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Center for the Study of Welfare Policy

Research Memorandum 60
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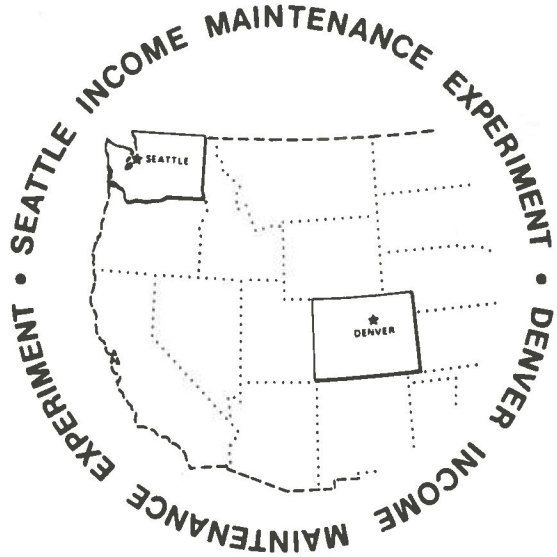
By: Richard W. West



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SRI Projects: URD 8750/1190

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I INTRODUCTION

The analysis to date of the impact of the Seattle and Denver Income Maintenance Experiments (SIME/DIME) on labor supply has dealt exclusively with heads of families (husbands, wives and female heads of families).* This report extends the existing analyses for heads of families by focusing on the effects of the experiment on the labor supply of young persons who were not heads of families upon enrollment into the experiment. In particular we will focus on persons, aged 16 to 21 at enrollment, who are the children, stepchildren, or grandchildren of the family head at enrollment. This group is important to analyze for several reasons. First, it is the only major group of persons in the experiment other than family heads and young children. Second, these nonheads of families are subject to the experiment at the time when they are likely to first enter the labor market. Any impact of the experiment on their labor supply during this crucial period could have important long-run effects by delaying, postponing, or reducing their initial labor market experience. National attention recently has focused on the high unemployment rates observed among young persons. Any impact of the experiment on their behavior is of clear interest to policymakers.

The plan of the paper is as follows. Section II briefly describes the experiment and Section III presents the major characteristics of the sample. Section IV contains an analysis of the effects of the experimental NIT plans on labor supply during experimental quarters 8-11. Section V presents estimates of the experimental effect for half-yearly periods through experimental quarter 11. Section VI discusses the effects of the experimental manpower programs and Section VII presents a summary and conclusions.

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*See Keeley, Robins, Spiegelman, and West (1977a, 1977b, 1978a, 1978b,) and Robins and West (1978a, 1978b).

II DESCRIPTION OF AN EXPERIMENTAL NEGATIVE INCOME TAX PROGRAM

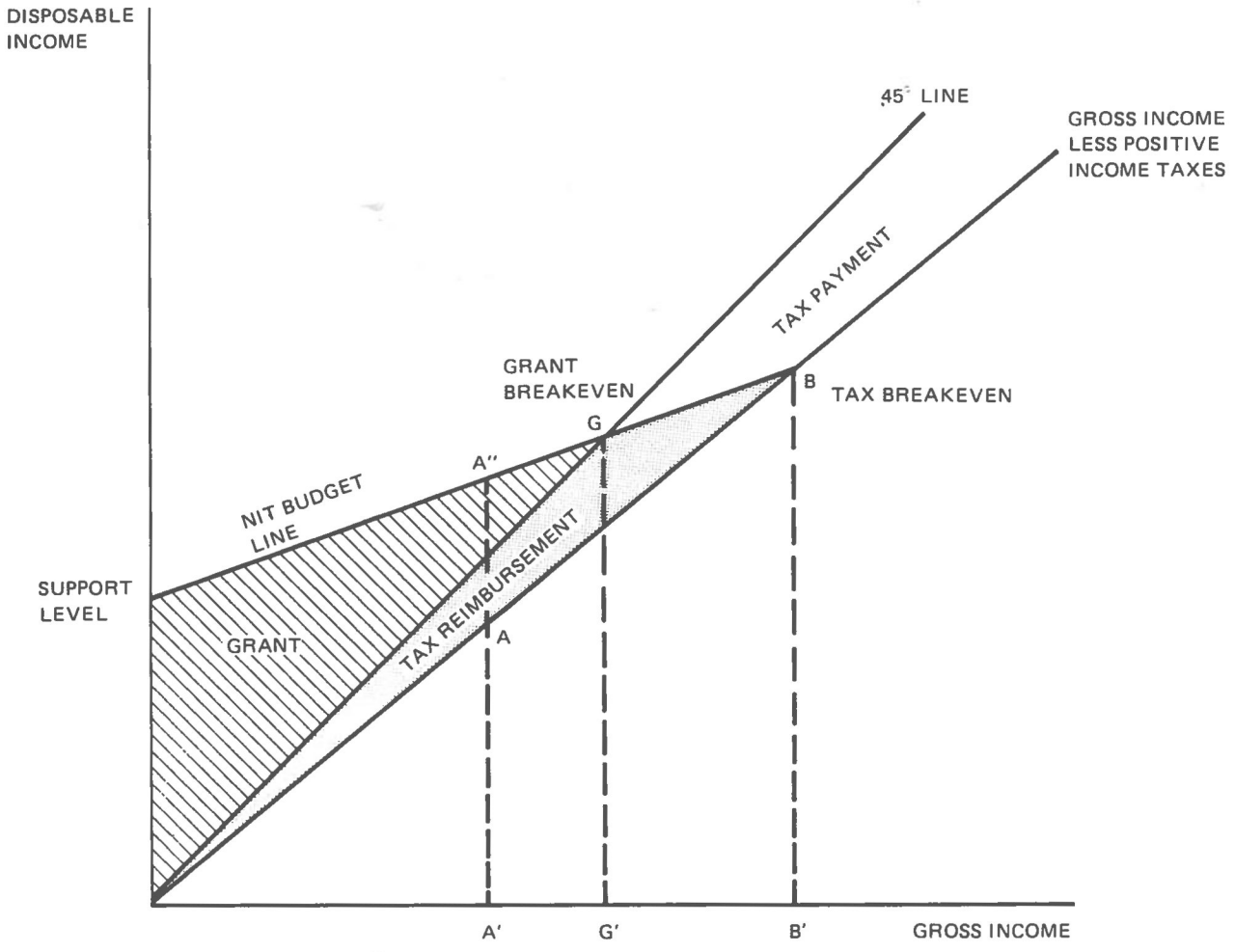
The Seattle and Denver Income Maintenance Experiments (SIME/DIME) are comprised of two components: a negative income tax (NIT) experiment and a manpower experiment (see Kurz and Spiegelman, 1971, 1972). The negative income tax component is testing 11 different NIT programs. These programs can be characterized by three parameters: the support level, the initial tax rate, and the rate of decline of the tax rate. The support level or guarantee represents the NIT payment the family receives if it has no other income. SIME/DIME has three support levels: $3,800, $4,800 and $5,600 expressed in 1971 dollars for a family of four. The support level is adjusted for family size and for changes in the cost of living. The tax (or benefit reduction) rate represents the amount by which the NIT payment is reduced for each dollar of other income. In SIME/DIME there are two basic kinds of tax rate systems: in one system the tax rate is constant; in the other system the average tax rate declines by .025 per thousand dollars of income. The constant tax rate systems have tax rates of either .50 of .70. The declining tax rate systems have initial tax rates of .70 and .80. To eliminate the effects of other tax and transfer programs, the experimental NIT plans fully tax public transfers and reimburse federal and state income taxes and social security taxes. Private transfers are taxed at a rate of .50 in all programs. Persons who leave originally enrolled families retain eligibility for NIT payments, and eligibility for payments is extended to new spouses and dependents. However, persons not living in a family group (unrelated individuals) have a support level of $1,000 irrespective of the support level of the family they belonged to at enrollment. Some persons are eligible for the NIT plans for 3 years and others are eligible for 5 years.

An experimental NIT plan is depicted in Figure 1. Gross income is measured along the horizontal axis and disposable income is measured on the vertical axis. Persons with incomes below G' receive NIT grants and have their positive taxes fully reimbursed. G' is the grant breakeven level where the NIT grant is zero. At incomes between G' and B' the NIT grant is negative and partially offsets the positive tax reimbursement. At B', known as the tax breakeven level, the positive tax reimbursement is completely offset by the negative grant. Persons with incomes greater than B' receive no benefit from the NIT plan.

The manpower component of the experiment contains three treatments. In the first treatment (M1), eligible persons are provided with a free manpower counseling service. In the other plans, eligible persons receive the free counseling as well as a subsidy of either 50% (M2) or 100% (M3) of direct training and education costs. All persons over 16 are eligible for these benefits and eligibility continues without regard to changes in family status.

Families were assigned to financial and manpower plans as well as to control status (no plan) randomly within strata determined by normal income level, family structure (husband-wife or headed by single female), racial ethnic group (black, white, Chicano) and site (Seattle, Denver); see Keeley and Robins (1978).

The NIT plans can be expected to affect the labor supply of young nonheads of families. The manner in which the effect occurs depends on the extent to which nonheads are integrated into the family decision-making process. In one extreme case the nonheads are fully integrated into a decision process that maximizes a family utility function. In this case, we can expect the experimentally induced increase in family disposable income and the increase in the tax rate to have a negative effect on the nonhead's labor supply (for a more complete discussion of this model for heads of families see Keeley, Robins, Spiegelman and West, 1977a). At the other extreme, the nonhead is an independent decisionmaker who benefits from being a member of the family. In this case, the effects of the experiment may depend on whether the family is



NOTE: Figure assumes no income outside of earnings and a linear positive income tax system.

FIGURE 1 A NEGATIVE INCOME TAX PROGRAM WITH POSITIVE TAX REIMBURSEMENT

able to induce the nonhead to reimburse the family for the taxes (grant reductions) that the family pays on the nonhead's income. If the family is able to collect these taxes from the nonhead, the income of the family (other than the nonhead) increases, the nonhead's income decreases, and the nonhead's net wage rate decreases. These changes have different effects on the nonhead's labor supply because the increase in family income and decrease in the nonhead's net wage rate should reduce his labor supply, while the decrease in his income should increase his labor supply. On the other hand, if the family does not collect the taxes, family income increases while the nonhead's income and net wage rate are unchanged. The increase in family income should decrease the non head's labor supply.

