplished, employment increases in this sector can be expected to increase the burden on the AFDC caseload. Particular emphasis should be placed on the low wage - high turnover aspects of service and retail trade jobs. Consequently, the causes of high turnover and low wages should also be dealt with. This creates a need to expand employment opportunities for women, eliminate employment barriers and
"occupational crowding," and provide adequate day care facilities. Until the expected wage (probability of finding a job \(X\) duration on the job \(X\) wage rate) in these sectors parallels that of the manufacturing sectors, increases in the service and retail sectors will inevitably lead to increasing caseloads.

Obviously, policy to alleviate these problems necessitates actions beyond the scope of the Department of Public Welfare. Recognition must be made of the interaction between labor market activity and the welfare caseload. Therefore, coordination of welfare policy and labor market policy is crucial to the success of programs implemented to slow the growth of the caseload.
REFERENCES


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