The manpower plans could also be expected to affect labor supply. First, the counseling plan could enable nonheads of families to become better at finding jobs. This could decrease the length of their unemployment periods and increase their hours of work if they are able to find jobs with higher wage rates.* The education and training subsidy could induce persons to take more education and training and consequently work less. Subsequently, participants may work more if they can obtain jobs with higher wage rates because of their increased skills.

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*A study by West (1977) indicates that wage rates of family heads are unaffected by the experiment.

III CHARACTERISTICS OF THE SAMPLE

The sample chosen for this study is comprised of male and female persons, aged 16 to 21 at enrollment, who were either children, stepchildren, or grandchildren of the family head at enrollment. Of an original 1,177 persons in this category, the sample is reduced to 733 because of attrition and missing data. Table 1 accounts for the original sample and cases lost because of attrition and missing data.

Table 1

ORIGINAL SAMPLE AND CASES LOST BECAUSE OF ATTRITION AND MISSING DATA*

	Male	Female	Total
Original sample	612	565	1,177
Cases lost because of:			
Attrition	223	155	378
Missing data	38	28	66
Remaining cases	351	382	733

*Original sample is all persons, aged 16 to 21 at enrollment, who were children, stepchildren, or grandchildren of the head of household at enrollment. The sample excludes, however, those who were in 20-year families, families with E level = 7, and those from single-head families with E level = 6.

Table 2 presents distributions of various important characteristics of the sample members. The age distribution shows that the sample is somewhat concentrated in the lower portion of the range from 16 to 21. This concentration arises because nonheads tend to move out of the

Table 2

DISTRIBUTIONS OF SAMPLE CHARACTERISTICS
(Percent)

	Male	Female
Age in years		
16	27.6	31.9
17	28.5	31.9
18	21.7	18.6
19	12.8	11.5
20	9.4	6.0
Racial ethnic group		
Black	46.4	43.5
White	34.2	38.2
Chicano	19.4	18.3
Family status at experimental quarter 7		
Nonhead	61.0	57.3
Unrelated individual	25.9	13.6
Family head	13.1	28.8
Family status at experimental quarter 11		
Nonhead	48.4	36.9
Unrelated individual	30.5	21.7
Family head	20.5	40.8

family during this age period. Consequently, there are relatively fewer old nonheads in the sample.

The age concentration suggests that many of the nonheads will not be nonheads during the experimental period. That this conjecture is true can be seen by examining the distributions of family status during the 7th and 11th quarters after enrollment into the experiment. By the 11th experimental quarter only 48.4% of male nonheads are still nonheads; 30.5% are unrelated individuals and 20.5% have become heads of their own families. The figures for females are similar except that females are less likely to be unrelated individuals and more likely to be family heads. We will continue to refer to these persons as nonheads

even though they may no longer be nonheads during the experimental period.

The large changes in family status among nonheads of families suggest that it may be desirable to account for changes in family status in the analysis of experimental effects on the nonhead's labor supply. The NIT plans may be providing very different incentives to nonheads in different family statuses during the experimental period. For instance, the support level of $1,000 for an unrelated individual is less than half the support level for a two-person family in the $3,800 programs (the two-person support level is $2,356). Also, a nonhead who forms his or her own family may be more directly affected by a given program than a nonhead who remains in his original family.

Table 3 presents mean hours worked per week, the proportion of period worked and the proportion in school for the preexperimental year and experimental quarters 1-11. Although the table does not distinguish between experimentals and controls, it does reveal a major characteristic of the work behavior of young nonheads of families: the labor supply of young nonheads increases dramatically over time. This increase is not surprising because these nonheads are in the age range where it is typical to enter the labor force and commence work careers. Corresponding to this increase in work effort is a sharp reduction in school attendance. Note that while these nonheads are aged 16 to 21 at enrollment, they are aged 19 to 24 by the 11th experimental quarter.

This study will concentrate on the experimental effects on the work behavior of nonheads in quarters 8-11, or approximately the third year of the experiment. The analysis for this period is contained in the next section. A later section will briefly examine the experimental effects in earlier periods.

Table 3

QUARTERLY MEAN WEEKLY HOURS, PROPORTION OF QUARTER WORKED, AND PROPORTION OF PERSONS IN SCHOOL
(Nonheads of Families, Aged 16 to 21 at Enrollment)

	Males			Females		
	Average Hours Worked per Week	Proportion of Time Worked	Proportion of Time in School	Average Hours Worked per Week	Proportion of Time Worked	Proportion of Time in School
Preexperimental year	6.8	.234	.722	4.3	.169	.792
Experimental quarter						
1	8.2	.292	.624	7.5	.263	.675
2	10.5	.328	.561	8.6	.289	.644
3	11.1	.348	.541	8.4	.293	.573
4	12.3	.368	.516	9.1	.306	.542
5	14.9	.413	.464	10.5	.322	.503
6	15.9	.436	.433	11.8	.355	.458
7	15.5	.412	.419	12.5	.370	.424
8	15.5	.412	.410	12.4	.367	.369
9	18.1	.470	.370	13.8	.389	.330
10	18.1	.470	.308	14.9	.414	.285
11	16.8	.442	.268	14.9	.419	.262

IV EFFECTS OF THE FINANCIAL TREATMENTS ON THE LABOR SUPPLY OF YOUNG NONHEADS OF FAMILIES

This section examines the effects of the financial treatments on the labor supply of young nonheads of families during the third year of the experiment (experimental quarters 8-11). We will consider the effects on four different dependent variables: average hours worked per week, the proportion of time worked, the proportion of time involuntarily unemployed, and the proportion of time out of the labor force. Average hours worked per week is calculated as total hours worked during the year divided by 365/7. The proportion of time worked is calculated as the number of days the person held jobs on which he or she was working at a positive weekly rate divided by 365.* The proportion of time involuntary unemployed is calculated as the length of periods during which the person did not work, but looked for work, divided by 365. The proportion of time out of the labor force represents the remainder of the period.

The plan of the analysis is as follows. First, evidence will be presented to indicate whether the experiment has any effect. Second, we will explore the extent to which the response to treatment varies with the parameters of the NIT program, family status in the third year of the experiment, age, racial ethnic group, site, and experimental duration.

Although a variety of models will be estimated to explore these various issues, all the models share a common basic structure. Each model represents the dependent variable, y, as a linear function of a set of control variables, X; a set of variables representing the financial treatments, F; a set of variables representing the manpower treatments, M; and an error term, ε:

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*Thus, for example, it excludes periods when the person held a job, but was not working, such as might occur for a school teacher during the summer. However, both average hours worked and the proportion of time worked treat paid vacation and sick leave as work.

$$y = X\beta + F\delta + M\gamma + \varepsilon \quad ,$$

where β, δ, and γ are vectors of parameters to be estimated.

To account for the stratified random nature of the assignment to experimental treatments (see Keeley and Robins, 1978 and Conlisk and Kurz, 1972), variables representing the assignment strata are included in X. These variables are dummy variables for the normal income of the nonhead's original family, dummy variables for racial ethnic group, a dummy variable for being in Denver, and a dummy variable indicating that the nonhead's original family was headed by a single person. Additional variables are included in X to increase the efficiency of the estimates. These additional variables are average hours worked, the proportions of time working and involuntarily unemployed, average inschool status during the preexperimental year, and the preexperimental values of education, weeks of training, number of family members, number of family members aged 0 to 5, age (piecewise linear with a change of slope at 18) and family income. Separate analyses are performed for males and females.

Three dummy variables are used to represent the manpower treatments: one for counseling only, one for counseling plus 50% training and education subsidy, and one for counseling plus 100% subsidy. Several representations of the financial treatments are used.

Simple Estimate of Financial Treatment Effects

A basic question to be answered is whether the financial treatments have any effect on the labor supply of young nonheads. There are good reasons for expecting either some negative effect or no effect at all. Since nonheads typically are considered marginal workers, they may be especially responsive to economic incentives. On the other hand, nonheads are not directly affected by the NIT plans. While the families of nonheads receive NIT payments that depend on earnings of nonhead; the nonheads themselves receive nothing. Unless the nonheads' work behavior is affected by family income or the family is able to transfer the NIT tax on earnings to the nonheads, the nonheads will not respond to the treatment.

To address the issue of whether there is any financial treatment effect on labor supply, we use the simplest possible representation of the financial treatments: a dummy variable that takes the value one for a person eligible for any of the 11 experimental NIT plans and zero for financial controls. This model is useful for determining whether the experimental NIT plans affect labor supply, but the estimated parameters cannot be used to estimate the effect of any single NIT plan. Rather, the estimated parameters represent an average of the effects of the 11 plans being tested in SIME/DIME.

The estimation results for this model for the various dependent variables being considered in this study are presented in Table 4. The coefficients of the control variables are presented in the Appendix. The results shown in Table 4 indicate that the NIT plans have a substantial and highly significant effect on the labor supply of young male nonheads.

Table 4

ESTIMATES OF THE SINGLE DUMMY VARIABLE MODEL
(Standard Errors in Parentheses)

Dependent Variable	Coefficient	
	Males	Females
Average hours worked per week	-4.63***	-2.78
	(1.67)	(1.62)
Proportion of time worked	-.106***	-.074*
	(.040)	(.042)
Proportion of time involuntarily unemployed	.067*	.014
	(.035)	(.029)
Proportion of time out of labor force	.039	.060
	(.035)	(.041)
Average in-school status	.035	-.011
	(.047)	(.043)
Sample size	351	382

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

Average hours worked per week are reduced by 4.63 hours, or about 24%, and the proportion of time worked is reduced by .106, or 21%. (The percentage effects are calculated by dividing the response by the mean of the variable for controls.) These substantial decreases in work effort are reflected mostly in an increase in time unemployed rather than time out of the labor force. Table 4 also presents results for schooling status, which indicate that nonheads are not reducing labor supply in order to increase school attendance.

The results for females indicate a somewhat smaller and less significant effect. Average hours worked per week are reduced by 2.78 hours, or 18%, and the proportion of time worked is reduced by .074, or 17%. As with males, there is no evidence that work effort is being reduced in order to increase school attendance.

Since the experiment is conducted only for a short period, it is not clear that these estimated effects represent the effects of a permanent NIT program. Metcalf (1973, 1974) has shown that in a temporary program, the income effect is smaller and the substitution effect larger in magnitude than in a permanent program. While we will consider this issue in greater detail later in this paper, in this section we present some suggestive results based on the two different experimental durations.

Table 5 presents separate estimates of the experimental effect on average hours worked and proportion of time working for persons on 3- and 5-year NIT plans. The model is identical to the single dummy variable model (see Table 4) except that there are separate dummy variables for the 3- and 5-year programs. The estimated effects of the 5-year program are somewhat larger for males and considerably larger for females than the effects of the 3-year program. However, the difference between the 3- and 5-year effects is significant only for the proportion of time worked by females. Thus, while the analysis cannot demonstrate that the response increases with the duration of the NIT plan, it also does not demonstrate that response does not increase with duration. Consequently, there is a distinct possibility that responses to a 5-year program are

Table 5

ESTIMATES OF THREE AND FIVE YEAR EFFECTS IN THE SINGLE DUMMY VARIABLE MODEL
(Standard Errors in Parentheses)

Dependent Variable	Coefficient	
	Males	Females
Average hours worked per week		
Five-year effect	-5.78**	-5.35**
	(2.32)	(2.37)
Three-year effect	-4.10**	-1.83
	(1.82)	(1.74)
Difference	-1.68	-3.52
	(2.36)	(2.37)
Proportion of time worked		
Five-year effect	-1.29**	-.163***
	(.056)	(.061)
Three-year effect	-.096**	-.041
	(.044)	(.045)
Difference	-.034	-.122**
	(.057)	(.064)

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

considerably larger than responses to a 3-year program. Responses to a permanent NIT program may again be considerably larger than responses to a 5-year program.

The analysis of the simple dummy variable model has demonstrated that experimental NIT plans have a considerable effect on the labor supply of young nonheads of families, especially males. In the remainder of this paper we will analyze the extent to which the response to the NIT varies with the program parameters and the characteristics of the nonhead.

Variation in Response to Different NIT Programs

Having demonstrated that there is a labor-supply response to experimental NIT plans, it is important to discover how the response varies among different NIT plans. There is no reason to expect that response to an NIT plan would be independent of the support level and tax rate of the NIT plan. Indeed the magnitude of the response can be expected to increase with the support level and is likely to increase with the tax rate.

In previous research, we developed a response model that satisfactorily captures the manner in which response varies over financial treatments for family heads (see Keeley, Robins, Spiegelman, and West, 1977a, 1977b, 1977c, 1978). For persons in a family that would benefit from the NIT plan based on the family's preexperimental income (i.e., families with preexperimental incomes below the tax breakeven level), this model represents response as a linear function of the change in disposable income (Δy) and the change in the net wage rate (Δw) induced by the experimental NIT plans based on the family's preexperimental situation. The value of Δy is positive and Δw is generally negative. The coefficient of Δy is the income effect and is expected to be negative; the coefficient of Δw is the substitution effect and is expected to be positive. For persons in families with incomes initially above the tax breakeven level we represent the response function as a coefficient times a dummy variable (FABOVE).* Estimation results using this response model are given in Table 6.

The results indicate that this model is moderately successful in representing the manner in which response varies with treatment. For males the coefficients of Δy and Δw have the expected signs, although the coefficients are not significantly different from zero. There is, however, a significant negative response for males whose families

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*This is a simplification over the representation used in the analysis of heads of families. However, the relatively small number of nonheads does not allow us to estimate a more complicated above-breakeven response.

Table 6

ESTIMATES OF INCOME AND SUBSTITUTION EFFECTS FOR NONHEADS OF FAMILIES
(Standard Errors in Parentheses)

Dependent Variable	Coefficient					
	Males			Females		
	Δy	Δw	FABOVE	Δy	Δw	FABOVE
Average hours worked per week	-1.30 (.91)	1.87 (2.02)	-5.52* (2.92)	.85 (1.08)	5.59** (2.29)	1.58 (2.81)
Proportion of time worked	-.030 (.022)	.042 (.049)	-.119* (.071)	.028 (.028)	.160*** (.059)	.034 (.073)
Proportion of time involuntarily unemployed	.030 (.019)	-.030 (.042)	.077 (.061)	-.002 (.020)	-.024 (.041)	-.022 (.051)
Proportion of time out of labor force	.000 (.019)	-.012 (.042)	.042 (.061)	-.026 (.028)	-.135** (.058)	-.012 (.072)

Notes: Δy = change in disposable income, measured in $1,000s; Δw = change in net wage rate; FABOVE = dummy variable for being above the breakeven level.

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

initially were above the breakeven level. For persons in families initially below the breakeven level, the estimated coefficient for Δy indicates that each $1,000 increase in family disposable income decreases average hours worked per week by 1.3 (6%) and decreases the proportion of time worked by .03 (6%). A $1.00 decrease in the net wage rate decreases hours worked by 1.87 (10%) and decreases the proportion of time worked by .04 (8%). Persons initially above the breakeven level reduced

hours worked by 5.52 (28%) and the proportion of time worked by .12 (24%).

For females the results are somewhat different. The coefficient of Δy has the wrong sign, but is small and not significant. The coefficient of Δw is large and significant. Each dollar decrease in the net wage rate decreases average hours worked per week by 5.6 (37%) and the proportion of the time worked by .16 (37%). Since the average change in the net wage rate induced by the experiment for females initially below the breakeven level is -.79, these substitution effects are quite substantial. The mean change in the net wage reduces hours worked by 4.4 (29%) and the proportion of period worked by .126 (29%). The results for the other labor force status variables indicate that the negative substitution effect of the NIT on time worked is primarily reflected in an increase in time out of the labor force. The response of females initially above the breakeven level is not significant.

In view of the somewhat mixed estimation results obtained using this model, we have estimated several other models. One might be tempted to conclude from Table 6 that the response for males is concentrated among persons initially above the breakeven level. That this counter-intuitive conclusion is false can be seen from examining Table 7. In Table 7 we present the estimation results from a model that represents the financial treatments by two dummy variables: one for persons initially above the breakeven level and another for persons initially below the breakeven level.

The results indicate that the experimental NIT plans induce a significant reduction in work effort for males initially both below and above the breakeven level. Although the estimated above-breakeven response is somewhat larger than the below-breakeven response, the difference is not significant. The reduced time working appears to be reflected primarily in increased time involuntarily unemployed. For females the work effort response is significant only for persons initially below the breakeven and is reflected in an increase in time out of the labor force.

Table 7

ABOVE- AND BELOW-BREAKEVEN RESPONSES FOR NONHEADS OF FAMILIES
(Standard Errors in Parentheses)

	Males		Females	
Dependent Variable	Below Breakeven	Above Breakeven	Below Breakeven	Above Breakeven
Average hours worked per week	-4.22** (1.76)	-6.37** (2.97)	-3.61** (1.69)	1.37 (2.86)
Proportion of time worked	-.099** (.042)	-.140** (.072)	-.095** (.044)	.030 (.075)
Proportion of time involuntarily unemployed	.063* (.037)	.085 (.062)	.021 (.030)	-.019 (.051)
Proportion of time out of labor force	.035 (.037)	.054 (.062)	.074 (.043)	-.011 (.073)

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

Another rather unsuccessful attempt to parameterize the response variations to different treatments represented the financial treatments with three variables: a dummy for having any financial treatment, the support level (in $1,000s) minus 3.8, and the tax rate minus .5. The results, which are given in Table 8, are rather noninformative and will not be discussed.

In summary, we have had modest success in capturing the variation of response to different financial treatments. The parameters of the Δy, Δw, FABOVE model have the expected sign for males, but only the above-breakeven response is significant. However, the two-dummy-variable model indicates that there is a significant response both below and above the breakeven level. For females the Δy, Δw, FABOVE model indicates that

Table 8

VARIATION OF NONHEAD OF FAMILY RESPONSE BY SUPPORT LEVEL AND TAX RATE
(Standard Errors in Parentheses)

Dependent Variable	Coefficient					
	Males			Females		
	F	S	T	F	S	T
Average hours worked per week	-2.73 (2.58)	-1.89 (1.68)	-1.57 (9.63)	-4.38* (2.55)	-.62 (1.70)	-12.85 (9.64)
Proportion of time worked	-.055 (.062)	-.054 (.040)	-.028 (.232)	-.104 (.066)	-.028 (.044)	.332 (.251)
Proportion of time involuntarily unemployed	.019 (.053)	.052 (.035)	.018 (.200)	-.021 (.046)	.024 (.031)	.070 (.173)
Proportion of time out of the labor force	.036 (.054)	.002 (.035)	.010 (.200)	.125* (.065)	.004 (.043)	-.402 (.245)

Notes: F = dummy variable for having any financial treatment; S = support level in $1,000s minus 3.8; T = tax rate minus .5.

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

there is a significant response due to the substitution effect of the change in the net wage rate. There is no response above the breakeven level.

Variation in Response by Family Status

In Section III of this paper we discovered that many persons who were nonheads at enrollment became either heads of families or unrelated individuals during the experimental period. Since the experimental NIT

plans provide differing incentives to nonheads, heads, and unrelated individuals, it is likely that an individual's response will depend on his status during the experimental period. In this section we present response estimates for persons in each of the three family statuses. We define family status in two alternative ways: on the basis of family status in experimental quarter 7 and on the basis of status in experimental quarter 11. The 7th quarter definition has the advantage of being determined prior to the dependent variables that represent averages for quarters 8 to 11. The 11th quarter definition has the advantage of capturing many more status changes (see Table 2).

Neither measure of family status is exogenous with respect to the financial treatments. Both could themselves be affected by the NIT plans. Consequently, the experimental impacts presented in this section cannot be averaged to obtain the total experimental effect. Rather, they represent only the partial effects of the experiment on the dependent variables other than the effects that operate through changes in family status. The estimates do, however, indicate how the experimental response varies with family status during the experimental period.

The estimates are presented for males in Table 9 and for females in Table 10 (the coefficients of the control variables are presented in the Appendix). The model contains three dummy variables representing persons eligible for financial treatment in each of the three family status categories (defined at either quarter 7 or quarter 11). The model also includes dummy variables for each family status category among the control variables to account for the effects of family status on the dependent variables.

The results indicate that there is a large and significant reduction in work effort for males who remain nonheads through either the 7th or 11th experimental quarter. The reduced work effort is reflected about equally in increased time involuntarily unemployed and increased time out of the labor force. For males who become heads of their own families there is also a substantial reduction in work effort. This reduction is significant only for the 11th quarter definition of family

Table 9

VARIATION OF MALE NONHEAD RESPONSE BY FAMILY STATUS
(Standard Errors in Parentheses)

Dependent Variable	Quarter 7 Definition			Quarter 11 Definition		
	Nonhead	Head	Unrelated Individual	Nonhead	Head	Unrelated Individual
Average hours worked per week	-7.09***	-5.57	.18	-7.37***	-10.36***	2.16
	(2.02)	(4.26)	(3.05)	(2.23)	(3.38)	(2.80)
Proportion of time worked	-.166***	-.174*	.042	-.157***	-.286***	.067
	(.049)	(.104)	(.074)	(.054)	(.082)	(.068)
Proportion of time involuntarily unemployed	.079*	.056	.073	.076	.204***	.011
	(.043)	(.090)	(.065)	(.047)	(.071)	(.059)
Proportion of time out of the labor force	.088**	.118	-.115*	.081*	.082	-.078
	(.043)	(.090)	(.065)	(.047)	(.071)	(.059)
Sample size	214	46	91	170	72	109
Controls	96	19	38	82	29	42
Financial treatment	118	27	53	88	43	67

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

Table 10

VARIATION OF FEMALE NONHEAD RESPONSE BY FAMILY STATUS
(Standard Errors in Parentheses)

Dependent Variable	Quarter 7 Definition			Quarter 11 Definition		
	Nonhead	Head	Unrelated Individual	Nonhead	Head	Unrelated Individual
Average hours worked per week	-6.18***	-1.01	5.01	-6.77***	-2.12	1.90
	(2.08)	(2.86)	(4.24)	(2.58)	(2.43)	(3.26)
Proportion of time worked	-.157***	-.008	.059	-.195***	-.034	.036
	(.054)	(.075)	(.111)	(.067)	(.063)	(.085)
Proportion of time involuntarily unemployed	.005	.035	.025	.051	.025	-.055
	(.038)	(.053)	(.078)	(.046)	(.044)	(.059)
Proportion of time out of labor force	.152***	-.026	-.084	.144**	.009	.019
	(.053)	(.073)	(.108)	(.065)	(.061)	(.082)
Sample size	212	110	60	141	156	85
Controls	92	49	26	62	68	37
Financial treatment	120	61	34	79	88	48

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

status, which generates more new family heads and thus smaller standard errors. The reduction for new heads is primarily reflected in an increase in involuntary unemployment. The response is -7.37 hours (-43%) for 11th quarter nonheads and -10.36 hours (-33%) for 11th quarter husbands. These responses are substantially larger in magnitude than the responses estimated for originally enrolled husbands (see Robins and West, 1978). There is no significant effect on work effort for males who became unrelated individuals.

The results for females show a significant response only for nonheads who remain nonheads. The response is -6.77 hours (42%) for 11th quarter nonheads. The reduction in work effort primarily corresponds to an increase in the amount of time spent out of the labor force.

Thus, the breakdown of response by family status has revealed two important results. The experimental NIT plans induce a reduction in the work effort of male nonheads who either remain nonheads or become heads of new families; there is no reduction for males who become unrelated individuals. There is a reduction in work effort induced by the experimental NIT plans for females who remain nonheads, but not for females who become wives or unrelated individuals.

Variation in Response by Family Status and Financial Treatment

Having discovered that the response to the experiment did vary significantly by family status in the experimental period, it seemed desirable to reexamine the variation in response to different financial treatments by 11th quarter family status.

The model estimated uses a different representation of the manner in which the response varies by financial treatment for each family status group. For persons who remain nonheads the response is modeled as a linear combination of Δy, Δw and FABOVE. These variables are based on the preexperimental situation of the nonhead's family. This representation is used because the nonhead's family situation should affect his or her response to the treatments and because it has proved valuable in the analysis of family heads.

For persons who become new family heads it seems unlikely that the financial situation of their original family has any major effect on their response. Rather, it can be expected that the situation of their new family will affect response. No preexperimental measurement of the financial status of the new family is available, however, and even if it were, it would likely be a poor proxy for the financial situation three years later. Consequently, the representation of response that we use for new family heads does not depend on the family's financial situation. The response is assumed to be a linear combination of three variables: a dummy variable for having any financial treatment, the support level (in $1,000s) minus 3.8 (S), and the tax rate minus .5 (T).* Consequently, the coefficient of F yields an estimate of the effect of the $3,800 support, 50% tax program. The coefficients of S and T yield estimates of how the response changes with changes in the support level and tax rate. The model used for unrelated individuals is the same as that used for new family heads except that the support variable is not used because all unrelated individuals face the same support level ($1,000) regardless of their initial financial treatment.

The results are given in Table 11 for males and in Table 12 for females. For males who remain nonheads the variables all have the expected sign in the work effort equations. The below-breakeven response appears to be primarily a result of the change in the net wage rate. This implies that the nonhead must indeed be subject to the experimental tax rate; either because he is fully integrated into a family decision-making process or the heads of the family succeed in passing all or part of the experimental tax burden onto him. There is also a significant above-breakeven response.

For males who become heads of families, two of the three variables are significant in the work effort equation: the dummy variable for having any financial treatment and the tax rate. The large negative coefficient of F (-15.03 hours per week) represents the effect of the

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*All three variables are zero for controls.

Table 11

VARIATION OF MALE NONHEAD RESPONSE BY FINANCIAL TREATMENT AND 11TH QUARTER FAMILY STATUS
(Standard Errors in Parentheses)

Family Status	Independent Variable	Coefficients: Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force
Nonhead	Δy	-1.45	-.036	.039	-.004
		(1.31)	(.032)	(.028)	(.028)
	Δw	6.96**	.177***	-.067	-.110*
		(2.73)	(.066)	(.057)	(.058)
	FABOVE	-7.29**	-.127	.072	.055
		(3.58)	(.086)	(.075)	(.076)
Head	F	-15.03***	-.430***	.285**	.145
		(5.34)	(.128)	(.112)	(.113)
	S	-3.68	-.097	.055	.042
		(3.22)	(.078)	(.068)	(.068)
	T	40.67*	1.169**	-.660	-.509
		(21.19)	(.510)	(.446)	(.448)
Unrelated individual	F	5.04	.150*	-.023	-.126
		(3.65)	(.088)	(.077)	(.077)
	T	-17.86	-.504	.200	.304
		(15.09)	(.363)	(.317)	(.319)

Notes: Δy = change in disposable income, measured in $1,000s; Δw = change in net wage rate; FABOVE = dummy variable for being above the breakeven level; S = support level in $1,000s minus 3.8; T = tax rate minus .5; F = dummy variable for having any financial treatment.

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Table 12

VARIATION OF FEMALE NONHEAD RESPONSE BY FINANCIAL TREATMENT AND 11TH QUARTER FAMILY STATUS
(Standard Errors in Parentheses)

Family Status	Independent Variable	Coefficients: Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force
Nonhead	Δy	-3.36	-.078	.069*	.009
		(2.07)	(.054)	(.037)	(.053)
	Δw	4.05	.148	-.034	-.114
		(3.95)	(.103)	(.071)	(.101)
	FABOVE	-1.82	-.066	-.029	.095
		(3.91)	(.102)	(.070)	(.100)
Head	F	-1.04	.004	-.019	.015
		(4.25)	(.111)	(.076)	(.108)
	S	1.73	.040	-.052	.012
		(2.50)	(.065)	(.045)	(.064)
	T	-13.35	-.373	.483*	-.110
		(15.44)	(.403)	(.277)	(.394)
Unrelated individual	F	-5.45	-.096	-.059	.155
		(4.61)	(.120)	(.083)	(.118)
	T	45.35**	.820	.008	-.828
		(19.78)	(.517)	(.354)	(.505)

Notes: Δy = change in disposable income, measured in $1,000s; Δw = change in net wage rate; FABOVE = dummy variable for being above the breakeven level; S = support level in $1,000s minus 3.8; T = tax rate minus .5; F = dummy variable for having any financial treatment.

***Significant at the 1% level

**Significant at the 5% level

*Significant at the 10% level

$3,800 support, 50% tax rate program. The positive coefficient of the tax rate indicates that the magnitude of response decreases as the tax rate increases. This could occur either because fewer new heads are below the tax-breakeven level in the high-tax programs or because the income effect of the tax change counteracts the substitution effect. The coefficient of the support variable is not significant, but it does have the expected negative sign.

There is no significant effect on hours of work for males who become unrelated individuals. There is, however, a counterintuitive positive effect of the $3,800 support, 50% tax program on the proportion of time worked.

For females the estimated coefficients for nonheads who remain nonheads in the work effort equations have the expected signs, but are not significant. The only significant coefficient is a positive tax effect for females who become unrelated individuals.

In summary, the results for nonheads who remain nonheads are consistent with the model, although not overwhelmingly supportive. It does appear that males react primarily to the increased tax rate induced by the NIT rather than to the increased family disposable income. For the other family status groups the results are mixed. The somewhat ambiguous results obtained with this model probably stem from the use of many (8) variables to represent the financial treatments and the relatively small samples (351 males and 382 females). The resulting large standard errors imply that only very large effects can be statistically significant.

Variation of Response by Age, Racial Ethnic Group, and Site

Having discussed in detail the variation in response by family status and financial treatment, we will now briefly consider the variation in response by three other characteristics of the nonhead: age, racial ethnic group (black, white, or Chicano), and experimental site (Seattle or Denver).

As shown in Table 3 the average hours worked by nonheads in the sample increases dramatically over time. Much if not all of this increase occurs because the nonheads tend to work more as they get older. Table 13 illustrates this phenomenon in a somewhat different manner. The table presents a breakdown of average hours worked and proportion of time worked in experimental quarters 8 through 11 by age. The table clearly indicates that older nonheads, both male and female, tend to work more than younger nonheads.

Table 13

AVERAGE HOURS WORKED PER WEEK AND PROPORTION OF TIME WORKED BY AGE AND SEX

	Average Hours Worked Per Week	
Age at Enrollment	Male	Female
16	13.58	11.22
17	15.18	12.77
18	18.17	16.94
19	24.23	16.67
20	19.44	20.96
	Proportion of Time Worked	
	Male	Female
16	.371	.336
17	.389	.385
18	.467	.439
19	.612	.463
20	.544	.537

The rather large increase in work effort with age strongly suggests that the work effort response to the experiment may also vary strongly with age. To investigate this hypothesis we estimate a simple model that represents the response as a linear combination of a dummy variable for having any financial treatment (F) and F multiplied by age at enrollment minus 16. The coefficient of F represents the effect of the

experiment on persons aged 16 at enrollment (about 19 at the time the dependent variables are measured). The coefficient of F × (age-16) represents how the effect of the experiment varies with age. The results are presented in Table 14. The estimated coefficients of the age interaction are quantitatively small and never significant. Similar results are obtained with more complicated models. Thus, contrary to expectation, there is no evidence that response varies with age.

Table 15 presents separate estimates of the effect of the NIT plans for each of the three racial ethnic groups: black, white, and Chicano. Although the estimated responses do appear to differ, the F-tests indicate that the differences are not statistically significant.

Table 14

VARIATION OF NONHEAD RESPONSE BY AGE
(Standard Errors in Parentheses)

	Coefficient			
	Males		Females	
Dependent Variable	F	F × (age-16)	F	F × (Age-16)
Average hours worked per week	-5.19* (3.00)	.28 (1.24)	-2.05 (2.79)	-.42 (1.30)
Proportion of time worked	-.093 (.072)	-.007 (.030)	-.048 (.073)	-.015 (.034)
Proportion of time involuntarily unemployed	.065 (.062)	.001 (.026)	-.032 (.050)	.027 (.023)
Proportion of time out of labor force	.028 (.062)	.006 (.026)	.080 (.071)	-.011 (.033)

Note: F = dummy variable for having any financial treatment.

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

Table 15

VARIATION OF NONHEAD RESPONSE BY RACIAL ETHNIC GROUP
(Standard Errors in Parentheses)

Sex and Racial Ethnic Group	Coefficient			
	Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force
Males				
Blacks	-3.60	-.100*	.055	.045
	(2.36)	(.057)	(.049)	(.049)
Whites	-7.32***	-.124*	.081	.043
	(2.77)	(.067)	(.058)	(.058)
Chicanos	-2.45	-.091	.074	.017
	(3.66)	(.088)	(.076)	(.076)
F-test	.76	.06	.07	.05
Females				
Blacks	-4.05*	-.106*	.046	.061
	(2.44)	(.064)	(.044)	(.062)
Whites	-.19	-.011	.010	.001
	(2.57)	(.067)	(.046)	(.066)
Chicanos	-5.16	-.129	-.050	.179*
	(3.70)	(.096)	(.066)	(.094)
F-test	.87	.76	.73	1.24

Note: The F-test is for the null hypothesis that the response is the same for all three racial ethnic groups (2 degrees of freedom).

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Table 16 presents separate estimates of the effect of the NIT plans for each of the two sites: Seattle and Denver. For males the estimated responses are remarkably similar in the two sites. For females, the estimated responses appear to differ, but the differences are not statistically significant. Thus, there is no evidence that response varies by either age, racial ethnic group, or experimental site.

Table 16

VARIATION OF NONHEAD RESPONSE BY SITE
(Standard Errors in Parentheses)

	Coefficients			
Sex and Site	Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force
Males				
Seattle	-5.18**	-.100*	.065	.035
	(2.50)	(.060)	(.052)	(.052)
Denver	-4.21*	-.111**	.069	.042
	(2.18)	(.053)	(.045)	(.045)
F-test	.09	.02	.00	.01
Females				
Seattle	-1.29	-.031	.002	.029
	(2.27)	(.059)	(.041)	(.058)
Denver	-4.28*	-.117**	.027	.091
	(2.27)	(.059)	(.041)	(.058)
F-test	.44	1.09	.18	.58

Note: The F-test is for the null hypothesis that the response is the same at both sites (1 degree of freedom).

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

Summary and 3- and 5-Year Effects

Since a wide variety of estimation models and results have been presented in this section, it is desirable to summarize some of the key findings. The most important finding is that the experimental NIT plans definitely induce a reduction in work effort among persons who were nonheads when the experiment began. Both average hours worked per week and the proportion of time worked are reduced. The analysis has also demonstrated that this reduction in work effort is concentrated in particular groups of nonheads. For males these groups are nonheads who remain nonheads and nonheads who become heads of families. For females there is a response only for those who remain nonheads. The evidence on the variation of response by financial treatment is mixed. However, the estimated coefficients have the expected signs and there is some evidence that the nonheads react primarily to changes in the net wage rate or tax rate. There is no evidence that response varies by age, racial ethnic group, or experimental site.

The estimated effects of the experimental NIT are large in percentage terms. Furthermore, the analysis of separate effects of the 3- and 5-year programs using the simple dummy variable model indicates a possibility that the magnitude of the response increases as the experimental duration increases. Consequently, the response to a permanent program may be considerably greater than the response to a limited-duration experiment.

We will now reexamine the question of response differences between the 3- and 5-year programs in the context of the model that allows a different response in each of the three family status groups. The 11th quarter definition of family status is used. We choose this model to examine 3- and 5-year effects because it gives informative results using only a modest number of parameters to represent the financial treatments.

The estimation results are presented in Table 17. For males who remain nonheads, the 3- and 5-year responses are almost identical in the average hours worked equation. In the proportion of time worked

Table 17

VARIATION OF NONHEAD RESPONSE BY 11TH QUARTER FAMILY STATUS AND EXPERIMENTAL DURATION
(Standard Errors in Parentheses)

		Males		Females	
Family Status	Experimental Duration (Years)	Average Hours Worked Per Week	Proportion of Time Worked	Average Hours Worked Per Week	Proportion of Time Worked
Nonhead	3	-7.48***	-.173***	-5.38*	-.143*
		(2.49)	(.060)	(2.84)	(.074)
	5	-7.29**	-.129*	-9.67***	-.306***
		(3.15)	(.076)	(3.58)	(.093)
Head	3	-8.64**	-.244***	-2.05	-.036
		(3.56)	(.086)	(2.65)	(.069)
	5	-16.95***	-.446***	-2.60	-.043
		(5.38)	(.130)	(3.50)	(.091)
Unrelated individual	3	1.64	.068	2.54	.066
		(3.06)	(.074)	(3.41)	(.088)
	5	2.83	.054	-.91	-.095
		(3.72)	(.090)	(5.62)	(.146)
F-test		.86	.96	.59	1.39

Note: The F-test is for the null hypothesis that the 3- and 5-year responses are the same for each family status group (3 degrees of freedom).

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

equations, the 3-year response is actually somewhat larger than the 5-year response. Consequently, there is no evidence that the responses to a permanent program might be larger than those reported here. The results are very different for male nonheads who become family heads.

The 5-year response in both work effort equations is almost double the 3-year response. For males who become unrelated individuals, there is no response for either the 3- or 5-year program.

The joint null hypotheses that the 3- and 5-year responses are identical for each family status group cannot be rejected for either of the work effort equations. However, the simple null hypothesis that the 3- and 5-year effects are the same for males who become family heads can be rejected at the 12% level. Moreover, the estimated 5-year effects are quite large. Average hours worked per week are reduced by 16.95 (55%)* and the proportion of time worked is reduced by .446 (57%). The magnitude of these responses may be clarified by noting that average hours worked per week by males who become heads are 31.0 for controls, 22.4 for the 3-year financial treatment group, and 14.2 for 5-year financial treatment group. The proportion of time worked is .78, .55 and .34 respectively. These estimated responses are so large they imply that an NIT plan would have profound effects on the labor supply of the male heads of young families, even without considering the definite possibility of an even more pronounced response to a permanent program.

For females the results indicate an apparent difference between the 3- and 5-year effects only for females who remain nonheads. Although the joint test of the null hypothesis that the 3- and 5-year effects are the same for each family status group cannot be rejected, the null hypothesis that the 3- and 5-year effects are the same for females who remain nonheads can be rejected at the 10% level. The estimated 5-year responses are quite large: average hours worked per week are reduced by 9.67 (60%) and the proportion of the time worked is reduced by .306 (62%). The average hours worked per week by females who remain nonheads are 16.2 for controls, 10.7 for the 3-year financial treatment group, and 6.4 for the 5-year financial treatment group. The proportion of time worked is .49, .34, and .18 respectively. These large 5-year

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*The percentages are calculated by dividing the mean for controls who became family heads.

effects imply dramatic impacts of NIT plans for females who remain nonheads.

Schooling

Having determined that young nonheads of families are indeed working less in response to the experimental NIT plans, it is important to know what they are doing during the additional time they are not working. In particular, it is desirable to know whether young nonheads are decreasing their labor supply in order to increase school attendance. While the complete analysis of the impact on schooling for nonheads is the subject of another report, it is appropriate to consider a few simple results here.

As the reader may recall, when estimation results for the simple dummy variable model were presented at the beginning of this paper (see Table 4), estimation results for an average in-school status equation were also presented. Those results showed no significant impact of the NIT plans on school attendance. In-school status equations were also estimated for all the other models presented in this report. In every case but one there were no significant effects of the NIT plans on school attendance. The one model where there was a significant response is the model where response was allowed to vary by experimental site. The school status results are presented in Table 18, where the results for the proportion of time worked are repeated.

As can be seen from the table, the schooling response is significant only for males in Seattle. In that case the schooling effect is about the same as the work effect. Thus, Seattle males could be reducing work effort in order to increase school attendance. However, in Denver the estimated schooling responses are much smaller than the significant work responses for both males and females. The fact that a significant schooling response appears only in this model for Seattle males and not in any other model suggests that this result is spurious.

It does seem desirable, however, to explore the schooling question in more detail. To accomplish this goal we define four dummy variables

Table 18

VARIATION OF SCHOOLING AND WORK RESPONSE
BY EXPERIMENTAL SITE
(Standard Errors in Parentheses)

	Denver	Seattle
Males		
Average in-school status	-.034	.128*
	(.061)	(.070)
Proportion of time worked	-.111*	-.100*
	(.053)	(.060)
Females		
Average in-school status	-.011	-.010
	(.060)	(.060)
Proportion of time worked	-.117**	-.031
	(.059)	(.059)

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

that measure combined work and school status. The variables represent four combined states: working and attending school, working and not attending school, not working and attending school, and not working and not attending school. Each variable is defined for each quarter from 8 to 11 and then averaged over the quarters where information is available. Since the states defined by the four variables are mutually exclusive and exhaustive, the four variables sum to be one. In Table 19 we present estimation results using these variables as dependent variables with a model that allows responses to vary by 11th quarter family status and the simple dummy variable model.

For males the results indicate that the response occurs only among males who remain nonheads or become heads of families; there is no

Table 19

ESTIMATED EFFECTS ON COMBINED WORK AND SCHOOL STATUS
BY 11TH QUARTER FAMILY STATUS
(Standard Error in Parentheses)

Family Status	Work, School	Work, No School	No Work, School	No Work, No School
Males				
Nonhead	-.057	-.162***	.092*	.126**
	(.049)	(.062)	(.049)	(.052)
Head	-.014	-.266***	.143*	.137*
	(.075)	(.093)	(.074)	(.078)
Unrelated individual	-.046	.038	.018	-.010
	(.062)	(.077)	(.061)	(.065)
All	-.046	-.113**	.082**	.078**
	(.036)	(.046)	(.035)	(.037)
Mean of dependent variable	.171	.411	.180	.238
Females				
Nonhead	-.112**	-.170**	.105*	.177***
	(.048)	(.068)	(.054)	(.066)
Head	-.007	-.038	-.040	.085
	(.046)	(.064)	(.051)	(.062)
Unrelated individual	.011	.006	.049	-.065
	(.061)	(.085)	(.068)	(.083)
All	-.041	-.074*	.030	.084**
	(.030)	(.042)	(.034)	(.042)
Mean of dependent variable	.135	.354	.180	.331

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

response for nonheads who become unrelated individuals. This result is consistent with results reported above. For males who either remain nonheads or become heads of their own families, the results indicate that the experimental NIT plans decrease the probability of working and not going to school, increase the probability of not working and going to school, and increase the probability of not working and not going to school. Thus, it is clear that many males are decreasing their work effort even though they do not go to school. However, the increase in the probability of not working and going to school indicates that some of the reduction in work effort occurs among persons who choose to concentrate on schooling. The net effect on school attendance is, however, not significant. The responses are somewhat larger for males who become nonheads.

As in our other estimates, only females who remain nonheads exhibit a response to the experimental NIT plans. The results indicate a reduction in the probability of both working and going to school and an almost equal increase in the probability of not working and going to school. Thus, a substantial portion of the work effort response occurs among females who choose to concentrate on schooling. There is, however, no net effect on school attendance. The major part of the work effort response is associated with a reduction in the probability of working and not attending school and an increase in the probability of not working and not attending school. Thus, for both males and females there is a definite decrease in work effort that is not accompanied by school attendance.

V LABOR SUPPLY RESPONSE OVER TIME

The analysis in the previous section concentrated on the effects of the experimental NIT plans on labor supply during experimental quarters 8-11. In this section we present estimates of two models for half-yearly periods from the beginning of the experiment to quarter 11. The half-yearly periods are comprised of quarters 2 and 3, 4 and 5, 6 and 7, 8 and 9, and 10 and 11.* The first model is the simple dummy variable model, which yields a single estimate of the experimental effect. The second model allows for separate responses in each of the three 11th quarter family status groups.

The estimation results for the simple dummy variable model are presented in Table 20.† The results of the model that allows response to vary by 11th quarter family status are contained in Table 21 for males and Table 22 for females. The results for males indicate that the response generally increases over time as the males adjust to being eligible for the financial treatments. The results are consistent with previous estimates. There is a large and increasing response that appears only for males who either remain nonheads or become husbands; there is no response for males who become unrelated individuals.

For females the results are somewhat different. While the response tends to increase in magnitude over time in the simple dummy variable model, the response is significantly different from zero only in the half-year including experimental quarters 8 and 9. The responses are more pronounced in the model that allows response to vary by family status.

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*Quarter 1 is not used because it is partly preexperimental and to preserve comparability with the results in the previous section.

†The sample size is larger than in previous estimates because individuals with missing experimental in-school status were excluded earlier, but are included here.

Table 20

ESTIMATES OF THE SIMPLE DUMMY VARIABLE MODEL OVER TIME
(Standard Errors in Parentheses)

	Males		Females	
Experimental Quarters	Average Hours Worked Per Week	Proportion of Time Worked	Average Hours Worked Per Week	Proportion of Time Worked
2-3	-2.24 (1.38)	-.074* (.040)	-1.13 (1.16)	-.022 (.035)
4-5	-3.20** (1.50)	-.092** (.042)	-.40 (1.34)	.017 (.039)
6-7	-4.54*** (1.72)	-.113*** (.043)	-2.38 (1.59)	-.059 (.043)
8-9	-3.52** (1.74)	-.082* (.043)	-3.13* (1.66)	-.078* (.044)
10-11	-5.11*** (1.75)	-.118*** (.043)	-2.36 (1.71)	-.063 (.044)
Sample size	355	355	382	382

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

The response for females who remain nonheads increases in magnitude over time and is significant at the 5% level in the last three half-yearly periods. As in previous estimates, there is no response for females who become either wives or unrelated individuals.

Table 21

VARIATION OVER TIME OF MALE NONHEAD RESPONSE BY 11TH QUARTER FAMILY STATUS
(Standard Errors in Parentheses)

Experimental Quarters	Average Hours Worked Per Week			Proportion of Time Worked		
	Nonhead	Head	Unrelated Individual	Nonhead	Head	Unrelated Individual
2-3	-3.25*	-4.66	.52	-.082	-.104	-.060
	(1.93)	(3.00)	(2.46)	(.055)	(.086)	(.070)
4-5	-4.97**	-8.98***	2.63	-.102*	-.257***	.007
	(2.04)	(3.18)	(2.61)	(.057)	(.089)	(.073)
6-7	-6.41***	-11.72***	1.87	-.130**	-.288***	.004
	(2.34)	(3.64)	(2.99)	(.059)	(.092)	(.076)
8-9	-5.65**	-10.51***	2.93	-.098*	-.302***	.057
	(2.34)	(3.65)	(2.99)	(.057)	(.089)	(.073)
10-11	-8.17***	-10.17***	1.58	-.198***	-.274***	.080
	(2.37)	(3.69)	(3.03)	(.059)	(.092)	(.075)

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

Table 22

VARIATION OVER TIME OF FEMALE NONHEAD RESPONSE BY 11TH QUARTER FAMILY STATUS
(Standard Errors in Parentheses)

Experimental Quarters	Average Hours Worked Per Week			Proportion of Time Worked		
	Nonhead	Head	Unrelated Individual	Nonhead	Head	Unrelated Individual
2-3	-3.39*	.73	-.90	-.079	.028	-.022
	(1.88)	(1.78)	(2.39)	(.058)	(.055)	(.073)
4-5	-2.83	-.22	2.82	-.038	.024	.083
	(2.17)	(2.05)	(2.76)	(.064)	(.060)	(.081)
6-7	-5.87**	-1.36	1.01	-.164**	-.028	.047
	(2.57)	(2.43)	(3.27)	(.070)	(.066)	(.089)
8-9	-7.19**	-2.95	2.54	-.215***	-.052	.083
	(2.68)	(2.53)	(3.40)	(.071)	(.067)	(.090)
10-11	-6.55**	-1.17	1.50	-.174**	-.008	.001
	(2.73)	(2.59)	(3.47)	(.071)	(.067)	(.090)

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

VI EFFECTS OF THE MANPOWER TREATMENTS

We now proceed to present evidence on the effect of the manpower programs on the labor supply of nonheads of families. Three different manpower programs are being tested: manpower counseling only (M1), counseling plus a 50% subsidy of direct training and education costs (M2), and counseling plus a 100% subsidy (M3). Dummy variables for each treatment are included in the estimated equations for all the models discussed in Section IV. Table 23 presents coefficients of the manpower variables for the model that represents the financial treatments by a single dummy variable (see Table 4 in Section IV for financial treatment results). The results clearly indicate that there is no evidence that the manpower programs affect work effort.

Table 23

ESTIMATED EFFECTS OF THE MANPOWER TREATMENTS
(Standard Errors in Parentheses)

Dependent Variable	Males				Females			
	M1	M2	M3	F-test	M1	M2	M3	F-test
Average hours worked per week	.07 (2.32)	2.30 (1.97)	-1.97 (2.37)	1.10	-1.27 (2.24)	2.08 (2.04)	.61 (2.22)	.67
Proportion of time worked	.013 (.056)	.035 (.048)	-.055 (.057)	.80	-.009 (.058)	.064 (.053)	.029 (.058)	.61
Proportion of time involuntarily unemployed	.014 (.048)	.019 (.041)	.032 (.049)	.15	-.007 (.040)	.014 (.037)	-.016 (.040)	.17
Proportion of time out of labor force	-.031 (.048)	-.049 (.041)	.024 (.049)	.87	.009 (.057)	-.078 (.052)	-.012 (.057)	.93
Average in-school status	-.006 (.066)	-.134** (.056)	-.010 (.067)	2.35*	.019 (.059)	.006 (.054)	.095 (.058)	.97

Notes: The F-test is for the null hypothesis that all manpower effects are zero (3 degrees of freedom); M1 = manpower counseling only; M2 = counseling plus 50% education and training subsidy; M3 = counseling plus 100% education and training subsidy.

***Significant at the 1% level

**Significant at the 5% level

*Significant at the 10% level

VII SUMMARY AND CONCLUSIONS

The results reported in this study indicate that the experimental NIT plans in SIME/DIME induce a reduction in work among nonheads of families. For males the work effort reduction occurs for those who either remain nonheads or become husbands. The response is about -7.7 hours per week (-43%) for males who remain nonheads and -10.36 hours per week (-33%) for males who become husbands. Only females who remain nonheads appear to respond. Their response is -6.8 hours per week (-42%). There is no evidence that the work effort reduction is accompanied by an increase in school attendance. However, somewhat less than half the response appears to occur among persons who would have worked while attending school in the absence of the experiment, but attend school and do not work under the influence of the experiment. There is some evidence that nonheads respond primarily to changes in the tax rate and net wage rate rather than to changes in the support level. There is no evidence that the response varies by racial ethnic group, experimental site, or age. However, separate estimates of response for the 3- and 5-year programs indicate a possibility that response increases with experimental duration. Consequently, the response to a permanent program may be even larger than the estimates presented here.

The estimated responses are large in percentage terms and should not be ignored when considering the possible effects of national NIT plans. Furthermore, the response to a national plan could not be reduced by refusing eligibility to unrelated individuals since the estimated response is isolated in other groups, which could not be excluded from eligibility.

The response by male and female nonheads who remain nonheads, while large in percentage terms, may not be of great importance since these nonheads are generally secondary earners in their families. However, a reduction in work effort during this portion of their life cycle may have continuing effects by reducing their labor market experience and

thus possibly reducing their ability to obtain good jobs in the future. Such a long-term effect is purely speculative; there is little empirical evidence to support this hypothesis.

The reduction in work effort by male nonheads who become husbands is clearly important. These males are reducing their work effort just at the time when they are undertaking family responsibilities. Not only is their response important in the current period, but the reduction in work effort may also have long-term effects on their labor supply behavior.

Appendix

SUPPLEMENTARY TABLES

Table A-1

COEFFICIENTS OF CONTROL VARIABLES FOR NONHEAD MALES
Dummy Variable Model
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable: Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force	Average In-School Status
Preexperimental hours worked per week	.086 (.164)	.001 (.396)	.000 (.003)	-.001 (.003)	-.002 (.005)
Preexperimental days worked per quarter	.065 (.055)	.001 (.001)	.001 (.001)	-.000 (.001)	.000 (.002)
Preexperimental days involuntarily unemployed per quarter	-.075** (.034)	.002* (.001)	.001 (.001)	.000 (.001)	.000 (.001)
Preexperimental average in-school status	-1.37 (2.37)	-.030 (.057)	.036 (.049)	.066 (.049)	.288*** (.067)
Normal income level Not determined	-4.24 (6.95)	.084 (.168)	.192 (.145)	-.108 (.144)	-.310 (.197)
$1,000 - $3,000	.146 (3.62)	.014 (.087)	.053 (.075)	-.068 (.075)	-.090 (.102)
$3,000 - $5,000	.309 (3.43)	.012 (.083)	.033 (.071)	-.045 (.071)	-.104 (.097)
$5,000 - $7,000	4.32 (3.67)	.136 (.089)	-.087 (.076)	-.049 (.076)	.047 (.104)
$7,000 - $9,000	2.20 (3.85)	.087 (.093)	-.009 (.080)	-.077 (.080)	.028 (.109)
$9,000 - $11,000	4.13 (4.38)	.095 (.106)	.028 (.091)	-.123 (.091)	-.106 (.124)
Denver	4.62** (1.84)	.098** (.044)	-.085** (.038)	-.014 (.038)	-.065 (.052)
Minimum (Age, 18)	2.56* (1.50)	.033 (.036)	.000 (.031)	-.033 (.031)	-.134*** (.043)
Maximum (Age, 18)	.295 (1.41)	.016 (.034)	-.002 (.029)	-.014 (.029)	.062 (.040)
Black	-9.08*** (1.83)	.217*** (.044)	.075* (.038)	.142*** (.038)	.040 (.052)
Chicano	-2.43 (2.53)	.038 (.061)	.033 (.053)	.005 (.052)	-.038 (.071)
Number of family members	-1.04* (.618)	-.028* (.015)	.031** (.013)	-.003 (.013)	-.001 (.017)
Number of family members aged 0-5	.473 (2.63)	.007 (.064)	-.030 (.055)	.023 (.055)	-.077 (.074)
Single-headed original family	-1.38 (2.13)	-.035 (.051)	.085* (.044)	.050 (.044)	.023 (.060)
Preexperimental family income	.000 (.004)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
Manpower treatment Counseling only	.068 (2.32)	.013 (.056)	.019 (.048)	-.031 (.048)	-.006 (.066)
Counseling and 50% subsidy	2.30 (1.97)	.035 (.048)	.014 (.041)	-.049 (.041)	-.134** (.056)
Counseling and 100% subsidy	-1.97 (2.37)	-.055 (.057)	.032 (.049)	.024 (.049)	-.010 (.067)
Preexperimental years of schooling	.709 (.755)	.036** (.018)	-.036** (.016)	-.001 (.016)	.017 (.021)
Preexperimental weeks of training	-.072 (.230)	.005 (.006)	-.005 (.005)	.000 (.005)	-.004 (.006)

Note: Financial treatment coefficients are reported in Table 4.

***Significant at the 1% level
**Significant at the 5% level
*Significant at the 10% level

Table A-2

COEFFICIENTS OF CONTROL VARIABLES FOR NONHEAD FEMALES
Dummy Variable Model
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable: Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force	Average In-School Status
Preexperimental hours worked per week	-.161 (.198)	-.007 (.005)	-.002 (.004)	.009* (.005)	.001 (.005)
Preexperimental days worked per quarter	.143** (.060)	.004*** (.002)	.000 (.001)	-.005*** (.002)	-.001 (.002)
Preexperimental days involuntarily unemployed per quarter	.061 (.046)	.001 (.001)	.000 (.001)	-.002 (.001)	-.001 (.001)
Preexperimental average in-school status	2.91 (2.68)	.072 (.070)	.057 (.048)	-.128* (.068)	.252*** (.070)
Normal income level Not determined	3.05 (6.62)	.087 (.172)	-.027 (.119)	-.060 (.169)	.042 (.174)
$1,000 - $3,000	4.71 (3.70)	.128 (.096)	-.053 (.066)	-.075 (.094)	.078 (.097)
$3,000 - $5,000	4.68 (3.07)	.143* (.080)	.040 (.055)	-.184** (.078)	-.020 (.081)
$5,000 - $7,000	4.76 (3.08)	.138* (.080)	.004 (.055)	-.143* (.079)	.015 (.081)
$7,000 - $9,000	6.01* (3.38)	.192** (.088)	-.049 (.061)	-.143* (.086)	.057 (.089)
$9,000 - $11,000	5.29 (4.19)	.201* (.109)	-.059 (.075)	-.141 (.107)	.025 (.110)
Denver	5.46*** (1.84)	.128*** (.048)	-.057* (.033)	-.071 (.047)	-.110** (.048)
Minimum (Age, 18)	.934 (1.58)	-.001 (.041)	.021 (.028)	-.020 (.040)	-.106** (.041)
Maximum (Age, 18)	1.65 (1.51)	.035 (.039)	.040 (.027)	-.075* (.038)	.006 (.040)
Black	-5.36*** (1.78)	-.150*** (.046)	.065** (.032)	.084* (.045)	.081* (.047)
Chicano	-8.31*** (2.53)	-.203*** (.066)	-.016 (.045)	.219*** (.064)	.079 (.066)
Number of family members	-.051 (.650)	-.000 (.017)	-.006 (.012)	.006 (.017)	-.005 (.017)
Number of family members aged 0-5	1.42 (1.99)	.022 (.052)	.014 (.036)	-.036 (.051)	-.078 (.052)
Single-headed original family	1.05 (2.10)	.026 (.055)	-.087** (.038)	.062 (.054)	.039 (.055)
Preexperimental family income	.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)	-.000 (.000)
Manpower treatment Counseling only	-1.27 (2.24)	-.009 (.058)	-.001 (.040)	.010 (.057)	.019 (.059)
Counseling and 50% subsidy	2.08 (2.04)	.064 (.053)	.014 (.037)	-.078 (.052)	.007 (.054)
Counseling and 100% subsidy	.612 (2.22)	.029 (.058)	-.016 (.040)	-.012 (.057)	.095 (.058)
Preexperimental years of schooling	1.03 (.813)	.039* (.021)	-.055*** (.015)	.016 (.021)	-.020 (.081)
Preexperimental weeks of training	-.168 (.275)	-.004 (.007)	.000 (.005)	.004 (.007)	-.002 (.007)

Note: Financial treatment coefficients are reported in Table 4.

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10% level

Table A-3

COEFFICIENTS OF CONTROL VARIABLES FOR MALES
Experimental Family Status Model
(Standard Errors in Parentheses)

	Dependent Variable							
	Quarter 7 Family Status Model				Quarter 11 Family Status Model			
Independent Variable	Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force	Average Hours Worked Per Week	Proportion of Time Worked	Proportion of Time Involuntarily Unemployed	Proportion of Time Out of Labor Force
Preexperimental hours worked per week	.038 (.159)	.000 (.004)	.000 (.003)	.001 (.003)	.140 (.158)	.003 (.004)	-.002 (.003)	-.001 (.003)
Preexperimental days worked per quarter	.075 (.053)	.002 (.001)	-.001 (.001)	-.001 (.001)	.051 (.053)	.001 (.001)	-.000 (.001)	-.001 (.001)
Preexperimental days involuntarily unemployed per quarter	-.068** (.033)	-.001* (.001)	.001 (.001)	.000 (.001)	-.061* (.033)	-.001 (.001)	.001 (.001)	.000 (.001)
Preexperimental average in-school status	.879 (2.33)	.014 (.057)	-.069 (.049)	.054 (.049)	.958 (2.32)	.021 (.056)	-.056 (.049)	.035 (.049)
Normal income level Not determined	-7.28 (6.79)	-.163 (.165)	.204 (.144)	-.042 (.144)	-7.84 (6.71)	-.167 (.163)	.221 (.141)	-.054 (.141)
$1,000 - $3,000	-.011 (3.51)	.007 (.085)	.051 (.074)	-.058 (.074)	.015 (3.49)	.008 (.085)	.071 (.073)	-.079 (.073)
$3,000 - $5,000	-.197 (3.34)	-.008 (.081)	.025 (.071)	-.017 (.071)	-.217 (3.31)	-.004 (.080)	.055 (.069)	-.051 (.070)
$5,000 - $7,000	3.61 (3.56)	.115 (.087)	-.086 (.075)	-.029 (.076)	3.93 (3.53)	.128 (.086)	-.076 (.074)	-.052 (.074)
$7,000 - $9,000	1.27 (3.74)	.058 (.091)	-.011 (.079)	-.047 (.079)	1.62 (3.70)	.074 (.090)	.015 (.078)	-.088 (.078)
$9,000 - $11,000	1.76 (4.25)	.042 (.104)	.057 (.090)	-.099 (.090)	2.47 (4.23)	.060 (.102)	.074 (.089)	-.134 (.089)
Denver	4.87*** (1.79)	.100** (.044)	-.095** (.038)	-.005 (.038)	4.79*** (1.77)	.103** (.043)	-.091** (.037)	-.012 (.037)
Minimum (Age, 18)	1.59 (1.47)	.015 (.036)	.017 (.031)	-.032 (.031)	2.36 (1.45)	.028 (.035)	-.004 (.030)	-.024 (.030)
Maximum (Age, 18)	.568 (1.37)	.022 (.033)	-.005 (.029)	-.017 (.029)	.126 (1.36)	.013 (.033)	.011 (.029)	-.024 (.029)
Black	-9.11*** (1.78)	-.214*** (.043)	.081** (.038)	.134*** (.038)	-8.53*** (1.78)	-.203*** (.043)	.084** (.037)	.119*** (.037)
Chicano	-2.66 (2.46)	-.037 (.060)	.043 (.052)	-.006 (.052)	-2.52 (2.44)	-.037 (.059)	.042 (.051)	-.005 (.051)
Number of family members	-1.26** (.602)	-.031** (.015)	.037*** (.013)	-.005 (.013)	-1.02* (.594)	-.028* (.014)	.031** (.012)	-.003 (.012)
Number of family members aged 0-5	-.466 (2.57)	-.016 (.062)	-.027 (.054)	.043 (.055)	-.357 (2.53)	-.010 (.061)	-.022 (.053)	.032 (.053)
Single-headed original family	-1.56 (2.06)	-.036 (.050)	.091** (.044)	-.055 (.044)	-1.01 (2.05)	-.025 (.050)	.081* (.043)	-.055 (.043)
Preexperimental family income	.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)
Manpower treatment Counseling only	.499 (2.26)	.023 (.055)	.017 (.048)	-.040 (.048)	.511 (2.24)	.021 (.054)	.026 (.047)	-.046 (.047)
Counseling and 50% subsidy	2.78 (1.92)	.046 (.047)	0.11 (.041)	-.057 (.041)	2.12 (1.90)	.030 (.046)	.015 (.040)	-.046 (.040)
Counseling and 100% subsidy	-1.56 (2.29)	-.046 (.056)	.029 (.048)	.017 (.049)	-1.94 (2.28)	-.056 (.055)	.022 (.048)	.034 (.048)
Preexperimental years of schooling	.542 (.734)	.035* (.018)	-.030 (.016)	-.005 (.016)	.707 (.726)	.037** (.018)	-.034** (.015)	-.003 (.015)
Preexperimental weeks of training	.019 (.222)	.006 (.005)	-.006 (.005)	-.000 (.000)	.072 (.222)	.008 (.005)	-.006 (.005)	-.002 (.005)
Family head at experimental quarter 7 or 11	10.86*** (3.60)	.235*** (.088)	-.170** (.076)	-.065 (.076)	-1.02* (.594)	.278*** (.074)	-.203*** (.064)	-.076 (.064)
Unrelated individual at experimental quarter 7 or 11	-1.23 (2.80)	-.088 (.068)	-.091 (.059)	.179*** (.059)	-3.23 (2.69)	-.089 (.065)	-.118** (.056)	.207*** (.057)

Note: Financial treatment coefficients are reported in Table 4.

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Table A-4

COEFFICIENTS OF CONTROL VARIABLES FOR FEMALES
Experimental Family Status Model
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable: Quarter 7 Family Status Model — Average Hours Worked Per Week	Quarter 7 — Proportion of Time Worked	Quarter 7 — Proportion of Time Involuntarily Unemployed	Quarter 7 — Proportion of Time Out of Labor Force	Quarter 11 Family Status Model — Average Hours Worked Per Week	Quarter 11 — Proportion of Time Worked	Quarter 11 — Proportion of Time Involuntarily Unemployed	Quarter 11 — Proportion of Time Out of Labor Force
Preexperimental hours worked per week	-.191 (.195)	-.007 (.005)	-.001 (.004)	.008 (.005)	-.157 (.195)	-.007 (.005)	-.002 (.004)	.008* (.005)
Preexperimental days worked per quarter	.145** (.059)	.004*** (.002)	.000 (.001)	-.005*** (.001)	.140** (.059)	.004*** (.002)	.000 (.001)	-.005*** (.001)
Preexperimental days involuntarily unemployed per quarter	.055 (.045)	.001 (.001)	.000 (.001)	-.002 (.001)	.045 (.046)	.001 (.001)	.000 (.001)	-.001 (.001)
Preexperimental average in-school status	1.76 (2.66)	.033 (.069)	.039 (.049)	-.072 (.068)	1.91 (2.67)	.037 (.070)	.036 (.048)	-.073 (.067)
Normal income level Not determined	5.57 (6.48)	.156 (.169)	-.033 (.119)	-.122 (.165)	1.81 (6.52)	.061 (.170)	-.014 (.117)	-.047 (.165)
$1,000 - $3,000	6.39* (3.64)	.177* (.095)	-.054 (.067)	-.122 (.092)	6.88* (3.68)	.184* (.096)	-.061 (.066)	-.124 (.093)
$3,000 - $5,000	5.27* (3.03)	.164** (.079)	.033 (.056)	-.197** (.077)	5.52* (3.04)	.165** (.079)	.040 (.055)	-.205*** (.077)
$5,000 - $7,000	5.07* (3.02)	.151* (.079)	.003 (.055)	-.154** (.077)	5.26* (3.04)	.149* (.079)	.003 (.055)	-.152** (.077)
$7,000 - $9,000	7.28** (3.33)	.226*** (.087)	-.059 (.061)	-.168** (.084)	6.48* (3.33)	.202** (.087)	-.052 (.060)	-.150* (.084)
$9,000 - $11,000	6.35 (4.11)	.235** (.197)	-.058 (.075)	-.176* (.104)	4.99 (4.12)	.195* (.107)	-.051 (.074)	-.143 (.104)
Denver	5.21*** (1.80)	.120** (.047)	-.056* (.033)	-.064 (.046)	5.55*** (1.81)	.129*** (.047)	-.062* (.033)	-.066 (.046)
Minimum (Age, 18)	.544 (1.57)	-.006 (.041)	.035 (.029)	-.029 (.040)	.833 (1.57)	.002 (.041)	.036 (.028)	-.036 (.040)
Maximum (Age - 18, 0)	1.17 (1.50)	.016 (.039)	.030 (.028)	-.047 (.038)	1.30 (1.50)	.021 (.039)	.032 (.027)	-.053 (.038)
Black	-5.48*** (1.74)	-.151*** (.045)	(.032)	.082* (.044)	-4.99*** (1.76)	-.138*** (.046)	.071** (.032)	.067 (.044)
Chicano	-7.56*** (2.48)	-.181*** (.064)	-.015 (.045)	.195*** (.063)	-7.55*** (2.51)	-.182*** (.065)	-.009 (.045)	.191*** (.063)
Number of family members	-.075 (.641)	.000 (.017)	-.007 (.012)	.007 (.016)	-.249 (.642)	-.005 (.017)	-.005 (.012)	.010 (.016)
Number of family members aged 0-5	1.61 (1.95)	.032 (.051)	.024 (.036)	-.056 (.050)	1.97 (1.98)	.042 (.051)	.027 (.036)	-.069 (.050)
Single-headed original family	.719 (2.06)	.015 (.054)	-.094** (.038)	.079 (.052)	.363 (2.08)	.003 (.054)	-.096** (.038)	.093* (.053)
Preexperimental family income	.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	-.000 (.000)	.000 (.000)
Manpower treatment Counseling only	-.834 (2.19)	-.002 (.057)	-.008 (.040)	.010 (.056)	-1.63 (2.22)	-.022 (.058)	-.016 (.040)	.038 (.056)
Counseling and 50% subsidy	2.35 (1.99)	.068 (.052)	.010 (.037)	-.079 (.051)	2.46 (2.01)	.073 (.052)	.013 (.036)	-.085* (.051)
Counseling and 100% subsidy	.762 (2.17)	.033 (.057)	-.017 (.040)	-.016 (.055)	.240 (2.19)	.021 (.057)	-.014 (.039)	-.007 (.055)
Preexperimental years of schooling	.883 (.800)	.036* (.021)	-.055*** (.015)	.020 (.020)	.755 (.805)	.031 (.021)	-.056*** (.014)	.024 (.020)
Preexperimental weeks of training	-.120 (.269)	-.002 (.007)	.001 (.005)	.002 (.007)	-.120 (.273)	-.002 (.007)	.002 (.005)	-.000 (.007)
Family head at experimental quarter 7 or 11	-3.53 (2.73)	-.136* (.071)	-.090* (.050)	.226*** (.069)	-2.55 (2.68)	-.129* (.070)	-.096** (.048)	.225*** (.068)
Unrelated individual at experimental quarter 7 or 11	1.89 (3.75)	.081 (.098)	-.072 (.069)	-.990 (.095)	1.67 (3.08)	.015 (.080)	-.003 (.055)	-.012 (.078)

Note: Financial treatment coefficients are reported in Table 4.

***Significant at the 1% level

**Significant at the 5% level

*Significant at the 10% level

Table A-5

MEANS AND STANDARD DEVIATIONS OF VARIABLES

Variable	Males		Females	
	Mean	Standard Deviation	Mean	Standard Deviation
Preexperimental hours worked per week	6.78	10.63	4.31	8.31
Preexperimental days worked per quarter	21.31	30.31	15.38	26.16
Preexperimental days involuntarily unemployed per quarter	9.62	24.09	4.68	16.85
Preexperimental average in-school status	.72	.42	.79	.37
Normal income level				
Not determined	.02	.13	.02	.12
$1,000 - $3,000	.15	.36	.08	.28
$3,000 - $5,000	.27	.44	.20	.40
$5,000 - $7,000	.16	.36	.26	.44
$7,000 - $9,000	.19	.39	.23	.42
$9,000 - $11,000	.15	.36	.12	.32
Denver	.59	.49	.52	.50
Minimum (Age, 18)	17.45	.66	17.34	.68
Maximum (Age - 18, 0)	.51	.79	.40	.72
Black	.46	.56	.43	.50
Chicano	.19	.40	.18	.39
Number of family members	4.80	1.53	4.67	1.54
Number of family members aged 0-5	.10	.32	.17	.43
Single-headed original family	.58	.50	.60	.49
Preexperimental family income	6308.01	2612.58	6417.67	3017.55
Manpower treatment				
Counseling only	.17	.37	.17	.38
Counseling and 50% subsidy	.30	.46	.23	.42
Counseling and 100% subsidy	.16	.37	.19	.39
Preexperimental years of schooling	10.80	1.30	10.85	1.31
Preexperimental weeks of training	.31	3.45	.38	2.81
Financial treatment	.56	.50	.56	.50
7th quarter head	.13	.34	.29	.45
7th quarter unrelated individual	.26	.44	.14	.35
7th quarter nonhead with financial treatment	.34	.47	.31	.46
7th quarter head with financial treatment	.08	.27	.16	.37
7th quarter unrelated individual with financial treatment	.15	.36	.09	.29
11th quarter head	.21	.40	.41	.49
11th quarter unrelated individual	.31	.46	.22	.42
11th quarter nonhead with financial treatment	.25	.43	.21	.41
11th quarter head with financial treatment	.12	.33	.23	.42
11th quarter unrelated individual with financial treatment	.19	.39	.13	.33
Hours worked per week, quarters 8-11	17.11	15.93	13.99	15.73
Proportion of quarters 8-11 worked	.45	.38	.40	.41
Proportion of quarters 8-11 involuntarily unemployed	.30	.31	.19	.27
Proportion of quarters 8-11 out of labor force	.25	.30	.41	.39
Average in-school status, quarters 8-11	.35	.48	.31	.41

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